

Our more than 67,000 employees, physicians and caregivers across North America are connected through one unifying purpose: the patients who entrust us with their care. Whether leading the evolution of home dialysis or value based care, we are driven by our shared commitment to improve the lives of people living with kidney disease by creating the next generation of renal care for tomorrow and beyond.

We embrace innovation across our network of dialysis centers, outpatient cardiac and vascular labs, and specialty pharmacy and laboratory services. We manufacture and distribute a comprehensive line of dialysis equipment, disposable products and renal pharmaceuticals. The scope and sophistication of our vertically integrated network provide us with seamless oversight of our patients' needs.

We have an unmatched capacity to analyze immense amounts of clinical data from within our own care ecosystem, maintaining a world-class research network. The ability to champion data-driven care innovations remains one of the company's key competitive advantages, informing every aspect of patient care and experience, quality improvement programs, coordinated care delivery and care integration.

MISSION

To deliver superior care that improves the quality of life of every patient, every day, setting the standard by which others in the healthcare industry are judged.

VISION

To be the leader and partner of choice in managing care in a value based system, we must continuously create clinical value for our patients and payors that translates to economic value for all of us.

VALUES



Collaboration

We team up.

We work together to accomplish more than what is possible individually.



Proactive

We get things done.

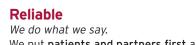
We see opportunities where others don't and challenge the status quo with a no-limits mindset.



Excellent

We exceed expectations.

We are **results oriented** and use best practices. We suggest ideas on how to improve and innovate.



We put patients and partners first and consistently deliver exceptional service. We act with **honesty and integrity** and never compromise safety, quality and the health of our patients.





Fresenius-Medical-Care



2,400+ dialysis

centers



260+ research sites



employees



200K+ dialysis patients



135K hemodialysis machines in operation



FRESENIUS MEDICAL CARE NORTH AMERICA FAST FACT

24K+ home dialysis patients



25M+ hemodialysis treatments per year



68 vascular ambulatory surgery centers



26 catheterization lab partnerships



50K+ patients in value based care programs

We are the only company in our industry bringing together our expertise in

fmcna.com



FreseniusMedicalCareNA

and the best-in-class service we provide to our customers.



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BILL VALLE Fresenius Medical Care North America



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Sundaresh, Shaila, MD

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Friends & Family join AIPNO in congratulating



Dr. Yatish Goyal

2020 Distinguished Physician of the Year on his Achievement

Congratulations!

PRESIDENT'S MESSAGE



Dear Members, Sponsors, Beneficiaries and Friends

Following the path shown by its predecessors, AIPNO has continued to grow its base and numbers since 1983. AIPNO draws its strength from the experience of old members and the energy of its young members.

AIPNO is a vibrant non-profit organization-501c(3) founded in 1983 geared towards enhancing the quality of healthcare by fostering excellence and professionalism in the practice of medicine and supporting efforts to improve the availability of healthcare. Our mission is to continue to enhance community involvement and coordinate with other local, national and international organizations through philanthropy

My presidency coincided with the worst pandemic this generation has seen: COVID-19. As a physician and a leader, I endeavored to create a positive change during these difficult times in collaboration with president elect Dr Dharmesh

Mehta, Board of trustee chair Dr Beejaadi Mukunda, the Executive Committee and AIPNO members.

In conjunction with SEWA International Our team led several initiatives to provide assistance for those affected by COVID-19. AIPNO dedicated their annual medical yatra to help local, national, and international communities in dire need of personal protective equipment. Our team along with several AIPNO members hosted the annual AIPNO fundraiser to raise funds for healthcare facilities, private practitioners, and the local foodbank. Team members used their time and talent to sew masks for local hospitals. Thus far, over 400 masks have been donated and 500 more are in production. AIPNO with SEWA also created a phone call triage process for Northeast Ohio to help direct questions to appropriate AIPNO physicians.

Furthermore, AIPNO and SEWA launched a 24/7 COVID-19 Convalescent Blood Plasma Registry for Northeastern Ohio. This national registry allows for plasma collection from donors who had complete COVID symptom-resolution to help save the lives of patients currently suffering from COVID-19. This massive task involved the collaboration of hundreds, who offered live-phone and social media support, and was overseen by the Food and Drug Administration (FDA).

Seeing the effects of COVID-19 on local university students in Northeast Ohio, we started an executive initiation in conjunction with SEWA to support the needs of them. I heard about the residential difficulties of many, especially international students, and strove to extend a helping hand. AIPNO partnered with several student affairs' offices along with student organizations to learn more about local needs to create a positive resolution for those so immensely affected by the pandemic.

Acknowledging the need for more information and stress-relief for healthcare workers combatting COVID-19, our team worked with several medical educators in order to create an informative web series to teach evidence-based medicine centered around COVID-19. These hour-long webinars gave participants an opportunity to ask questions and dispel myths about COVID-19 while learning how to combat this disease. The speakers included a wide-mixture of specialists topics including: an update on COVID 19; involvement of ACE and ARB medications in relation to COVID-19; the evolution of telemedicine during this time; the effects of the virus on the pediatric population; the impact on kidney health in relation to the virus; a hepatologist's perspective of the virus; the management of diabetes in COVID-19 patients; the acknowledgement of physician burnout and ways to avoid this fate; the involvement of GI system relative to the virus; and effective communication with patients and families affected by COVID 19.

This year we recruited many new members and utilized active members to achieve the mission of enhancing health care quality by fostering excellence and professionalism in the practice of medicine and supporting efforts to improve the availability of healthcare to under-served populations.

The Wellness of Health Care Professionals During COVID-19 webinar was also conducted by spiritual teacher Vivek Gupta. This provided physicians and participants an opportunity to learn skills on decompression and meditation during this difficult time. As part of the wellness initiative, AIPNO along with SEWA International worked with world-renowned singer, lyricist, and music composer Padma Shri Kailash Kher in order to create an

online concert dedicated to frontline COVID-19 Healthcare Workers. This concert, "Music is a Medicine of the Mind", drew several thousand viewers and was a monumental success.

In collaboration with SEWA International, our AIPNO Executive Committee, including Dr. Sundaresh and Dr. Ahluwalia, undertook a noble initiative labeled "Quilts for Kids". AIPNO members and volunteers around the community sewed quilts for local children's hospitals along with several dozen blankets. Furthermore, the committee is working with local homeless shelters in order to serve food to the most vulnerable patient-populations in Northeast Ohio. This initiative will continue for the next 24 months. They have also collaborated with world-renowned speaker and teacher Acharya Vivek to present on the Faces of Leadership via virtual forum on May 21st. The organization continues to provide groceries to the elderly, work with immigration issues for local residents and students, provide human resources for volunteering around local counties, and find transportation for patients wanting to be tested for COVID-19.

In collaboration with several other organizations, including SEWA and FICA, the organization has undertaken the enormous task of rallying support for the healthcare community and collaboratively impacting local, national, and international counties in a positive manner.

There was fun at the AIPNO Golf outing in 2020 organized by sports committee chairperson Dr. Arun Gupta. AIPNO is honored to contribute to various organizations in greater Cleveland that share our mission and vision.

We are in process of research endowment for underserved and minority student in Cleveland. We are glad to assist the community through education, research and service. We are in the process of establishing AIPNO Research Scholarship to encourage researchers to focus on community friendly projects. AIPNO has been awarding Medical Student Scholarship Awards for many years. This will be in addition to the existing scholarships.

The AIPNO Annual Fundraiser Gala is one of our most prestigious events. This event consists of a complimentary CME, Research Showcase, an awards ceremony, and a cultural program. We award scholarship to medical students and recognize a distinguished physician of the year who has been instrumental in the field of medicine. We are expecting more than 1000 participants this year. AIPNO fosters and encourages participation from high school students, medical students, residents, fellows, faculties, seasoned researchers, allied healthcare providers, community leaders, philanthropic practitioners, dedicated donors, and valued beneficiaries alike.

AIPNO has selected a major beneficiary every year since 1992. This year we are supporting - NKF "National Kidney Foundation"; which is a lifeline for all people affected by kidney disease, and Hattie Larlham Foundation; which creates opportunities for children and adults with intellectual and developmental disabilities.

I wish Dr. Mehta and his team a great success for 2021. I wish all of you a safe and prosperous year. I personally want to thank my team, and ancillary staff for helping me to implement our community work, education despite so many challenges.

Rupesh Raina MD President AIPNO 2020

PRESIDENT-ELECT & ENDOWMENT COMMITTEE REPORT



Dear AIPNO members, sponsors, friends and families,

I would like to welcome you all to the 37th Annual Gala and 8th Research Showcase along with 29th Fundraiser. I am honored to be the Endowment Chair of Fundraiser "Chiraag". I am thankful to our founders, our endowment committee and AIPNO Board of Trustees for this wonderful event.

Our mission cannot be fulfilled without the generous support of our sponsors. I would like to thank all the members and donors who have supported us throughout the year to help us achieve our goals.

We are pleased to support NKF - The National Kidney Foundation.

NKF is a lifeline for all people affected by kidney disease. As pioneers of

scientific research and innovation, NKF focuses on the whole patient through the lens of kidney health.

We are also supporting Hattie Larlham Foundation, which creates opportunities for children and adults with intellectual and developmental disabilities. They provide medical, residential, recreational and work training services to 1,600 Northeast and Central Ohio people with disabilities.

I extend my gratitude to our President Dr. Rupesh Raina, BOT Chair Dr. Beejadi Mukunda, Secretary Dr. Manmeet Ahluwalia, Past President Dr Harbhajan Parmar, Treasurer Dr Rajesh Saraiya and the whole executive committee for their unconditional support

I am very thankful to my lovely wife Hetal Mehta and my kids Vedi and Neil, and my parents for supporting me to serve AIPNO.

This gratitude cannot be complete without thanking our executive assistant Pam Pawelecki who has helped us in organizing all the events.

Again, on behalf of AIPNO, I want to express my sincere appreciations to our donors. I would like to thank them from bottom of my Heart.

"Alone we can do so little; together we can do so much" - Helen Keller

Sincerely,

Dharmesh Mehta, MD, Chair, Endowment Committee President Elect, AIPNO

CHIEF GUEST:

U.S. SENATOR SHERROD BROWN



A lifelong Ohioan, **Senator Sherrod Brown** has spent his career fighting for the Dignity of Work – the idea that hard work should pay off for everyone, no matter who you are, where you live, or what kind of work you do. He has held nearly 500 roundtables across Ohio, because he believes the best ideas don't come out of Washington – they come from conversations with Ohioans across our state. Building on his successful work to make the Earned Income Tax Credit permanent, Senator Brown has a plan to overhaul our tax code to put people first, and to make hard work pay off for more Americans. That includes putting more money back in the pockets of workers and families, giving workers more power in the workplace, making it easier to save for retirement and encouraging companies to invest in their greatest asset: the American worker. Senator Brown also believes we need to broaden our definition of work – caring for children or an aging parent is work, and so is getting an education.

Sherrod has fought for Ohio jobs and Ohio companies, he's fought against trade and tax policies that sell out workers, and he has taken on Wall Street greed. Sherrod pushed this country to save the American auto industry in 2009, and is fighting for Ohio's auto supply chain with legislation to get rid of tax incentives for auto companies to ship jobs overseas. He serves as the Ranking Member on the Senate Banking, Housing and Urban Affairs Committee where he played an instrumental role in passing the historic Wall Street reform law that established new consumer protections created the Consumer Financial Protection Bureau, and reined in big banks. He's fighting to end the corporate business model that puts short-term profits ahead of long-term investment in workers and communities, and to make it easier for everyone to find and afford a home. One of Sherrod's first votes in Congress was against the original NAFTA, and he has led the bipartisan fight for a trade policy that puts American workers and American businesses first. He led opposition to the Central American Free Trade Agreement, and he was a leader in the fight that helped kill the Trans-Pacific Partnership. In 2015, President Obama signed Senator Brown's bipartisan Leveling the Playing Field Act, the most significant improvement to our trade enforcement laws in more than a decade that led directly to key wins for the Ohio steel industry - including wins in cases filed by companies with plants in Ohio, like Nucor, U.S. Steel, ArcelorMittal, and AK Steel, which employ more than 8,200 Ohioans. In 2020, he voted for a trade deal for the first time in his career, after working to improve President Trump's first draft of a new NAFTA - he secured groundbreaking worker protections, including his Brown-Wyden provision that amounts to the strongest labor enforcement in American history in a U.S. trade deal.

Sherrod believes that quality, affordable health care is a right for all Americans, and he refused for years to accept Congressional health insurance until Congress passed the Affordable Care Act, which ensures Ohioans will never be denied care because of a preexisting condition. The senator now gets his health insurance through the same exchange system available to all Page 1 of 3 Americans. Senator Brown has a plan to bring down the cost of prescription drugs that one news organization said, "combines every idea drug lobbyists hate." He is also working to tackle the addiction crisis. The president signed Sherrod's bipartisan legislation to give Customs and Border Protection agents high-tech tools to screen for illegal opioids at the border, and he is working with Senator Portman to get Ohio law enforcement the same tools. Senator Brown also fought to protect Ohio's Medicaid expansion – our state's number one tool to get people into treatment.

Inspired by his faith, Sherrod is committed to social and economic justice. He joined Civil Rights legend Congressman John Lewis as co-chair of the Congressional delegation to commemorate the 50th anniversary of the march for voting rights in Selma in 2015, and made the pilgrimage to Selma for the Jubilee in 2019. Sherrod is fighting back against politicians and judges who erect more and more barriers to voting. As a former Ohio Secretary of State, Sherrod has long championed voting rights, and the Washington Post called his voter registration efforts, "probably the most intensive and wide-ranging in the nation." Sherrod is fighting to ensure that all Ohio children, no matter their zip code or the color of their skin, have the opportunity to succeed. He has joined with officials and community partners to launch My Brother's Keeper mentorship programs for boys and young men of color in cites across Ohio.

For more than a decade now, Sherrod has also convened a one-of-its-kind Ohio College Presidents Conference in Washington to discuss ways to leverage federal resources to promote higher education and job training in Ohio. Ohio is one the of the few states to have both its senators sit on the powerful Senate Finance Committee where one of Senator Brown's top priorities is protecting the retirement security Ohioans have earned over a lifetime of hard work. In 2017, Senator Brown helped secure permanent health care security for Ohio coalminers, and he continues to lead the fight for a bipartisan solution to the multiemployer pension crisis threatening millions of retirees, workers, and small businesses.

As the only Ohio senator in half a century to serve on the Senate Agriculture, Nutrition, and Forestry Committee Sherrod helped write the most recent Farm Bill that strengthened the farm safety net, improved conservation programs for our Lake Erie, and worked to combat childhood hunger. He helped secure Central State University's recognition as an 1890 Land Grant University – a designation for HBCU land grant universities that allows them to access particular funding – and authored and fought to secure investments ensuring the 1890s can expand their research capacity and outreach in the coming years.

Sherrod is the longest-serving Ohioan on the Senate Veterans Affairs Committee where he works to expand educational opportunities for veterans, service members and their families. As co-chair of the Senate Air Force Caucus, Senator Brown brought a congressional delegation of his colleagues to Wright Patterson Air Force Base in Dayton, and has secured important funding for base operations.

Sherrod was born and raised in Mansfield, Ohio, where he earned his Eagle Scout award and spent summers working on his family's farm. He is married to author and Pulitzer Prize-winning columnist Connie Schultz, and he is the author of three books: Desk 88: Eight Progressive Senators Who Changed America, Congress from the Inside: Observations from the Majority and the Minority, and Myths of Free Trade: Why America Trade Policy Has Failed.



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www.aipno.org

SPEAKER:

CLEVELAND MAYOR, FRANK JACKSON



On Jan. 2, 2018, **Mayor Frank G. Jackson** took the oath of office for his historic fourth term – which will make him the City of Cleveland's longest serving Mayor. During his time in office, Mayor Jackson has been an advocate for building equity and opportunity for all Clevelanders in all neighborhoods.

Mayor Jackson is a lifelong resident of the Central Neighborhood where he began his career in elected office as its City Councilman and, later, City Council President. He is a graduate of Cleveland Public Schools, Cuyahoga Community College and Cleveland State University – the latter from which he earned his bachelor's, master's and law degree. He began his public service career as an Assistant City Prosecutor in the Cleveland Municipal Court Clerk's Office.

Some of his accomplishments include:

City Finances and Operations

- Managing a citywide operating budget of \$1.2 billion, using five year budget projections and strict fiscal controls to reduce costs while maintaining service levels
- Developing a performance management program, a management training academy and a mentoring program for City employees to improve performance and accountability

Quality of Life

- Creating Cleveland's Plan for Transforming Schools, a plan that will lead to systemic change in Cleveland's schools and dramatic improvement in educational outcomes
- Bringing together Ohio colleges, universities, Cleveland Metropolitan School District and stakeholders to form the Higher Education Compact to help students succeed in college
- Improving the health of Clevelanders through the Healthy Cleveland Initiative, in partnership with Cleveland City Council and the four major local hospital systems

Public Safety

- Building partnerships with local, state and federal law enforcement agencies and community organizations to address the causes and impacts of gun and youth violence
- Using crime data analysis to target crime hot spots and drive down violent crime rates in nearly all major categories since 2006

Development

- Investing more than \$265 million in Cleveland's neighborhoods since 2007, on streetscapes, recreation
 facilities, and other capital improvements and working with the public sector to encourage more than
 \$7 billion in private development in Cleveland
- Collaborating with business leaders and labor unions to implement Community Benefits Agreements for private development projects, creating opportunities for Cleveland residents and businesses to benefit directly from investment occurring in the City
- Transforming the economy through Sustainable Cleveland 2019, a 10-year initiative to build a sustainable regional economy, encourage sustainable business practices and reduce environmental impact
- Advancing Cleveland's Downtown Lakefront Development Plan to encourage 3.5 million square feet in new development that encourages recreation, entertainment commercial maritime activity and economic development.

SPEAKER:

BRECKSVILLE MAYOR, JERRY N. HRUBY



Jerry N. Hruby began serving his ninth four-year term as Mayor of the City of Brecksville, January 2, 2020, and will be serving through January 1, 2024. He is also the City's Safety Director. And Acting Economic Development Director. Mayor Hruby began his career with the City of Brecksville in 1968 when he became a member of the Brecksville Police Department. He is a lifelong 72 year Brecksville resident and has been married to his wife Patricia for 49 years. Their adult daughter, Anna, also resides in Brecksville.

Mayor Hruby's slogan in his first mayoral campaign exemplifies the government of Brecksville and has been adopted as the City's slogan, "Building Our Future with Respect for Our Past." Brecksville, a historic Western Reserve Community founded in 1811, has received many statewide and local awards. We have been honored as one of the safest cities and one of the best cities for families in the nation. The Mayor is a strong supporter of the community's local historical association and has taken on the role of historian for the City government. He has

worked toward the preservation of artifacts, photographs and documents that tell the history of our community and its governance.

During Mayor Hruby's tenure in office, he has provided the vision and oversight for many important projects. These include a new County Library, a new 48,000 sq. ft. Community Center which houses the Recreation Department and its programs and activities, and expansion to the Community Center making it 98,000 sq. ft. with a Human Services wing, expanded Fitness Center and Therapy Pool; Know in 2020, adding an expansion to the Jack A Hruby Natatorium with an Activity Pool and a new outdoor Aquatics Center; Kids Quarters children's playground, Municipal Lake, a City-owned satellite postal unit, the RTA Park n Ride/City Parking Lot, downtown renovation programs and parking, the acquisition of the 83-acre Blossom Hill property and 102-acre Cleveland Tree Farm, the addition of many playing fields at the Blossom facility including a lighted full size fenced artificial surface facility, upgraded renovation of the City Hall playing fields, renovation of the historic Old Town Hall, expansion of the Service Department and Fire Station, and purchase and redevelopment of the former Brecksville-Broadview Heights School District bus garage compound on Stadium Drive.

Currently, a partnership with the Brecksville Broadview Heights Schools in the Construction of a new Elementary School and Field House at Blossom Hill. The district will construct the school and the city the field house which will be shared by both city and school. The facilities are planned to open in 2022. The Construction of a new Service Facility at Blossom Hill was completed in 2014 and the Stadium Drive material storage facility was constructed in the fall of 2012. In 2014-2015 the new Service Vehicle Storage and Horticulture Facility was constructed as phase II of the Stadium Drive plan.

Also in 2014 Brecksville began the design phase for a new Police Station that was constructed in 2018-2019. This new state of the 27,000 sq. ft. art facilities also home to the Chagrin Valley Dispatch Center that will be shared with the City of Independence. Broadview Heights Seven Hills, Cuyahoga Heights, Valley View, Brooklyn, Brooklyn Heights, Newburgh Heights and Brecksville. The new station has a 2 hour holding jail facility. Therefore it will utilize other full service jails in the region. The station also houses a 70 foot pistol/rifle firing range, "Safe Rooms" off the main lobby, evidence center and many other components for our staff and Canine.

The Bicentennial Obelisk Garden began in 2011 as part of the celebration and was completed in 2012; a lasting tribute to Brecksville's first 200 years. Two (2) fifty-year time capsules were buried at this site and are to be opened in 2061. The Obelisk was dedicated and the time capsules buried on July 1, 2012. Plans are under way for a historic walk from City Hall to the Obelisk displaying historic facts along the walkway as a manner in which to tell, in part, the story of significant events during the first 200 years, construction of walkway in 2020...

In the fall of 2013, a cooperative agreement between the city school district and the city resulted in the renovation of the Highland Drive School baseball field. The area was re-graded, new grass planted, renovated playing surface,

replacement of fence, dugouts and backstop all were installed. The field was ready for play in spring of 2014. We appreciate the cooperation of the school district who will share in its use with the city.

Under the Mayor's guidance, Brecksville won the 2003 "America in Bloom" award and was the 2003 national winner of the "Proven Winners Landscaped Areas Award." The city's Beautification Committee was created under the direction of Mayor Hruby and is an integral part of the volunteerism that oversees the design of city plantings and beautification and decorations throughout the community. This is our 21st Tree City Year Award. In 2016 a Community Garden was constructed on Stadium Drive across from the Horticulture Building. A committee made up by the Beautification Committee over sees this project. This garden has been a tremendous success and the gardeners in one of our 77 plots won First Place at the 2016 Cuyahoga County Fair for "Cucumbers". It is again sold out with waiting list for 2021.

The Mayor established an award winning city-wide recycling program in 1988 through the fine work and dedication of our residents and Service Department staff. It has expanded and added programs for older residents and those with special needs, and has enacted many other City improvements and additional City services such as leaf pick up, white goods, and discarded electronics.

Five years ago the Mayor and staff recognized this region and our country as entering a period of recession. The city's share of government funding began to decrease as well as the collection of income taxes. The Mayor and staff put together a plan that was agreed to by City Council which included reduction in staff by attrition, reduced spending in all categories, while at the same time maintaining the level of services to our residents and the maintenance of our facilities. This plan has worked and the city finds itself in the position that no layoffs have been required nor have we had a dramatic cut in services. The Mayor also serves on the City Planning Commission, Board of Zoning Appeals, Records Commission, and Investment Board, oversees Economic Development and the collection of Income Taxes and presides over the City Mayor's Court which has two Magistrates who hear all cases.

In 2009, Mayor Hruby was honored by the Northeast Ohio Area wide Coordinating Agency with the Walter F. Ehrnfelt, Jr. Award for outstanding regional contribution. The Mayor was much honored to receive this award for many reasons. First, because it is named after former Strongsville Mayor Walter Ehrnfelt. Mayor Hruby and Mayor Ehrnfelt were very good friends and worked on many civic and political projects together. Mayor Hruby delivered the eulogy at Mayor Ehrnfelt's funeral. Second, the award was presented to him by the late U.S. Senator George Voinovich, with whom Mayor Hruby has been a close associate for well over 30 years. Third, Mayor Hruby served for 10 years on the NOACA Board and was President of the Board as well as Chairman of the Transportation Improvement Plan and Chairman of the Environmental Committee. And last, it was an honor for the Mayor to receive this award in the presence of Anne Ehrnfelt, Mayor Ehrnfelt's wife and a close friend of the Mayor. For these reasons, Mayor Hruby stated, "Of the many awards I have received throughout my career, this one is uniquely significant due to my relationship with Mayor Ehrnfelt, first and foremost, and secondly because of my close relationship with Senator Voinovich and my friends at NOACA.

Mayor Hruby was appointed by Gov. John Kasich to The Ohio Turnpike Commission on June 30th, 2011 and was elected Chairman of the Commission on July 1, 2011. On June 30, 2013, the Mayor was reappointed to the commission now known as the Ohio Turnpike and Infrastructure Commission for an 8 year term; he remains its Chairman. "Each City Council I have had the distinct privilege to work with has partnered with our Administration and the community to see that together, we would accomplish the many goals we have set to improve our City facilities and services. The Administration's staff also played a major role in each and every project. It was our ability to work together, respect each other's positions, and to engage in dialogue that has made our goals reality. We must now be the stewards of what we have created and continue to serve our citizens by providing for their current needs, and planning and projecting their needs for the future." - Mayor Jerry N. Hruby

SPEAKER:

REPRESENTATIVE NIRAJ J. ANTANI

42nd HOUSE DISTRICT, OHIO



State Representative Niraj Antani is serving his third elected term in the Ohio House of Representatives. He represents the 42nd District, which covers most of southern Montgomery County. Having been elected at age 23, now age 29, he is one of the youngest currently serving members of the House. In addition, he is the second Indian-American state elected official in Ohio history, and the first Indian-American Republican. Antani serves as Vice Chairman of the Rules and Reference Committee and as Vice Chairman of the Committee on Insurance, and as a member of the Committee on Health, Committee on Public Utilities, and Joint Medicaid Oversight Committee.

During the Romney for President campaign in 2012, Antani worked for the Ohio State Director & Senior Adviser to the campaign. He has also worked for U.S. Congresswoman Ileana Ros-Lehtinen in Washington, DC, as well as U.S. Congressman Mike Turner in his Dayton office.

Antani was named to Forbes Magazine's list of the top "30 Under 30" people in the United States for Law & Politics in 2015. As well, the conservative media organization Newsmax named him the 2nd most influential Republican in the nation under age 30. In addition, in 2013 he was named to the "Top 30 Conservatives Under Age 30 in the United States" list by Red Alert Politics. Antani has received the Legislator of the Year Award by the AMVETS Department of Ohio for his work helping veterans, as well as the Friend of Community Colleges Award by the Ohio Association of Community College and the Distinguished Government Service Award by the Ohio Association of Career Colleges and Schools for his work for the betterment of higher education for the middle class. Antani received the 2018 "Making a Difference" award from the Miami Valley Down Syndrome Association for his work helping people with disabilities. He also was most recently awarded NFIB Ohio's 2020 Guardian of Small Business Award, which is awarded annually to one member of the Ohio House and one member of the Ohio Senate.

He earned a Bachelor's degree from The Ohio State University. Born and raised in Miami Township, Antani attended Miamisburg City Schools and is a graduate of Miamisburg High School. A strong conservative, Antani is a member of the NRA and volunteered for Dayton Right to Life. He is a member of the Rotary Club of Miamisburg, is the 2nd Vice President of the Miamisburg High School Alumni Association, and a former executive board member of the non-profit Dayton International Festival, Inc. He chaired the Ohio Republican Party Asian Pacific American Advisory Council and serves on the national board of the Republican State Leadership Committee's Future Majority Project. Antani has appeared on Fox News, MSNBC, PBS NewsHour, CNBC, C-SPAN, and Chuck Todd's radio show. In addition, he has appeared in the Washington Post, the Wall Street Journal, and in various NBC National News articles.

Antani currently resides in Miamisburg, Ohio.

KEYNOTE SPEAKER:

JOHN LANGELL, M.D., PH.D., M.P.H., M.B.A.



John Langell, M.D., Ph.D., M.P.H., M.B.A., was appointed by the Northeast Ohio Medical University Board of Trustees on July 24, 2019 to become the Northeast Ohio Medical University's seventh president, effective October 1, 2019.

Dr. Langell has more than twenty years of experience in higher education and has served in senior leadership positions in academic health care, industry, nonprofit organizations and the federal government.

In his most recent position, Dr. Langell served as vice dean for the School of Medicine as well as founder and executive director of the Center for Medical Innovation, both at the University of Utah. He was recruited to the University of Utah's Department of Surgery in 2006 as its director of acute care surgery and not long afterward also served as chief of general surgery at the George E. Wahlen VA medical Center.

During that same period, Dr. Langell, a veteran of the U.S. Air Force, maintained his reservist status while serving as CEO (Commander) of Air Force Health Care Facilities. Over the course of 11 years—2006 to 2018—he led four separate Air Force Reserve medical facilities. He was responsible for the leadership and management of all medical and allied health professionals as well as administrators.

Dr. Langell has specialized expertise in the treatment of diseases of the upper gastrointestinal tract, biliary tract and endocrine system (thyroid, parathyroid and adrenal glands). His clinical focus is in the application of advanced minimally invasive surgical techniques in laparoscopic surgery with special focus on diseases of the stomach, intestines, liver, gallbladder, pancreas and biliary tree. Additionally, he has expertise in the minimally invasive treatment of hernia disease, including abdominal wall and groin hernias, hiatal hernias, thyroid, parathyroid and adrenal glands.

Dr. Langell is well-known for his work as a minimally invasive gastrointestinal and endocrine surgeon, tenured educator, developer of advanced medical education programs, and federally-funded researcher. But he is equally known for his effective, appreciative and inclusive style as a leader, his expertise as an innovator and operator; and his forward-thinking approaches as a change agent and Lean-Six Sigma Black Belt.

With more than a dozen patents filings-six of which are licensed, three software copyrights and five companies of which he has been a founding partner, Dr. Langell is a supporter of research, enterprise, development and innovation.

Dr. Langell received his Bachelor of Science Degree at the University of California at Los Angeles. He received both his Doctor of Medicine (M.D.) and Doctor of Philosophy (Ph.D.) at Drexel University. Dr. Langell completed his surgical residency at Stanford University Medical Center and a residency in Space and Aerospace Medicine at NASA/ University of Texas Medical Branch (UTMB). During this period, he earned his Master of Public Health Degree at UTMB while researching pharmacological countermeasures for space radiation toxicity. He also has a Master of Business Administration (M.B.A.) Degree, which he obtained in the Executive MBA program at the University of Utah.

Dr. Langell is married to Dr. Sara Whittingham, a former active duty flight surgeon, who currently practices anesthesiology at the University of Utah and the VA medical center.

The couple has two daughters, Sydney and Grace.

KEYNOTE SPEAKER:

STANTON L. GERSON, MD

Professor, Department of Medicine, School of Medicine

Professor, Department of Environmental Health Sciences, School of Medicine

Director, Case Comprehensive Cancer Center

Director, National Center for Regenerative Medicine, School of Medicine



Stanton Gerson, MD, is the Director of the Case Comprehensive Cancer Center and the National Center for Regenerative Medicine at Case Western Reserve University, where he is the Asa and Patricia Shiverick—Jane Shiverick (Tripp) Professor of Hematological Oncology and Case Western Reserve University Distinguished University Professor. In 2012, he was the recipient of the Case Western Reserve Medal for Excellence in Health Science Innovation, the highest honor bestowed by the School of Medicine to those advancing research, education and health care. He is past president of the Association of American Cancer Institutes (2016-2018) and a member of the American Association of Physicians since 1997, and has been member and Chair of numerous NIH study sections including the National Cancer Institute (NCI) Board of Scientific Advisors. He serves on the Executive Advisory Board of 11 NCI designated cancer centers. He has earned multiple National Institutes of Health (NIH) grants and published more than 258 journal articles, 275

abstracts and 37 book chapters and 18 patents. Dr. Gerson has distinguished himself in a number of realms including his research in DNA repair and stem cell therapy, which has resulted in numerous publications and patents. Three of his discoveries are in clinical trials as new cancer therapies. He is also the co-editor of the internationally recognized textbook, "Gene Therapy of Cancer Translational Approaches from Preclinical Studies to Clinical Implementation 3" (Elsevier Limited, Oxford, United Kingdom) and the textbook "Clinical Hematology." Dr. Gerson is foremost, a mentor and educator for the next generation of compassionate cancer research scientists and clinicians.

Research Interests

Dr. Gerson's research interests are in the areas of stem cells and DNA repair. In his stem cell research, he developed mesenchymal stem cells as a therapeutic infusion for blood stem cell transplantation and for the correction of genetic disorders. This therapy is approaching FDA approval. He identified a gene therapy strategy method that creates drug-resistant stem cells capable of selectively repopulating the recipient without the need for high dose toxic therapy. This strategy is now used experimentally and clinically throughout the country. In the area of DNA repair, he developed inhibitors of DNA repair to improve the efficacy of anti-cancer agents. Both are currently in clinical trials. Finally, Dr. Gerson has developed transgenic mouse models that examine the role of critical genes in the stability of stem cell populations over the lifetime of the animal. These studies may predict stem cell diseases of aging and cancer. His research has generated 12 patents in the area of gene therapy and cancer drug development that have been licensed to three companies.

2020 BENEFICIARIES



National Kidney Foundation™

Fueled by passion and urgency, National Kidney Foundation is a lifeline for all people affected by kidney disease. As pioneers of scientific research and innovation, NKF focuses on the whole patient through the lens of kidney health. Relentless in

our work, we enhance lives through action, education and accelerating change.

The National Kidney Foundation was founded in 1964 after the work of the DeBold family to raise awareness and support kidney patients broadened in scope and advocacy thanks to medical advancements, like the Teflon shunt that allowed for repeated access to a patient's blood and the success of sibling transplants. Over the next 40 years, NKF positioned itself as a reputable source for information on several issues related to kidney disease and has remained committed to supporting kidney disease patients and their families as well as increasing awareness. The Northern Ohio division of the NKF was established over a decade ago to provide life-saving patient support and community education programs to residents in a 32-county territory in Northern Ohio.

The NKF was responsible for developing the first broadly accepted clinical practice guidelines in nephrology, which eventually became known as KDOQI—Kidney Disease Outcomes Quality Initiative. The first guidelines were published in 1997, and today there are 12 guidelines, which are setting the standards for treatment of all aspects of kidney disease and have made a major difference in the quality of care for kidney patients worldwide.

Today, the National Kidney Foundation participates in research that is helping advance knowledge about chronic kidney disease, treatment and patient outcomes. Test results from NKF's Kidney Early Evaluation Program are studied and analyzed to help doctors find ways to improve outcomes and better treat kidney disease in specific, at-risk populations. In 2011, NKF also launched its first ever cross-sectional multi-site study that assessed how chronic kidney disease is being identified and managed in those most at risk—Type II diabetic patients.

The Foundation realizes there is still much more to do and believes that we are poised to meet the public health challenge of chronic kidney disease. Throughout our history, up until today, Ada DeBold's legacy of providing education and support to those touched by kidney disease continues to be a guiding light.



As a pediatric nurse, Hattie Gadd Larlham witnessed first-hand the challenges faced by parents of babies born with profound disabilities. In 1961, Mrs. Larlham was so moved by the plight of her neighbors, whose daughter, Alice, had been born with significant disabilities, that she became determined to help. She left her highly respected post at Robinson Memorial Hospital and dedicated her time to

caring for baby Alice from the comfort of the Larlham family's farmhouse in Mantua, Ohio. With the help of her family and community volunteers, Mrs. Larlham soon welcomed into their home many more babies and young children with severe developmental disabilities. By 1963, Mrs. Larlham had officially founded The Hattie Larlham Foundation, and began planning the construction of the Hattie Larlham Center for Children with Disabilities (the Center).

Today, on the property where the Larlham farmhouse once stood, the Center remains a safe haven and source of hope for children and adults with profound disabilities, providing continuous medical care, educational opportunities, and life enrichment programs.

Hattie Larlham also provides substantial services at the community level. Residential services include: five group homes for medically fragile people, 13 supported living environments in Summit County for more independent adults, and 40 community homes for adults of varying abilities in Franklin and Delaware counties. Hattie Larlham is proud to offer respite, in-home care, and shared living services to assist people with disabilities and their families. Additional programs for children and adults with disabilities offered throughout Northeast and Central Ohio include: Adult day support programs, employment services and work training, the Dahlberg Gibson Learning Center, and Franklin County Recreation, an evening and weekend social activity program for adults with disabilities.

In 2021, Hattie Larlham will celebrate 60 years of providing care and support to the most vulnerable within our communities. To learn more about the important work that Hattie Larlham does, and for information about supporting the organization, visit: www.hattielarlham.org

AIPNO Beneficiary History

- 1993 Cleveland Sight Center
- 1994 Templum house
- 1995 Project Act
- 1996 Providence House
- 1997 Boys Hope
- 1998 The Help foundation Inc.
- 1999 Cleveland Sight Center
- 2000 Center for Prevention of Domestic Violence
- 2001 The City Mission
- 2002 Make-A-Wish Foundation
- 2003 Membership for a Safer Cleveland
- 2004 Cystic Fibrosis Foundation, Rainbow Chapter
- 2005 Leukemia and Lymphoma Society Inc.
- 2006 ALS Association
- 2007 Ronald McDonald House
- 2008 MetroHealth burn fund
- 2009 The Lymphoma & Leukemia Society, Northern Ohio Chapter
- 2010 The Diabetes Association of Cleveland
- 2011 Cleveland Metropolitan School District
- 2012 The American Heart Association
- 2013 The Alzheimer's Association, Cleveland Area Chapter
- 2014 The Kidney Foundation of Ohio
- 2015 Minds Matter, Cleveland
- 2016 Scott Hamilton C.A.R.E.S. Foundation
- 2017 Recovery Resources
- 2018 Benjamin Rose Institute on Aging
- 2019 WomenSafe, Inc.
- 2020 National Kidney Foundation Hattie Larlham Foundation



2020 DISTINGUISHED PHYSICIAN OF THE YEAR

DR. YATISH GOYAL, M.D.



Dr. Yatish Goyal is an internal medicine specialist fulfilling the role of Chief of Staff at the Medina Hospital, a Cleveland Clinic facility. He is also serving as the Medical Director at both Sanctuary of Medina and Life Care Center of Medina in Medina, OH.

He has been board certified in Internal Medicine for over 20 years and specialized in the management of chronic diseases, cardiology, diabetes, and geriatrics. Dr. Goyal joined the staff at Medina Hospital in 2000 and has fulfilled multiple administrative roles such as Chairman for the Department

of Medicine, Treasures, and Vice Chief of Staff in the past. Additionally, he has been a member of the Board of Trustees twice for the Cleveland Clinic Community Physician Partnership Quality Alliance, from 2012 – 2014 and 2016 – 2019.

Dr. Goyal received his MBBS with Honors at the Nalanda Medical College in Patna, Bihar, India in 1993 alongside his CMO from the Dr. Ram Manohar Logia Hospital in 1994. He then went on to complete his internship and residency at the Catholic Medical Center & Albert Einstein College of Medicine in New York, NY in 1997.

He is actively involved in research and education, a member of The Ohio State University in Columbus, OH as an Adjunct Clinical Professor since July of 2003.

Over the years, he has garnered attention through awards and honors such as Physician of the Year (2017), Physician of Distinction (2012, 2013), and Recognition Award from the Department of Cardiology's Syncope Clinic under the Cleveland Clinic Foundation.

AIPNO EXECUTIVE MEMBER OF THE YEAR



Vikas Jain M.B.B.S.

Vikas Jain, MDRadiologist with skills in Neuroradiology, body imaging and MSK imaging. Associate program director for the residency program at Case Western Reserve University MetroHealth campus. He graduated from Maulana Azad Medical College and completed a Fellowship at the University of Iowa Hospitals and Clinics.

Dr. Jain's academic interests include head and neck radiology, being a Committee member in ACR, ASHNR and ASNR, and working on scholarly projects with residents and medical students. Hailing from

Westlake, Ohio, he enjoys gardening, koi pond, National parks, nature, and Indian History. His favorite things to do in Cleveland are hiking and biking in Cuyahoga National Park, enjoying the waterfront of Lake Erie, boating, kayaking and jet skiing. Café Tandoor is his favorite restaurant.

One little know fact about Vikas is that although he is afraid of deep water, he still manages to go out parasailing, boating and jet skiing.

AIPNO EXECUTIVE MEMBER OF THE YEAR



Saloni Khatri, MD

Saloni Khatri, MD is an Internal Medicine physician who has been practicing Medicine for 16 years. After being in a private practice for a decade, she joined Cleveland Clinic, Ohio as a staff physician 6 years ago. She completed ophthalmology residency and practiced in India, prior to moving to United States. Dr. Khatri did research fellowship at Case Western Reserve University where she was involved in ophthalmology research, and publication prior to joining internal medicine residency at University of Toledo. She treats hypertension, diabetes, hypothyroidism, dyslipidemia and many other medical conditions. Her focus is on the

holistic approach to patient care, their mental well-being and preventive care. She feels that her profession gives her the opportunity to look at many lives closely and she is grateful that she is able to assist people in their journeys of physical and mental health.

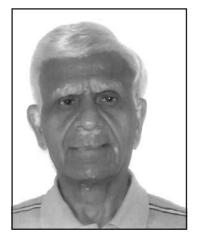
Her vision is to inspire the awareness that each of us has potential for unconditional happiness within us. She is an active student of philosophy and finished a certified 18-month course through Academia of Sanskrit research and Indic studies in 2018. Dr. Khatri is currently enrolled in Science of Wellbeing from Yale University. She finished a course on Inner engineering in 2020. She has been part of numerous service missions, silence retreats and self-development camps. She also serves as a director on the board of Cleveland Chapter of a worldwide Non-Profit organization-Chinmaya Mission, through which she continues to help in organizing various workshops and events for the community. She has a special interest in mindfulness, yoga, spirituality and meditation. She is an avid reader. Her other interests include traveling and writing. She published a poetry book-Sum of my sins in 2015, which is a collection of poems inspired by inward journey.

Dr. Khatri is proud to serve in AIPNO under the visionary leadership. She loves her work as internist and is grateful that it gives her a platform for service with meaning and purpose. She aspires to be able to make a positive contribution to the world around her with compassion, kindness, humility and in that process inspire the love for learning the art of happiness in all.

"Be the reason someone smiles. Be the reason someone feels loved and believes in the goodness in people." from the Light in the Heart.

LIFETIME ACHIEVEMENT AWARD:

SHASHIN SHAH, M.D.



AIPNO PREAMBLE

The Association of Indian Physicians of Northern Ohio was founded in 1983. It represents physicians of India living in Northern Ohio covering the area from Elyria - Sandusky in west to Warren - Youngstown in east to Akron - Mansfield in the south. Rich cultural environment, stable Midwestern family tradition and excellent medical institutions coupled with the most convenient location in the nation and unlimited economic opportunities have made Cleveland and Northern Ohio have a desirable place to raise a family for people from different parts of the USA and world. So, gravitation of the physicians of India was a natural phenomena in the 50s and 60s with a rapid growth in 70s and 80s which has not stopped yet. Today it is estimated that there are well over 500 plus Indian physicians calling Northern Ohio a 'Home Away from Home'. The Indian Physicians are engaged in various disciplines

of the medical profession such as Post Doctoral Training, Primary Care, Specialized -Super specialized care, Research, Academic, and Administrative to name a few. Their contribution to medicine, education, culture and economy of the area is significant and note worthy. It is also pleasure and pride to note that a good number of our children are studying in various medical schools of Northern Ohio to become DOCTORS.

When we moved to Cleveland in 1976 we soon found that Cleveland was the hub of medical activities of the Northern Ohio area and a magnet for people from many nationalities of the world of which the Asian Indians had earned a good name in American society by their professional and cultural contribution. But, we were surprised to notice that there was no medium or method for the Indian doctors to get together to develop camaraderie and to share and exchange their views and experience; to be heard and informed and to mingle and merge into the society - Indian as well as American.

We had heard the success stories of the Indian Medical Associations in many cities in America. We wondered WHY NOT A MEDICAL ASSOCIATION in CLEVELAND?

THE INTRODUCTION

We mentioned this to a few of Indian doctors at a meeting of the medical staff of St. Alexis Hospital in Cleveland. They were surprised and showed interest. They told us to write down to describe our idea and necessity of it with a plan to implement them. They, however, cautioned us that such attempts in the past had failed. When we talked to other Indian doctors in the community the response and information were similar. Some of them had questions and curiosity to know the purpose and need for a doctors' association when there was already an association for doctors called the Cleveland Academy of Medicine. Their concern was it may be construed as a splinter, an ethnic or a political group. Some thought that it may isolate us from our colleagues causing loss of referral and decline in revenue. Others questioned the practicality and complexity to run an organization because it required time and commitment away from the practice and family. A few of them expressed their fear of domination by a group from certain alma maters or a certain medical specialty. In spite of all those concerns late Dr. K.C.Bhaiji and late Dr.S.Silvaraj gave us encouragement & support for the project told us to 'Go for it'.

MISSION IMPOSSIBLE?

'Ekla Cholo, Ekla Cholo Re__'

(March alone with or without followers) Rabindranath Tagore, Nobel Laureate poet

1) Armed with the foregoing discussion and dialogue with the doctors we prepared a list of Objectives, Possibilities, Benefits and Opportunities to Address to address their genuine concern. We felt it would help the doctors to realize and accomplish their life's mission and objectives without any side effects. The list is meant to bring doctors together to develop collegiality and camaraderie among themselves and create a vehicle to reach out to the Indian community as well as the general population. It could be a medium and method for doctors to participate and partake in various medical opportunities such as teaching, business, speaking, seminar, research, and volunteering medical missions here as well as in India, just to name a few.

- 2) We created a list of doctors in Northern Ohio using the roster of the area hospitals, looking through the telephone books, and also spreading words in the Indian communities in various cities.
- 3) We tried to reach out to as many doctors as possible either meeting them personally, through phones or at the Indian community events to inform and invite them to come to the meetings for their participation.

MEETINGS + PARTICIPANTS* + DISCUSSION = DECISION

The first meeting was a launch meeting at our house in the summer of 1982. About ten to fifteen doctors were present at the meeting. We presented a summary of our efforts and response by the doctors to the list of objectives and opportunities. The participants exchanged their views and opinions with knowledge and practical, pragmatic suggestions. It was felt that there was overall significant and genuine interest for the project. The group decided to meet frequently and everybody was requested to recruit more doctors to participate to make it a reality. We had several meetings since then and the number of participants grew significantly. (*Refer the list) There was consensus to arrange a general body meeting of the Indian Doctors of Northern Ohio to form an association.

HAPPY BIRTH DAY to AIPNO!

The inauguration dinner meeting on July 10, 1983 at the ornate Mather Hall of the Cleveland State University was a gala affair attended by over 150 physicians with their spouses. Graduates from various medical schools of India and doctors in practice in various medical specialties in Northern Ohio gave inspiring speeches and requested medics to vote for the association. The general body unanimously approved the formation of the association with the name of the new born baby as ASSOCIATION OF INDIAN PHYSICIANS of NORTHERN OHIO (AIPNO). The general body appointed Dr. K.C. Bhaiji, Dr. S. Silvaraj, Dr.T.J. Maximin, Dr. Mariama Thomas and Dr. Shashin Shah to the Ad Hoc committee to prepare the By Laws and Constitution. The newly formed AIPNO's first action was a proposal for a donation of \$1,000.00 to the Indian Scholar Chair at CSU as one of the objectives of the association. The members unanimously and wholeheartedly approved it and the audience applauded it thunderously and the CSU accepted it graciously.

The Ad hoc committee selected Dr. Shashin Shah as the chairman and in charge to prepare the By Laws and Constitution of AIPNO. The By Laws and Constitutions of other Indian Med. Assoc. in USA were referred and Robert's book of Parliamentary Procedure was used as a legal guide to prepare the document with special attention given to incorporate our special Objectives and Mission as described in the list. The final draft was approved by the general body in the fall of 1983. At the meeting the general body set December 2, 1983 for the election of members of the Executive Commit.

ELECTION

The announcement was sent to the Indian Physicians in the Northern Ohio to submit their names to the Election Committee to serve on the nine members Executive Committee for the year 1983-1984. The response was overwhelming. The election ran smoothly and amicably. It was also satisfying and heart warming to see that the elected nine members of the committee were representatives of various parts of Northern Ohio fulfilling the first and foremost tenet of the AIPNO. Dr. Shashin Shah was elected as the first president of the AIPNO for the fiscal year 1983-1984.

THE JOURNEY!

AIPNO had a good start. It made big news not only in the Indian community but, also in the medical community at large as well as in the hospitals where the Indian Doctors were practicing. We were congratulated and invited by the Case Western University Hospital of Cleveland for an evening get-together and tour of the hospital with the presentation of new MRI (original name was NMR) machine first in the Cleveland.

We approached medical groups of other Nationality and formed a coalition. Dr. Shashin Shah represented the coalition as an invitee at the monthly business meeting of the Cleveland Academy of Medicine.

Dr. Shah represented AIPNO at the Inauguration meeting of AAPI in 1984 in Boston and AIPNO became the Founding member of AAPI.

Organized a Wak-a-thon with FICA in Cleveland for the Statue of Liberty Centennial celebration. Raised about \$10,000.00. Andrew Cuomo, the Mayor of New York City enshrined our efforts at the Statue's Hall of Fame.

Here is summary of other accomplishments and involvements of AIPNO over the years. Joined FICA as a sister organization and participated in many cultural and community activities and contributed to its charitable activities.

- The first and only the Indian Independence Day parade with float in Cleveland Health Fair in cooperation with the Cleveland State University- 1984.
- Annual Health Fair with BAPS temple and Shiva Vishnu Temple since 1985. Sponsored Medical Camp in Bidada, Kutch, India.
- Medical Service and donation for the Tsunami hurricane, India. Medical Service and donation for Katrina hurricane, USA.
- Annual Chirag fund raising for various medical related organizations and to create an Endowment fund for the future. The fund has accumulated about One Million+ dollars. Annual Medical Yatra in various cities in India.
- Medical Research Poster contest among the doctors in training at the AIPNO annual day. Annual Tennis and Golf tournaments. CME cruises.
- Karaoke singing talent night.
- Published first Yellow page style Directory of the Indian Doctors in northern Ohio

We understand that the list may not be complete, but we thought that these are unique, outstanding and trend-setting accomplishments and demonstrate AIPNO's multi-facet personality. We may have missed other important milestones. We apologize for it. Let AIPNO know about it. Please, remember that this is not the END of the journey.

Poet Robert Frost wrote: 'I have promises to keep and miles to go before I sleep!'

AIPNO NO DOUBT HAS A BRIGHT FUTURE AND MORE RESPONSIBILITIES.

We think that AIPNO should recruit and encourage young/second generation ofIndian doctors to come forward and take the helm to take it to a higher plateau and align with the 21st centaury.

The name of the doctors* who gave their valuable time and expertise to make it happen. Shashin Shah, Arunika Shah, K.C. Bhaiji, S. Silvaraj, T.J. Maximin, Mariama Thomas, Shyam Pathak, Kalyani Pathak, Vinu Mankad, Gita Gidwani, Nalini Zaveri, Arvind Shah, Manu Domadia, Gautam Kapadia, Hiren Adhvaryu, Sukumar Roy, Dinesh Patel, Umakant Purohit, Niraj Julka, Santa Kampani, Mohan Durve, Shashidhar Kori, S. Sundaresh, Raja Shekar, Excuse us if we have missed some names. Please let the AIPNO officers know to correct the omission.

Shashtra Shah

It was an honor and privilege to serve on AIPNO.

Thank you all who helped make it happen.

Respectfully submitted,

Armica Why

Drs. Arunika N. Shah & Shashin P. Shah



ACCOUNTANT'S COMPILATION REPORT

Board of Trustees and Members of the Finance Committee Association of Indian Physicians of Northern Ohio Cleveland, Ohio

Management is responsible for the accompanying financial statements of Association of Indian Physicians of Northern Ohio (a non-profit organization), which comprise the statement of financial position as of December 31, 2019, and the related statement of activities for the year then ended in accordance with accounting principles generally accepted in the United States of America. We have performed a compilation engagement in accordance with Statements on Standards for Accounting and Review Services promulgated by the Accounting and Review Services Committee of the AICPA. We did not audit or review the financial statements nor were we required to perform any procedures to verify the accuracy or completeness of the information provided by management. Accordingly, we do not express an opinion, a conclusion nor provide any form of assurance on these financial statements.

Management has elected to omit substantially all of the disclosures and the statement of cash flows required by accounting principles generally accepted in the United States of America. If the omitted disclosures and the statement of cash flows were included in the financial statements, they might influence the user's conclusions about the Organization's financial position, changes in net assets and cash flows. Accordingly, the financial statements are not designed for those who are not informed about such matters.

Supplementary Information

The supplementary information contained in Schedules I and II is presented for purposes of additional analysis and is not a required part of the basic financial statements. The information is the representation of management. The information was subject to our compilation engagement; however, we have not audited or reviewed the supplementary information, and, accordingly, do not express an opinion, a conclusion, nor provide any form of assurance on such supplementary information.

We are not independent with respect to Association of Indian Physicians of Northern Ohio.

Dingus and Daga, Arc.
Shaker Heights, Ohio

August 24, 2020

20600 Chagrin Boulevard · Suite 701 · Shaker Heights · Ohio · 44122 · 216.561.9200

ASSOCIATION OF INDIAN PHYSICIANS OF NORTHERN OHIO STATEMENT OF FINANCIAL POSITION

December 31, 2019 (With summary financial information for 2018)

	Without Donor Restrictions	With Donor Restrictions	To	otals 2018		
ASSETS	restrictions	Trestrictions .	2019	2010		
Cash	\$ 43,910	\$ 200,109	\$ 244,019	\$ 212,944		
Contributions receivable	6,279	Ψ 200,109	6,279	19,750		
Investments	233,918	1,238,475	1,472,393	1,306,882		
Due from unrestricted fund	255,710	23,347	23,347	39,676		
Due from restricted fund		25,547	23,347	9,582		
Due from restricted fund				9,362		
TOTAL ASSETS	\$ 284,107	\$ 1,461,931	\$ 1,746,038	\$ 1,588,834		
LIABILITIES AND NET ASSETS						
Accounts payable	\$ 11,248		\$ 11,248	\$ 33,968		
Accrued and withheld payroll taxes	2,840		2,840	2,763		
Accrued contribution	,	\$ 58,269	58,269	5,000		
Due to unrestricted fund		,	-	9,582		
Due to restricted fund	23,347		23,347	39,676		
TOTAL LIABILITIES	37,435	58,269	95,704	90,989		
NET ASSETS						
Unrestricted	7,337		7,337	10,800		
Board designated functioning						
as an endowment	239,335		239,335	208,866		
Temporarily restricted						
Medical Yatra		185,848	185,848	141,892		
Research showcase		23,196	23,196	53,925		
Permanently restricted		1,194,618	1,194,618	1,082,362		
	246,672	1,403,662	1,650,334	1,497,845		
TOTAL LIABILITIES AND						
NET ASSETS	\$ 284,107	\$ 1,461,931	\$ 1,746,038	\$ 1,588,834		

ASSOCIATION OF INDIAN PHYSICIANS OF NORTHERN OHIO STATEMENT OF ACTIVITIES

Year Ended December 31, 2019 (With summary financial information for the year ended December 31, 2018)

	Without Donor	With Donor		To	tals	
	Restrictions	Restrictions	20		2018	
REVENUE	restrictions	restrictions				2010
Medical Yatra contributions		\$ 63,277	\$	63,277	\$	49,355
Chiraag contributions		23,500		23,500	*	9,250
Other contributions	\$ 2,797	,		2,797		_
Membership dues	2,775			2,775		5,575
Annual dinner	,	71,615	,	71,615		130,730
Special events	24,087	ŕ		24,087		98,483
Investment income	36,991	194,216		31,207		(55,090)
Satisfaction of restrictions:				•		, ,
Investment fees on donor restricted funds	5,535	(5,535)				
Donations/scholarships	108,741	(108,741)				
Transfer for operations (2%)	21,645	(21,645)				
Medical Yatra direct expenses	4,354	(4,354)				
Research showcase direct expenses	86,850	(86,850)				
TOTAL REVENUE	293,775	125,483	4	19,258		238,303
EXPENSES						
Medical Yatra	4,354			4,354		29,632
Continuing education costs	1,975			1,975		3,069
Annual dinner	79,327		,	79,327		107,735
Special events	23,067		2	23,067		77,608
Scholarships and donations	111,941		1	11,941		96,000
Wages	19,688			19,688		19,976
Professional fees	8,061			8,061		8,339
Consulting	2,821			2,821		-
Office expenses	2,192			2,192		4,549
Taxes	1,769			1,769		1,740
Insurance	1,375			1,375		1,375
Local travel	466			466		295
Telephone	508			508		609
Bank and investment fees	9,225			9,225		8,852
TOTAL EXPENSES	266,769		20	56,769		359,779
Change in net assets	27,006	125,483	1:	52,489		(121,476)
NET ASSETS - Beginning	219,666	1,278,179	1,49	97,845		1,619,321
NET ASSETS - Ending	\$ 246,672	\$ 1,403,662	\$ 1,63	50,334	\$	1,497,845

ASSOCIATION OF INDIAN PHYSICIANS OF NORTHERN OHIO SCHEDULE I - SATISFACTION OF RESTRICTIONS

Year Ended December 31, 2019

		Temporarily Restricted				Permanently		
	Unrestricted		Research	1	Medical	R	estricted	
			Showcase Yatra		Yatra	Endowment		
FROM PERMANENTLY RESTRICTED ENDOWMEN	Т							
Investment fees	\$	5,535				\$	(5,535)	
Donation/scholarships		78,269					(78,269)	
Transfer for operations								
(maximum 2% of average endowment)		21,645					(21,645)	
		105,449					(105,449)	
FROM TEMPORARILY RESTRICTED								
Medical Yatra direct expenses		4,354		\$	(4,354)			
Medical Yatra scholarships and donations		14,967			(14,967)			
Annual meeting direct expenses		86,850	\$ (86,850)					
Annual meeting scholarships and donations		15,505	(15,505)					
		121,676	(102,355)		(19,321)			
TOTAL	\$	227,125	\$ (102,355)	\$	(19,321)	\$ ((105,449)	

ASSOCIATION OF INDIAN PHYSICIANS OF NORTHERN OHIO SCHEDULE II - MANAGEMENT AND GENERAL EXPENSES

Years Ended December 31, 2019 and 2018

		Totals					
		2018					
Wages	\$	14,688	\$	14,976			
Professional fees		8,061		8,339			
Scholarships and donations		3,200		15,550			
Consulting		2,821		-			
Office expenses		2,192		4,549			
Taxes		1,387		1,358			
Insurance		1,375		1,375			
Telephone		508		609			
Local travel		466		295			
Bank and investment fees		274		289			
TOTAL	_\$	34,972	\$	47,340			

New Year Gala 2019

After receiving tremendous and enthusiastic response the year before, we hosted our family friendly New Year's Eve Party again on 31st December 2019 at Cleveland Marriott East, in collaboration with other local community organizations. It was a fundraiser to benefit family services. The event was supported by Margaret Wong and Associates (Attorneys at Law), Howard Hanna Real Estates (Chintan and Lipi Shah), Hegemon Group International (Rajiv Choksi) and Dingus and Daga Inc (CPAs). We are proud to say that over 200 people attended the Party making the event a grand success. Cleveland Indian Community enjoyed non-stop DJ by Desi Soundz Entertainment, live dhol, and delicious food provided by Saffron patch. We had a photo booth with party props for people to create long lasting memories. We had a dance performance by Dr Sangita Mehta, Dr Hetal Mehta and Seysha Mehta. We also had a kids performance by Vedi Mehta, Neil Mehta, Arya Podar and Meera Masurekar. The dance was choreographed by Dr Sangita Mehta and Poonam Podar. Dr Mukul Pandit amazed everyone by singing melodious songs. We welcomed 2020 with a champagne toast at 12 midnight. Child supervision was also provided and kids enjoyed pizza, cookies, face painting, henna tattoo etc. We provided complimentary valet parking and offered discounted room rental at Marriott. All in all a complete fun package. Both the New Year parties were a huge success encouraging us to continue to organize these kinds of events in future. We believe AIPNO New Year's Eve Bash is an excellent medium to highlight AIPNO and further enhance our mission. We want to thank our AIPNO executive committee, sponsors, supporters and other people without whom this event wouldn't have been possible. This is the beginning of a movement and with the support of our AIPNO family, we look forward to bringing such quality family friendly collaborative events and entertainment in the future.



🧒 AIPNO Wishes You a Happy New Year 2020

Karoke Night

Karoke Night "After a three-year hiatus, AIPNO celebrated the long-awaited return of Karaoke Night on Saturday, March 7th, 2020. The event was held at Marriott Beachwood, where about 125 guests came together for an evening full of Bollywood songs and dance, as well as dinner catered by Tadka Restaurant. Dr. Kalpana Varma served as emcee for the evening, which began with a rousing game of Antakshari to loosen things up. Antakshari had large participation, mainly by senior members. Following the ice-breaker, renowned classical vocalist Sugaata Chatterjee delivered two wonderful songs and set the stage for the night's performances. Dozens of incredible crowd-pleasing Bollywood numbers followed, including songs like Ghunghru toot gaye from movie War, Piya Tose Naina Lage Re from the classic film Guide, Ik Rasta Hai Zindagi from the hit film Kaala Patthar, Dil Hai Chhota Sa from the popular movie Rosa, Dard e

dil dard e jigar dil main jagaya aapne from late Rishi Kapoor's famous movie Karz. AAj ki raat hona hai kya from cult movie DON 2, Kajra mohabbat wala from old movie Kismat etc etc. Few kids surprised everyone with their melodious singing. Among the vocalists, there was also a beautiful instrumental performance. Karaoke Night was a joyous hit among attendees, and many are already selecting pieces to perform next year. Let's hope we all stay healthy as we look forward to next year!"







SPORTS COMMITTEE EVENTS

Chair: Arun Gupta, MD

Tennis Tournament in September 2020

A Tennis tournament was organized for the first time for AIPNO members and their families by Dr. Ravi Krishnan. It received enthusiastic participation by physicians, other health care professionals and a couple of high school students from the AIPNO families. Around 20 participants played in a round robin league for three hours on July 25th, 2020 at Mayfield Village Racquet Club. Participants enjoyed a lot of tennis and made new friends. Participants enjoyed packed lunches after the tournament while maintaining social distancing and other COVID precautions. This tennis tournament would most likely become a permanent annual event for the AIPNO families.









Golf Outing at Signature of Solon Country Club

Medical YATRA-2020

(In Ludhiana & other Punjab cities)

Younger Physicians willing to lead

Chairperson: Dharmesh Mehta, MD Co-Chairs: Mona Gupta, MD, Murthy Vuppala, MD Director: Ramesh Shah



• Medical YATRA-2020 in Ludhiana/Amritsar, Punjab

After 19 yrs. of untiring efforts, persistence & perseverance are paying off recruiting younger Physicians from N. Ohio & other states in USA. This has created a great enthusiasm and awesome HOPE of continuity & sustainability in AIPNO-YATRA organization. Young physicians (taking 2-3 weeks off from their busy practices & growing families) bring more vitality, energy, hi-tech talents and compassionate caring to rural tribal patients.

From Feb 25-March 3, YATRA conducted **18 clinics serving 4,800 patients** around greater Ludhiana. Clinics were conducted in Public & Community health centers. Along with Primary Care-Eye Care & Dental Care, surgeons examined patients for potential surgery and referred them to **Sarabha Hospital & Global Heart Center for various tests (MRI, X-Ray, Ultrasound, Lab tests etc...)** as needed and **hospital surgical TEAM finally ordered necessary surgeries**. Since March, Rotary Club reports that 150 surgeries are done and 200 more yet to be done in 2021.

Surgeries include:

Hernia, Appendicitis, Gall Bladder, Hysterectomy, Cardiac, Mitral valves, Hip/Knee Replacements etc. Inclusion of Surgery service as part of Medical YATRA provides long-term relief from critical health issues and improves quality of life to rural patients. All costs for surgeries are covered by Rotary Global Grant of \$102,000 (Rs. 75 lacs)- a partnership put together amongst Medical YATRA, RC-Bakersfield and 5-Rotary Clubs from Ludhiana and two Rotary Districts and Rotary Foundation.

In Jalandhar, YATRA team saw 500 patients some of them referred to Ludhiana for surgeries. In Amritsar, YATRA team saw 300 patients, In Barnala, YATRA team saw 400 patients and Patiala, YATRA team saw 250 patients. Surgeries at these places were performed by Govt. Hospitals. Fight against COVID-19, YATRA was partner in Rotary Grant for providing PPE to 20 Public & Community Health clinics.

In 2021, YATRA supported Operation Theater is scheduled to open in Jalandhar, P. & Mobile Cancer Van project supported by YATRA is schedule to start Sept/Oct. Both of them are Rotary Global Grant projects.

AIPNO'S MEDICAL YATRA - COVID-19 INITIATIVE









AIPNO's Humanitarian services- MEDICAL YATRA conducts medical camps in India every year. **COVID-19** virus has inspired & motivated **MEDICAL YATRA-AIPNO** to rise to the challenge to help out the local, national and international community in dire need of personal protective equipment. AIPNO MEDICAL YATRA members utilized their spare time and latent talents in these challenging times to sew masks and donate to local hospitals as per hospital guidelines. So far, they have made and donated 400 masks. This wave of enthusiasm and creativity has created a ripple effect and more & more volunteers are coming forward to donate their time & talents to sew masks and do anything else needed. Now we are ordering more kits to sew 500 masks. This is one-way **AIPNO** is giving back to our local community hospitals.

Additionally, in collaboration with SEWA International, to serve the community, AIPNO -MEDICAL YATRA is creating a phone call triage process for the Northeast Ohio community to direct them to appropriate AIPNO physician for medical questions.

"Service to humanity is service to god" is the motto of the AIPNO- MEDICAL YATRA. We welcome the help of any volunteers and physicians willing to join in to give a helping hand to the needy victims of this ferocious **COVID-19** pandemic.



AIPNO-Sewa COVID-19 Response Student Outreach Initiative

As part of AIPNO and Sewa (Cleveland's) joint COVID-19 community response effort, Dr. Reema Gulati is leading a student outreach initiative aimed to support the needs of local university students affected by COVID. The idea sparked when she learnt about the residential difficulties these students (especially international) were facing as

university campuses were vacated, and how organizations like the AHOAA swiftly stepped in to provide free accommodations to these vulnerable students. That got her curious to learn about, and serve, other (unmet) needs of local university students. In this ongoing initiative, she is continuously connecting with Offices of Student Affairs at various universities (e.g. Case, Cleveland State University, Baldwin Wallace, John Carroll) and student bodies (like Student AMWA) to learn about COVID related needs. She has also offered to partner with campus organizations with similar missions to facilitate student relief response on and off campus. In the brief time since the launch of the operation, it's heartening to share that her outreach effort has received overwhelming appreciation, and her group's assistance and resources are being warmly welcomed by various university staff. Just as an example, Case and Baldwin Wallace University shared AIPNO-Sewa's high quality, evidencebased web-based resources for mentalhealth and stress management with their medical students and nursing students. Dr. Gulati's group has also identified pressing needs for a large group of international students at Cleveland State University, like food, visa issues,

AIPNO PRESIDENT DR. RUPESH RAINA AND EXECUTIVE INITIATIVE FOR
COVID 19 PANDEMICS FOR OUTREACH EFFORT TO SERVE NEEDS OF
LOCAL UNIVERSITY STUDENTS







As a part of AIPNO and Sewa's (Cleveland) joint COVID-19 community response effort, AIPNO feels extremely fortunate to lead a student outreach initiative aimed to support the needs of local university students affected by COVID 19. The idea sparked when we learned about the residential difficulties many students (especially international) were facing as university campuses were vacated, and how organizations like the AHOAA swiftly stepped in to provide free accommodations to these vulnerable students. This motivated us to learn about and serve the other (unmet) needs of local university students.

In this ongoing student initiative, we are continuously connecting with various Office of Student Affairs (e.g. Case, BW, JCU, etc.) and student bodies (like Student AMWA, etc.) to learn how we can serve their needs related to COVID 19. We have also offered to partner with campus organizations who have similar missions to facilitate student relief response both on and off campus. In the brief time we've launched this operation, it's heartening to share that our outreach effort has received overwhelming appreciation and our assistance and resources are being warmly welcomed by various university staff, e.g., various web-based resources for mental-health and stress management, coronavirus-issues and concerns for folks on visa in the US, are being shared with university

Simply stated, this initiative is a work in progress. As we learn more about what our students need, we will strive to do more for them. In the coming days, we hope to connect with many other institutions and become a valuable COVID 19 relief response resource for them.

As per Dr Gulati "I wholeheartedly thank the leadership of AIPNO and Sewa whose encouragement and support has been instrumental in inspiring me to undertake this novel outreach operation!" Sincerely.

Reema Gulati, M.D. Project Lead and Executive Member
Rupesh Raina M. D. Present AIPNO 2020

medical prescriptions for student's visiting parents who got stranded due to the travel restrictions, fall admission issues of prospective students, and loss of on and off campus jobs with the ensuing financial strains on these students. They are working hard to connect these students to available resources and develop pathways to sustain their needs. To address one of the most critical needs related to campus job loss, the group is working a plan to develop an impactful 'Virtual Summer Internships Program' to connect these students (as interns) with local companies for apprenticeship and skill development. Further, the group aims to coach these students with skills, both hard and soft that are needed in the work force utilizing the vast network of professionals in AIPNO and Sewa. As Dr. Gulati says, "Simply stated, this initiative is a work in progress. As we learn more about what our students need, we will strive to do more for them. In the coming days, we hope to connect with many other institutions and become a valuable COVID relief response resource for them. I wholeheartedly thank the leadership of AIPNO and Sewa whose encouragement and support has been instrumental in inspiring me to undertake this student outreach initiative." We at AIPNO, thank Dr. Gulati for her dedication and commitment to furthering AIPNO's mission through service to her local community during these challenging times of COVID 19. AIPNO takes this opportunity to congratulate Dr. Gulati, Director of Pediatric Gastroenterology at MetroHealth, for completing her Master's in Public Health with a focus on population health leadership and management. Dr. Gulati has special interests in investigating the effects of social determinants of health in children with digestive diseases and is passionate about mitigating health disparities in children.

AIPNO'S INITIATIVE FOR PROVIDING FOOD TO SHELTERS



Saloni Khatri, MD Executive Committee AIPNO



Saroj Mahalaha, MD Past AIPNO President



Viji Vijay President-SEWA International Cleveland

AIPNO President and the Executive committee's initiative for SERVING FOOD to the Homeless shelter every month. AIPNO is working in collaboration with SEWA International to serve the community with this initiative.

For the month of June, this initiative is being undertaken by the President Elect of AIPNO, Dr. Dharmesh Mehta. Please join us by volunteering every month to adopt food for the shelter.

"Service to humanity is service to god" is the motto of the AIPNO. We welcome the help of any volunteers and physicians willing to join in to provide a helping hand and contribute to our motto.



Dr. Rupesh Raina President AIPNO





Dr. Dharmesh Mehta President Elect AIPNO

HUMANITARIAN SERVICES 2020



AIPNO and SEWA launched a 24/7 COVID-19 Convalescent Blood Plasma Registry for Northeastern Ohio. This national registry allows for plasma collection from donors who had complete COVID symptom-resolution in order to save the lives of patients currently suffering from COVID-19.

AIPNO President and the Executive committee are introducing the initiative for serving food to the Homeless shelter every month in collaboration with SEWA International and local homeless shelters in order to serve food to the most vulnerable patient-populations in Northeast Ohio. This initiative will continue for the next 24 months.



In collaboration with SEWA International, our AIPNO Executive Committee, including Dr. Sundaresh and Dr. Ahluwalia, undertook a noble initiative labeled "Quilts for Kids". AIPNO called for volunteers around the community to sew quilts for local children's hospitals and anticipate on donating several dozen blankets.

AIPNO and Cleveland Clinic Initiative for COVID 19 Online CME



Dear AIPNO Member,

In anticipation of the COVID-19 patient surge, AIPNO member providers will be caring for patients with an unfamiliar diagnosis or in unfamiliar settings.

To help ease the burden of a learning curve, Dr Neil Mehta and Dr Vikram Kumar our CME chairs collaborated with Cleveland Clinic to have access an online curriculum, available to all physicians in AIPNO, to prepare you to care for patients with and without COVID-19 in the ICU, inpatient and ambulatory settings.

Some of the curriculum links to content developed by outside organizations and societies, but the majority of the content was internally developed by colleagues at Cleveland Clinic, in an effort led by Neal Chiasson, MD in consultation with Neil Mehta, MBBS and a team of other experts. Depending on how many lessons you complete, the activity provides approximately 20 hours CME. Please see the next page for details.



Dr. Rupesh Raina President AIPNO



Dr. Neil Mehta Co-CME Chair



Dr. Vikram Kumar

AIPNO CME:

COVID-19 CCLCM curriculum In anticipation of the COVID-19 patient surge, it was expected that healthcare providers would be caring for patients with an unfamiliar diagnosis or in unfamiliar settings.

To help ease the burden of the learning curve, Cleveland Clinic developed an online curriculum, available to all physicians in AIPNO, to prepare you to care for patients with and without COVID-19 in the ICU, inpatient and ambulatory settings. Some of the curriculum links to content developed by outside organizations and societies, but the majority of the content was internally developed by colleagues from the Respiratory Institute at the Cleveland Clinic, in consultation with Neil Mehta, MBBS and a team of other experts. At the time of writing, content is available for 90 topics and more topics are being added. You can pick and choose which topics you want to learn about. Each course has information about available CME credit.

The curriculum is available here: https://healthcareedu.ccf.org/

Dr Neil Mehta and Dr Vikram Kumar

AIPNO PRESIDENT ANNOUNCES AIPNO SUMMER RESEARCH PROGRAM FROM 6/15 to 8/15/2020







Each summer scholar in AIPNO training program requires completion of an original research, education development, education development or community service project. The progress of each scholar is monitored by a research mentor and the Research Committee. This individualized support will help scholar stay on track throughout the duration of their project. Since many scholars will not, themselves, become independent researchers, an important emphasis of this training program is the development of critical thinking. During this program, each scholar will be challenged constructively to justify the relevance of their project, their choice of methods, data interpretation, and overall conclusions.

One of our goals is to help the scholar further the understanding of review articles via critical analysis. Other goals include helping the scholar conduct/contribute to a review article of their own supervised by a senior staff and to develop the skills necessary to develop a publishable case report. The educational goals include the advancement of the basic knowledge base to perform the above projects in an organized and timely manner.

The development of online research training modules will introduce scholars to clinical research. Opportunities such as online access to the 'The Clinical Research Scholars Program to train excel and learn about 'Introduction to Clinical Research,' a non-credit hour course with an educational, informative, and relevant research curriculum, will be available to the scholar. We will aid scholars engage in specific areas of scholarly activity to allow acquisition of skills in the critical analysis of the work of others; to assimilate new knowledge, concepts, and techniques related to the field of one's practice; to formulate clear and testable questions from a body of information/data so as to be prepared to become effective subspecialists and to advance research in internal medicine; to translate ideas into written and oral forms as teachers; to serve as consultants for colleagues in other medical or scientific specialties; and to develop as leaders in their fields.

All scholar will be expected to develop a hypotheses in projects of substantive scholarly exploration and analysis that require critical thinking. Areas in which scholarly activity may be pursued include, but are not limited to basic, clinical, or translational biomedicine; health services; quality improvement; bioethics; education; and public policy. Scholars must gather and analyze data, derive and defend conclusions, place conclusions in the context of what is known or not known, and present their work in oral and written form.

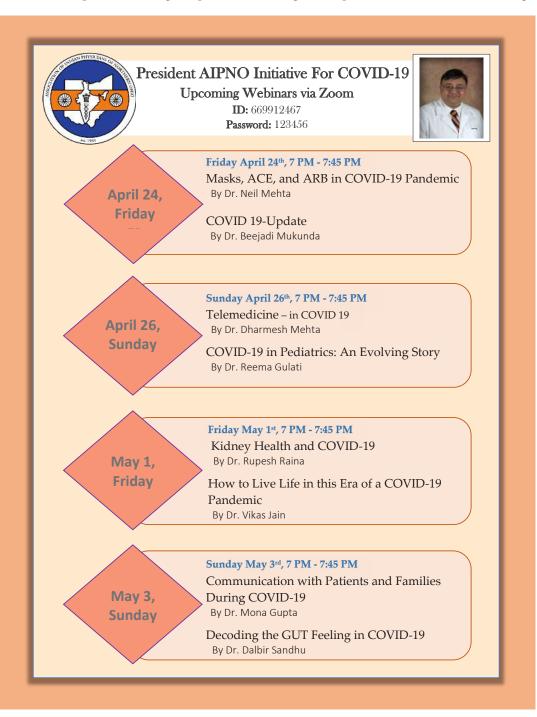
We will establish A Scholarship Oversight Committee (SOC) which in conjunction with the trainee, the mentor, Dr. Raina, and the program director will determine whether a specific activity is appropriate to meet the guidelines for scholarly activities. In addition to biomedical research, examples of acceptable activities might include a critical meta-analysis of the literature, a systematic review of clinical practice with the scope and rigor of a Cochrane review, a critical analysis of public policy relevant to the subspecialty, or a curriculum development project with an assessment component. These activities will require active participation by trainee. The mentor(s) will be responsible for providing the ongoing feedback essential to the trainee's development.

Program Director: Rupesh Raina MD
Please contact us at admin@aipno.org or at (216) 228-1168

AIPNO Webinar Series

The COVID-19 pandemic blindsided all of us, with the stealth and ferocity of an unknown enemy. Although our entire country knows this, none know it more intimately than frontline medical professionals. Thankfully AIPNO, led by president Dr. Rupesh Raina and his team including Dr. Dharmesh Mehta, Dr.Neil Mehta and Dr.Mukunda, organized a series of informative Zoom webinars filled with useful knowledge to help the medical community fight back against this novel virus. To recap, the series began April 24th covering vital topics of conversation surrounding

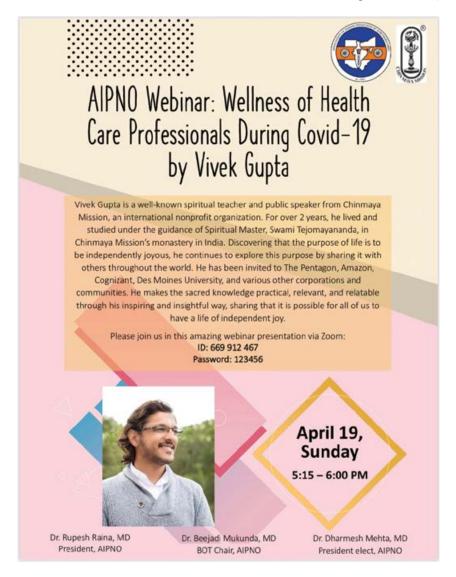
COVID-19. Topics such as details surrounding masks, telemedicine, kidney health, gut and liver disease, communicating appropriately and effectively, and the Cleveland Clinic New York experience. Several of these topics have been published and presented in national and international meetings and journals. Most impressively, the webinars were not limited to medicine but included practical advice around daily life challenges in the pandemic. In particular, Vivekji detailed a spiritual journey about deeper understanding of the inner self. All these were extremely well received, well attended. and left us with more confidence, knowledge and peace. These webinars can be



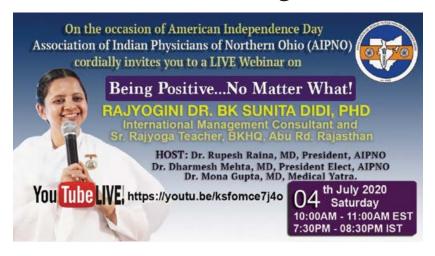
revisited at AIPNO and various on line sites.. We applaud our AIPNO community and leaders with the foresight, zeal, hard work, direction, commitment and achievement bringing a new age of academics and teaching of the highest order.

AIPNO Webinar

AIPNO held a Webinar - Wellness of Health Care Professionals during Covid -19 by Vivek Gupta



AIPNO Webinar - Being Positive...No Matter What!



On American Independence day, AIPNO held a live webinar by Dr BK Sunitadidi.

FUNDRAISER MASKS FOR ALL



sewa

SUPPORT AIPNO

You can support various causes AIPNO contributes to with your donation.







Go to www.AIPNO.org and click on AIPNO Fundraiser for Covid-19

or make check payable to AIPNO and mail to: 4370 Karen Lynne Dr. Broadview Hts, OH 44147

216.228.1168

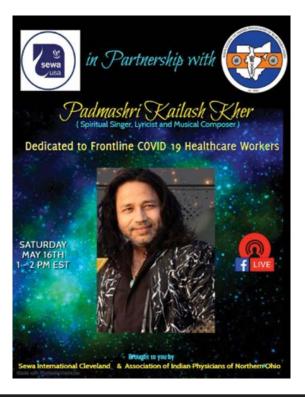
ADMIN@AIPNO.ORG

AIPNO Fundraiser

AIPNO held fundraiser in support of COVID 19.

Concert Dedicated to Frontline COVID19 Healthcare Workers

AIPNO in partnership with Sewa International held a concert by Padma Shri Kailash Kher, SInger, Lyricist & Music Composer dedicated to Frontline COVID19 Healthcare Workers.





AMERICAN ACADEMY OF YOGA AND MEDITATION

AIPNO & FICA

Presents Live Webinar On



Yoga In Prevention & Management Of Cardiovascular Disease

Do You Have Heart Problems, High Blood Pressure Or Diabetes?

Meet The Experts Who Will Help You Understand Ways To Manage Yours Health Through Yoga And Meditation.

Speakers



Dr. H R Nagendra

Vice Chancellor

SVYASA Yoga University



Dr. Nirmal Gupta
Professor & Head
CVTS, Dept. Of Cardiovascular
&
Thoracic Surgery SGPGIMS



Dr. Indrani Basu Ray Cardiologist & Cardiac Electrophysiologist Adjunct Professor, The University Of Memphis, Memphis, TN, USA

Date: October 3rd, 2020
Time: 8.00 pm to 9.30 pm IST
9.30am to 11am CST (USA)
10.30am to 12pm EST

Post your questions and queries of aaoyam.us@gmail.com
aaymonline.org
9 +91 9096135255









- Live broadcast:
- American Association of Yoga and Meditation
 - GangesMississippiDlg

Yoga "Good for the Heart" Prevention and Management of Heart Disease

In collaboration with several other organizations, including SEWA and FICA, the organization has undertaken the enormous task of rallying support for the healthcare community and collaboratively impacting local, national, and international counties in a positive manner.

COVID-19 Convalescent Blood Plasma Registry

AIPNO and SEWA launched a 24/7 COVID-19 Convalescent Blood Plasma Registry for Northeastern Ohio. This national registry allows for plasma collection from donors who had complete COVID symptom-resolution in order to save the lives of patients currently suffering from COVID-19. This massive task involved the collaboration of hundreds, who offered live-phone and social media support, and was overseen by the Food and Drug Administration (FDA).



AIPNO with Sewa International Launches 24/7 COVID-19 Convalescent Blood Plasma Registry for Northeastern Ohio

The Association of Indian Physicians of Northern Ohio (AIPNO) is PROUD to have a collaboration with Sewa International to launch a COVID-19 Convalescent Blood Plasma Registry for Northeast Ohio

(www.sewacovidplasma.org), the 24/7 service that offers a national registry for both donors and recipients under the Convalescent Plasma Therapy program with live phone and social media support. The Convalescent COVID-19 Plasma Therapy is an FDA regulated investigational therapy where plasma collected from eligible Donors is used as therapy for a restricted class of Recipient Patients, both of whom have compatible blood type.

A donor is defined as:

- 1. Male or a non-pregnant female
- 2. No prior history of Hepatitis B, Hepatitis C, HIV, or intravenous drug use
- 3. And COVID-19 survivor with either one of the following:
 - a. Complete resolution of symptoms at least 28 days prior to donation

OF

 b. Complete resolution of symptoms at least 14 days prior to donation,
 AND Negative results for COVID-19 either from one or more nasopharyngeal swab specimens or by a molecular diagnostic test from blood.

The recipient is a COVID-19 patient who is acutely ill with respiratory failure deemed to benefit with this therapy after discussion with their physician. We have worked with Sewa's registry to be mobile enabled, fully functional, self-registry service with 24/7 live phone and email support that offers both pre-screening and donor-patient matching services.

The registry includes status updates and email communication with an automatic status change intimation. Run by a dedicated team of Sewa and AIPNO volunteers, the services adhere to HIPPA medical data protection laws, and protects the privacy and confidentiality of the registered users (donors and recipients). "A dedicated group of physicians and technologists designed and developed this registry rapidly because they saw the urgent need for such a service nationwide," said Prem Pusuloori, Sewa Director of National & International Programs.

Users of the registry can call (302) 659 - SEWA / (302) 659 - 7392 or contact via email: plasmasupport@sewausa.org.

"Our mission is to bring together matching blood donors and COVID-19 patients seeking the plasma in-time and save lives, and we are open round-the-clock to serve"

For any help and support for the Greater Cleveland community, please do not hesitate to contact Sewa and the AIPNO executive committee.

All should be helped and one in need should be helped with 100 times the enthusiasm — being aware of privilege, one becomes an advocate of spreading the same privilege.

Mrs. Viji Vijay, President Sewa Cleveland Chapter. Dr. Sree Sreenath, President Sewa International. Cleveland@sewausa.org Dr. Rupesh Raina President, AIPNO Chairman & Board of Advisors, Sewa Cleveland Chapter Dr. Dharmesh Mehta, President Elect Dr. Beejadi Mukunda, BOT Chair AIPNO admin@AIPNO.org

AIPNO Research Initiative







ıkunda, MD Mona Gupta, MD

Rupesh Raina, MD

Research is and has been an integral part of AIPNO's activities and AIPNO is committed to supporting research amongst its members and in particular supporting the students aspiring to be a career in medicine or medical research to support the community. The research showcase has been a feature of the AIPNO's annual event for several years. Upcoming Research Showcase will build on previous research showcase. Seventh Research showcase in 2019 was successful with 19 basic science abstracts, 28 clinical research and 4 quality improvement abstracts. The

research initiatives are mainly focused on basic science, clinical research and quality improvement research. There are several NIH funded researchers in AIPNO and North East Ohio Indian community who are willing to mentor and support medical students and those interested in a career in medical research. AIPNO is committed to connecting these medical students with their areas of interest and basic science researchers who can help them learn the basic skills of laboratory medicine providing initial access to research endeavors. This will be a unique opportunity for students interested in a medical career as well as medical school students in the NEOMED, Case Western University and Cleveland Clinic system to have access to high-quality research opportunities. AIPNO is committed to supporting clinical research and have several members who are leading clinical research at national and international level. One of the research initiatives this year will involve potential opportunities for students to access programs to introduce them to skills in conducting clinical research. Additional research opportunities will be ability to work with established researchers for projects that will involve hypothesis generation, working under guidance of researchers to culmination of projects that will lead to presentations and publications in pier reviewed journals. Another initiative will be a mentor – mentee program. Number of AIPNO members will be identified as mentors with their areas of interest and will be available to help mentor budding high students and university students who are interested in career in healthcare to provide opportunities for research projects. The mentors will include established investigators with expertise in basic science, clinical research and quality improvement.

ABSTRACT and POSTER RESEARCH

B

Title: Analyzing patterns of gene expression in inflamed microglia stimulated with a proinflammatory molecule (TNF Alpha)

Author(s): Aditya Kalahasti

Affiliation: Solon High School

It has been well documented by medical studies that in neurodegenerative diseases such as Alzheimer's, Parkinson's, and Multiple Sclerosis, inflammation can be both a complex and important factor in the progression, as well as the effects, of the disease. However, the effect of these diseases on genomic patterns within inflamed cells has not been well documented. The purpose of this experiment was to observe the patterns of gene expression within intergenic regions using microglia, with a control group and a sample that had been manipulated to overexpress levels of the NRA2 gene, which changes a cells response to inflammation. Within each group, there was a set of cells treated with tumor necrosis factor alpha, a pro-inflammatory molecule. The manipulated genes were labeled A2, unmanipulated named VT (vector). The treated samples had the tag 24h, indicating they had been treated for 24 hours, and the untreated had the tag of Unt. An interstitial probe was created to find unusual reads within intergenic genes, which were then compared with scatterplots made from the overall data. The results found were that the presence of the TNF alpha agent resulted in the high differentiation of genes within the four samples, and the overexpression of the NRA2 gene resulted in a much lower level of differentiation between the samples. Overall, when untreated with the tumor necrosis factor, and unmanipulated with overexpression of the NRA2 gene, there is a higher level of expression of reads in regard to undiscovered genes within the inflamed microglia.

B3

Title: CITE-seq Identifies increased immune activation in patients treated with Nivolumab and Bevacizumab in Randomized Phase 2 Study in Recurrent Glioblastoma (rGBM)

Author(s): Vineeth Tatineni, Tyler J Alban, Matthew Grabowski, Balint Otvos, Defne Bayik, Pat Raymond, C. Marcela Diaz-Montero, , Justin D Lathia, Manmeet S Ahluwalia

Affiliation: Cleveland Clinic

Glioblastoma (GBM) creates an immunosuppressive environment that presents a challenge to the efficacy of immunotherapeutic approaches aimed at increasing T cell activation by immune checkpoint inhibition. Results from the CheckMate-143 trial demonstrated responses in 8% of patients treated with Nivolumab, underscoring the need for further insight into the mechanisms and markers of immune suppression and response. Here we analyzed patient's peripheral blood samples in a randomized, phase 2 study of Nivolumab and bevacizumab standard vs low dose, at GBM first recurrence (NCT03452579). In this study we identified 8 responders and 8 nonresponders at 8 weeks post treatment as well as 4 bevacizumab only treated patients as controls, and performed 10X Genomics simultaneous cellular indexing of transcriptomes and epitopes by sequencing (CITE-seq) to understand how their immune system was differentially changing during treatment. Analysis was performed comparing responders and non-responders as well as bevacizumab dosing cohorts to help understand how it might be playing a role with Nivolumab treatment. Initial analyses did not reveal any differences in peripheral immune populations between responders and non-responders post treatment, however standard dose bevacizumab treated patients had a significant reduction in MDSCs post treatment. Furthermore, the gene expression profile of total immune populations revealed an immune activated state in the standard dose treated cohort, which was not observed in the low dose bevacizumab group. Importantly, standard bevacizumab treated patients tended to have increased response to therapy Ongoing analysis includes comparison on bevacizumab only treated patients to the Nivolumab bevacizumab treated groups to help identify the individual and combined effects.

B5

Title: The Role of Coronary Artery Calcium (CAC) Scores in Predicting Cardiovascular Health

Author(s): Sarisha Mahajan

Affiliation: Revere High School

Introduction: A coronary artery calcium (CAC) scan is a specific type of CT scan that detects the amount of calcium in a patient's coronary arteries. The existence of large amounts of calcified plaque in the arteries signals the presence of coronary artery disease, increasing the risk of heart attacks and chest pain(angina). An Agatston score, the sum of the area times the weighted density of each calcification, is often used to measure severity. The goal of this literature review was to assess the value of CAC scores both on their own and combined with traditional risk factors in predicting cardiovascular risk. We also determined if risk predictors could be used to improve cardiovascular health

Methods: The PubMed/Medline database was used to acquire articles on the topic. The studies utilized CT technology to obtain the scores and many studies utilized data from population-based cobort studies from around the world

Results: CAC scores accurately predict cardiovascular risk, especially when combined with traditional risk factors. They were most beneficial in reclassifying intermediate-risk patients. A CAC score of zero is associated with extremely low mortality rates even when other factors suggest otherwise. CAC imaging was also associated with positive lifestyle changes and better adherence to drug therapy.

Conclusions: CAC scores are highly valuable in predicting cardiovascular risk; however, they are still not widely used in the clinical setting. Early detection of heart disease through the use of CAC scores and improved adherence to disease-preventing drugs can save many lives."

В9

Title: STRUCTURE AND ASSEMBLY OF HUMAN MULTI-TRNA SYNTHETASE COMPLEX REVEALS NOVEL MECHANISM OF DISEASE ASSOCIATION

Author(s): Krishnendu Khan

Affiliation: Cleveland Clinic Lerner Research Institute

In mammalian cells, eight cytoplasmic aminoacyl-tRNA synthetases (AARS), and three nonsynthetase proteins, forms a large multi-tRNA synthetase complex (MSC). AARSs have critical roles in interpretation of the genetic code during protein synthesis, and in functions unrelated to translation. Nonetheless, the structure, function and assembly of the MSC remain unclear. We used cross-linking mass-spectrometry (XL-MS) to interrogate the 3-dimensional architecture of the MSC in human HEK293T cells. Using the MS-cleavable cross-linker, DSSO, inter-protein crosslinks spanning all MSC constituents were observed, including cross-links between eight protein pairs not previously known to interact. Molecular docking of the AARS's using spatial restraints obtained by XL-MS resulted in the generation of a 3D model of human holo-MSC. Unexpectedly, an asymmetric AARS distribution was observed featuring a clustering of tRNA anti-codon binding domain on one MSC face which might improve the efficiency of delivery of charged tRNAs to an interacting ribosome during translation. The MSC has been hypothesized to be a molecular depot which helps in sequestering protein components that otherwise would be toxic to the cell in free form. We are currently probing this hypothesis in neurodegenerative diseases, where MSC constituents have been found to play a critical role. In combination with the 3D model of MSC our work provides new insights into translational control mechanisms with possible implications into disease etiology.

Q6

Title: Impact of COVID-19 on the Society for Vascular Surgery Vascular Quality Initiative Arterial Procedure Registries

Author(s): Jay P. Natarajan

Affiliation: Northeast Ohio Medical University

"Previous studies documented that boosted posts can increase survey response rates. This project was an evaluation of the use of boosted Facebook surveys in Northeast Ohio older adults. We wanted to determine if using Facebook was a useful form of collecting community assessment data for older Northeast Ohio county residents, and if we could generate better response rates by using boosted poll survey.

Over three weeks, Lake County General Health District's staff paid \$50 per week to boost a three-question survey on their Facebook page, and the same questions were posted with no boosting on the Stark County Health Department Facebook page. For Lake County, there were 241 total responses for all the questions, while Stark County had 21 responses. In Lake County, 187/240 (77.92%) were 65 years or older, for 168/241 (69.71%) said that posts were not at the top on the page, and 139/239 (58.16%) said Facebook surveys are a good way to reach them. For Stark County, the responses were 1/21 (4.76%), 18/21 (85.71%), and 17/21 (80.95%), respectively.

In conclusion, we saw Lake County's boosted survey had higher participation rates than Stark County's non-boosted survey overall and in the target population of 65 years and above. In addition, more than half of each county's respondents stated that Facebook surveys are a good way to ask them questions.

Q8

Title: The Best Treatment Options for Nutcracker Syndrome

Author(s): Arul Mehta

Affiliation: Saint Ignatius High School

Nutcracker syndrome is a rare vein compression disorder. It occurs when arteries, most often the abdomen's aorta and superior mesenteric artery, compress the left renal vein. Though uncommon, it is an essential diagnosis due to the illness, problems, and diseases associated with it, including the risk of chronic kidney disease from long-term left renal vein hypertension and the risk of left renal vein thrombosis. The treatment options may vary but the most common type of surgery includes vascular surgery to relieve the pressure on your left renal vein.

Goals:

Identify common treatment types and analyze if less commonly used procedures may offer the patient more benefit

Methods

Using 9 different articles/sources in order to find what the best mode of treatment is for a patient with nuteracker syndrome formatted in a literature review.

Results:

Open, laparoscopic, and endovascular techniques have been developed to decrease the venous outflow obstruction of the LRV. Up to now, open surgical intervention, specifically LRV transposition, has been considered by some experts the mainstay for the treatment of nutcracker syndrome.

Conclusion:

Robotic-assisted surgery, laparoscopic treatment, and endovascular surgery are the three most beneficial and safe approaches towards treating this syndrome. The absence of data and research regarding the management of this uncommon disease process poses a challenge for adequate recommendations of the best treatment modality. Further research is needed on the best management techniques for Nutcracker syndrome.

09

Title: ASSESSMENT OF EFFECTIVE COMMUNICATION WITH POTENTIAL DONORS TO A STUDENT RUN FREE CLINIC

Author(s): Sanjay Jinka

Affiliation: Northeast Ohio Medical University

Securing funds is a priority for student run free clinics (SRFCs). The SRFC at NEOMED implements an annual fundraising event generating profit of over \$10,000. Analyzing effective modes of communication between students and donors will allow similar organizations to develop a framework for future fundraising endeavors. Donor lists from 2018 and 2019 were reviewed to determine the relationship between initial mode of communication (email, in-person, website, phone call, social media, or postal mail) or type of potential donor (internal NEOMED employee, external business, or external individual) and whether a response/donation was received. Data was evaluated via chi-square analysis with post-hoc testing and Bonferroni corrections. The relationship between driving distance of a potential donor from the SRFC and whether a response/donation was received was evaluated via logistic regression analysis. Inperson communications were significantly (p<0.05) more likely to elicit responses and donations compared to other modes of communication, namely phone calls. Website communications were also significantly more likely to elicit a response but had no influence on donation status Individual potential donors were significantly less likely to respond while internal potential donors were significantly more likely to donate compared to other types of donors. Businesses with decreased spatial distance from the SRFC were significantly more likely to respond but had no influence on donation status compared to donors with increased spatial distance. Overall, charitable organizations, namely SRFCs, should prioritize in-person communications with internal or spatially close potential donors to maximize donations and provide better patient care to the community.

Q11

Title: The Prevalence of Obesity among Food Insecure School-aged Children in a Family Medicine Residency Practice

Author(s): Anna Cherian

Affiliation: Northeast Ohio Medical University

"Background: Food insecurity, a social determinant of health, can be particularly harmful to children. Almost 13 million children, 17.5% of all children in the United States (US) lived in food-insecure households in 2016. American Academy of Pediatrics (AAP) released a policy statement in 2015 recommending screening all children for food insecurity.

Hypothesis: Among children aged 6-18 years old those from food insecure households will be

Hypothesis: Among children aged 6-18 years old, those from food insecure households will have a higher BMI and likelihood of being overweight or obese compared to those from food secure households

Methods:

Design: Mixed methods project: retrospective chart review and food security survey. Participants: Convenience sample of all patients who have children, aged 6-18 years who present for a visit at the family practice residency office during the project period of four weeks. Results: 72 patients between the ages of 6-18 were screened. 19 patients (26%) were identified as food insecure. Out of the 19 patients who were food insecure, 8 (42%) were overweight or obese and 11 were a healthy weight. 53 patients (74%) were identified as food secure. Out of the 53 patients who were food secure, 19 (35%) were overweight or obese and 34 were a healthy weight.

Conclusion: A two-item food security survey is a quick and easy tool for health professionals to be successful in identifying patients who are food insecure. Food insecurity and obesity co-exist within children and increased referrals to food assistance programs such as SNAP and WIC can ameliorate food insecurity and the negative health consequences associated with it.

Q12

Title: Evaluating the Social Media Boosted Poll Feature for Surveying Older Adults in Northeast Ohio

Author(s): Hebah Hussain, Harini Prabhakaran

Affiliation: Northeast Ohio Medical University

"Previous studies documented that boosted posts can increase survey response rates. This project was an evaluation of the use of boosted Facebook surveys in Northeast Ohio older adults. We wanted to determine if using Facebook was a useful form of collecting community assessment data for older Northeast Ohio county residents, and if we could generate better response rates by using boosted poll survey.

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C4

Title: Impact of KRAS Mutation Status on the Efficacy of Immunotherapy in Lung Cancer Brain Metastases

Author(s): Adam Lauko, Rupesh Kotecha, Vineeth Tatineni, Manmeet S. Ahluwalia

Affiliation: Cleveland Clinic

Immune checkpoint inhibitors (ICI) have resulted in improved outcomes in non-small cell lung cancer (NSCLC) patients. However, data demonstrating the efficacy of ICI in NSCLC brain metastases (NSCLCBM) is limited. We analyzed overall survival (OS) in patients with NSCLCBM treated with ICI within 90 days (ICI-90) and compared them patients who never received ICI (no-ICI). We reviewed 800 patients with LCBM who were diagnosed between 2010 and 2019 at a major tertiary care institution. OS from BM was compared between the ICI-90 and no-ICI groups using the Log-Rank test, and Cox proportional hazards model. Additionally, the impact of KRAS mutational status on the efficacy of ICI was investigated. After accounting for known prognostic factors, ICI-90 led to significantly improved overall survival (12.5 months vs 9.1, p<0.001) in patients with LCBM. In the 109 patients that had both a known PD-L1 expression and KRAS status, 80.4% of patients with KRAS mutation had PD-L1 expression vs 61.9% in wild-type KRAS patients (p=0.04). In patients without a KRAS mutation, there was no difference in OS between the ICI-90 vs no-ICI cohort with a one-year survival of 60.2% vs 54.8% (p=0.84). However, in patients with a KRAS mutation, ICI-90 led to a one-year survival of 60.4% vs 34.1% (p=0.004). Patients with NSCLCBM that received ICI-90 had improvement in OS compared to no-ICI patients. Additionally, this benefit appears to be observed primarily in patients with KRAS mutations that may drive the overall benefit, which should be taken into account in the development of future trials.

C42

Title: Rising burden of Psychiatric Illness among pediatric Inflammatory Bowel Disease patients and its impact on hospitalization outcomes.

Author(s): Aravind Thavamani

Affiliation: UH Rainbow babies and Children's hospital

"Background: Prevalence of inflammatory bowel disease (IBD) is increasing worldwide along with its co-morbid conditions like psychiatric and behavioral illnesses, which are independent predictors of quality of life.

Methodology: Non-overlapping years of National Inpatient Sample (NIS) and Kids Inpatient Database (KID) were analyzed to include all pediatric patients between 2003 and 2016 with IBD diagnosis. Patients having at least one of the following :depression, anxiety, adjustment disorder, bipolar disorder (BPD), post-traumatic stress disorder (PTSD), stress reaction, personality disorders, ADHD, pervasive developmental disorder, eating disorder, obsessive compulsive disorder (OCD), Schizophrenia and substance abuse were compared with IBD patients without these diagnoses (control group) for various demographic factors, comorbidities/surgeries and for outcomes of severity of IBD and health care resource utilization.

Results: Of the total 161,294 IBD related hospitalizations, the overall prevalence rate of psychiatric/behavioral illnesses was 15.7% and it increased from 11.3% (2003) to 20.6%(2016), p<0.001. Depression, substance use, and anxiety were the predominant psychiatric illnesses. Multivariate regression analysis showed patients with severe IBD (aOR: 1.57, CI:1.47 to 1.67,P<0.001) and intermediate IBD (aOR:1.14, CI: 1.10 to 1.28,P<0.001) had increased risk of associated psychiatric/behavioral illnesses than patients with a low severity IBD. Multivariate linear regression analysis showed psychiatric/behavioral illnesses was independently associated with 1.17 (CI:1.07 to 1.28,P<0.001) additional hospitalization days and additional \$ 8473 (CI: 7520 to 9425,P<0.001) hospitalization charges.

Conclusion: Prevalence of psychiatric/behavioral illnesses is steadily increasing, imposing considerable strain on healthcare utilization. This warrants multidisciplinary approach to address comorbidities, improve clinical outcomes and quality of life in IBD patients."

C50

Title: Quality of Life Changes after Surgery for Metastatic Spinal Disease: A Systematic

Author(s): Neal Kapoor

Affiliation: NEOMED, Massachusetts General Hospital

Objective: As it remains questionable to what extent surgery improves quality of life (QoL) for metastatic spinal disease, it would be interesting to quantify the magnitude and duration of QoL benefits after surgery for metastatic spinal disease. Therefore, a systematic review and meta-analysis was conducted to assess QoL after surgery for metastatic spinal disease, and how surgery affects physical, social/family, emotional, and functional well-being.

Methods: Included were studies measuring QoL before and after surgery for metastatic spinal disease for various indications including pain, spinal cord compression, instability or tumor control. A random-effect model assessed standardized mean differences (SMD) of summary QoL scores between baseline and 1, 3, 6, or 9-12 months after surgery.

Results: After screening 992 titles and abstracts, 10 studies were included for data extraction. The pooled QoL summary score improved from baseline to 1-month (SMD 1.09, p<0.001), to 3-months (SMD 1.28, p<0.001), to 6-months (SMD 1.21, p<0.001), and to 9-12 months (SMD 1.08, p=0.001). Surgery improved physical well-being during the first 3-months (SMD 0.94, p=0.022), improved emotional (SMD 1.19, p=0.004) and functional well-being (SMD 1.08, p=0.005) during the first 6-months, and only improved social/family well-being at month 6 (SMD 0.28, p=0.001).

Conclusions: Surgery improved QoL for patients with metastatic spinal disease, and rapidly improved physical, emotional, and functional well-being; it had minimal effect on social/family well-being. However, choosing the optimal candidate for surgical intervention in the setting of metastatic spinal disease remains paramount: otherwise postoperative morbidity and complications may outbalance the intended benefits of surgery.

C51

Title: Surveillance, Epidemiology, and End Results Database Update for Pediatric Thyroid Carcinomas Incidence and Survival Trends 2000-2016

Author(s): Ananya Tawde

Affiliation: Northeast Ohio Medical University

Objective: To reflect on trends in pediatric thyroid carcinomas using the Surveillance, Epidemiology, and End Results (SEER) Database.

Methods: The National Cancer Institute's SEER database was used for all cases of pediatric thyroid cancer between the years 2000 and 2016 for patients aged 0-19. Patients were grouped by histological subtype, disease-specific survival (DSS) based on treatment modality, and the following demographic data: age, sex, year of diagnosis, and race. Treatment methods, surgery alone (SA) and surgery with adjuvant radiation (S/R), were compared using Fifteen-Year DSS Curves.

Results: A total of 1175 pediatric patients were identified and the average age-adjusted rate of malignancy was 0.3 per 100,000 patients. The incidence of pediatric thyroid cancer was approximately 1:3.6, male to female. The papillary follicular variant histological subtype was the most common (n=689, 58.6 %), followed by papillary (n=223, 18.9%), follicular (n=153, 13.1%), and medullary (n=110, 9.4%). Overall incidences of thyroid carcinomas were highest in patients aged 15-19 (69.8%) and medullary thyroid carcinomas were highest specifically in patients aged 0-9. Patients aged 10-19 treated with S/R therapy provided the highest DSS fifteen-years past initial diagnoses in all histologic subtypes(p < 0.05). Patients with metastatic medullary thyroid carcinoma at initial diagnosis who underwent SA showed significantly poorer fifteen-year DSS when compared to other histologic subtypes (p < 0.05).

Conclusion: There were significantly improved prognosis in pediatric thyroid carcinomas if diagnosed and treated early. All four major histological subtypes exhibit an increase in overall survival rates, excluding medullary carcinomas 9 or more years after diagnosis.



Association of Indian Physicians of Northern Ohio

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TO THE 2020 RESEARCH SHOWCASE WINNERS

Basic Case Reports

1st: B4- Aditya Kalahasti; aditya.kalahasti@gmail.com

2nd: B3- Vineeth Tatineni; tatinev2@ccf.org

3rd: B5- Sarisha Mahajan; 21sarishamahajan@gmail.com,

B9- Krishnendu Khan; Khank3@ccf.org

Quality Improvement

1st: Q11- Anna Cherian; acherian@neomed.edu

2nd: Q4- Hebah Hussain; hhussain2@neomed.edu and Harini Prabhakaran; hprabhakaran@neomed.edu,

Q8- Arul Mehta; aarulmehta9@gmail.com

3rd: Q6- Jay Natarajan; jaynatarajan17@gmail.com,

Q9- Sanjay Janika; sjinka@neomed.edu

Clinical Research

1st: C42- Aravind Thavamani; aravindjt@gmail.com,

C50- Neal Kapoor; nkapoor@neomed.edu

2nd: C51- Ananya Tawde; atawde@neomed.edu

3rd: C4- Adam Lauko; Laukoa@ccf.org



Basic Case Research Abstracts

B1

Title: Septic Embolism

Author(s): Jude Ezechukwu, Peter Roman, Arthur Boydd III

Affiliation: American College of Physicians

A 26-year-old Caucasian female who presented with a one-week history of pleuritic chest pain, malaise, chills and fatigue as well as a chronic forearm lesion from IV drug use. Medical history is significant for several years of IV heroin abuse and untreated hepatitis C. On presentation, the patient was febrile, hypotensive, tachycardic at a rate of 120b/m and tachypneic at a rate of 24c/m. Patient had multiple injection marks in both arms and a linear full thickness 13 by 4cm wound in the left forearm. Lab results showed leukocytosis with bandemia and lactic acidosis. Patient was diagnosed with septic shock, samples for blood culture were collected with initiation of aggressive IV hydration and broad-spectrum antibiotics via a central catheter. Chest x-ray and CT angiogram showed multiple consolidations and bilateral cavitated nodular opacities suspicious for active and chronic septic embolic process. Echocardiography revealed huge masses on both mitral and tricuspid valves confirming the presence of vegetations. She was then transferred to another facility for evaluation by cardiothoracic surgery where she later died from multiorgan failure.

Septic emboli are a complication of infective endocarditis that result in downstream vessel occlusion leading to pulmonary or systemic complications like pulmonary embolism, stroke, myocardial, renal or splenic infarction etc. Septic emboli may occur in both right sided and left sided infective endocarditis and IV drug abusers are at high risk. Urgent resuscitation measures and initiation of broad-spectrum antibiotics and possible surgical intervention are warranted.

B2

Title: Herpes is Here Again in my Head

Author(s): Jude Ezechukwu, Sukumar Gundapaneni, Massiel Cruz-Peralta, Austin Makadia, Keyvan Ravakhah

Affiliation: American College of Physicians

"A 52-year-old African American female who presented with a two day history of severe global and throbbing headache associated with neck stiffness, nausea and vomiting, fever, photophobia, chills, myalgia and lightheadedness.

The patient has been admitted twice in the past with a similar presentation and has had similar symptoms in the past without inpatient presentation.

Examination was significant for painful distress, stiff neck and positive Kernig's sign.

Complete blood count revealed leukocytosis. Brain CT Scan was normal.

A lumbar puncture was done with CSF analysis revealing total CSF nucleated cell count of 556/mm3, with 52 % neutrophils and 47 % lymphocytes. CSF protein was elevated at 197mg/dl with a normal CSF glucose. HSV-2 DNA was detected on CSF PCR.

Patient was diagnosed with mollaret's meningitis, was started on intravenous acyclovir and later attained complete resolution of symptoms on the 4th day of admission and was discharged afterwards

Mollaret's meningitis is a form of benign, recurrent aseptic meningitis characterized by as few as 3 to 10 episodes of fever and meningism lasting 2–5 days, followed by spontaneous recovery. The most common etiologic agent is HSV-2. It is self-limiting and it is still controversial whether acyclovir changes the natural course of the illness.

In conclusion, it is worthwhile to keep a high index of suspicion for Mollaret's meningitis in patients presenting with recurrent aseptic meningitis as an early diagnosis will help prevent unnecessary investigations and treatments and provide timely reassurance to patients

В3

Title: CITE-seq Identifies increased immune activation in patients treated with Nivolumab and Bevacizumab in Randomized Phase 2 Study in Recurrent Glioblastoma (rGBM)

Author(s): Vineeth Tatineni, Tyler J Alban, Matthew Grabowski, Balint Otvos, Defne Bayik, Pat Raymond, C. Marcela Diaz-Montero, , Justin D Lathia, Manmeet S Ahluwalia

Affiliation: Cleveland Clinic

Glioblastoma (GBM) creates an immunosuppressive environment that presents a challenge to the efficacy of immunotherapeutic approaches aimed at increasing T cell activation by immune checkpoint inhibition. Results from the CheckMate-143 trial demonstrated responses in 8% of patients treated with Nivolumab, underscoring the need for further insight into the mechanisms and markers of immune suppression and response. Here we analyzed patient's peripheral blood samples in a randomized, phase 2 study of Nivolumab and bevacizumab standard vs low dose, at GBM first recurrence (NCT03452579). In this study we identified 8 responders and 8 nonresponders at 8 weeks post treatment as well as 4 bevacizumab only treated patients as controls and performed 10X Genomics simultaneous cellular indexing of transcriptomes and epitopes by sequencing (CITE-seq) to understand how their immune system was differentially changing during treatment. Analysis was performed comparing responders and non-responders as well as bevacizumab dosing cohorts to help understand how it might be playing a role with Nivolumab treatment. Initial analyses did not reveal any differences in peripheral immune populations between responders and non-responders post treatment, however standard dose bevacizumab treated patients had a significant reduction in MDSCs post treatment. Furthermore, the gene expression profile of total immune populations revealed an immune activated state in the standard dose treated cohort, which was not observed in the low dose bevacizumab group. Importantly, standard bevacizumab treated patients tended to have increased response to therapy Ongoing analysis includes comparison on bevacizumab only treated patients to the Nivolumab bevacizumab treated groups to help identify the individual and combined effects.

B4

Title: Analyzing patterns of gene expression in inflamed microglia stimulated with a proinflammatory molecule (TNF Alpha)

Author(s): Aditya Kalahasti

Affiliation: Solon High School

It has been well documented by medical studies that in neurodegenerative diseases such as Alzheimer's, Parkinson's, and Multiple Sclerosis, inflammation can be both a complex and important factor in the progression, as well as the effects, of the disease. However, the effect of these diseases on genomic patterns within inflamed cells has not been well documented. The purpose of this experiment was to observe the patterns of gene expression within intergenic regions using microglia, with a control group and a sample that had been manipulated to overexpress levels of the NRA2 gene, which changes a cells response to inflammation. Within each group, there was a set of cells treated with tumor necrosis factor alpha, a pro-inflammatory molecule. The manipulated genes were labeled A2, unmanipulated named VT (vector). The treated samples had the tag 24h, indicating they had been treated for 24 hours, and the untreated had the tag of Unt. An interstitial probe was created to find unusual reads within intergenic genes, which were then compared with scatterplots made from the overall data. The results found were that the presence of the TNF alpha agent resulted in the high differentiation of genes within the four samples, and the overexpression of the NRA2 gene resulted in a much lower level of differentiation between the samples. Overall, when untreated with the tumor necrosis factor, and unmanipulated with overexpression of the NRA2 gene, there is a higher level of expression of reads in regard to undiscovered genes within the inflamed microglia.

B5

Title: The Role of Coronary Artery Calcium (CAC) Scores in Predicting Cardiovascular Health

Author(s): Sarisha Mahajan

Affiliation: Revere High School

Introduction: A coronary artery calcium (CAC) scan is a specific type of CT scan that detects the amount of calcium in a patient's coronary arteries. The existence of large amounts of calcified plaque in the arteries signals the presence of coronary artery disease, increasing the risk of heart attacks and chest pain(angina). An Agatston score, the sum of the area times the weighted density of each calcification, is often used to measure severity. The goal of this literature review was to assess the value of CAC scores both on their own and combined with traditional risk factors in predicting cardiovascular risk. We also determined if risk predictors could be used to improve cardiovascular health

Methods: The PubMed/Medline database was used to acquire articles on the topic. The studies utilized CT technology to obtain the scores and many studies utilized data from population-based cohort studies from around the world.

Results: CAC scores accurately predict cardiovascular risk, especially when combined with traditional risk factors. They were most beneficial in reclassifying intermediate-risk patients. A CAC score of zero is associated with extremely low mortality rates even when other factors suggest otherwise. CAC imaging was also associated with positive lifestyle changes and better adherence to drug therapy.

Conclusions: CAC scores are highly valuable in predicting cardiovascular risk; however, they are still not widely used in the clinical setting. Early detection of heart disease through the use of CAC scores and improved adherence to disease-preventing drugs can save many lives."

B6

Title: Acute Portal Vein Thrombosis Post Laparoscopic Sleeve Gastrectomy

Author(s): Sukumar Gundapaneni

Affiliation: St. Vincent Charity Medical Center

Portal vein thrombosis (PVT) can be a potentially devastating complication of laparoscopic sleeve gastrectomy (LSG). Portomesenteric thrombosis can lead to mesenteric ischemia or infarction which can be life threatening.

A 34-year-old African American woman with a recent history of laparoscopic sleeve gastrectomy presented 10 days following surgery with increasing abdominal pain, anorexia, nausea and vomiting. The pain was present since the procedure but significantly worsened. There were no hypercoagulable conditions in her family. She did not use oral contraceptives or smoke cigarettes. Physical examination revealed tenderness in the right upper quadrant without peritoneal signs. Her recent surgical incisions were healing well. Ecchymosis was seen in left lower abdomen where she had been injecting enoxaparin as appropriately prescribed. CT abdomen with intravenous contrast revealed an asymmetric irregular low-attenuation change along the course of left portal vein branch of the liver indicative of portal vein thrombosis. She was started on therapeutic dose of enoxaparin then transitioned to warfarin.

High clinical suspicion for PVT is required after LSG, given the non-specific presentation. Most patients tend to present with vague abdominal pain, nausea, and vomiting which can also be seen early in the normal postoperative course of LSG. Increased intraabdominal pressure with carbon dioxide pneumoperitoneum, the pro-inflammatory state associated with baseline obesity and a steep reverse Trendelenburg position are believed to contribute to the prothrombotic state in portomesenteric circulation during LSG. Though not based on randomized controlled trials, current data suggest that LMWH is most effective in preventing thrombosis without increasing bleeding risk for bariatric patients.

В7

Title: HIV-Induced Podocyte Pyroptosis Contributes to Proliferation of Parietal Epithelial

Author(s): Harsha Adnani, Vinod Kumar, Pravin Singhal

Affiliation: Feinstein Institute for Medical Research

Background

The lack of or abundance of proliferating parietal epithelial cells (PECs) in Bowman's space

determines the glomerular phenotype in focal segmental glomerulosclerosis. Proliferating PECs in Bowman's space characterize the HIV-associated nephropathy. The involved mechanism of PECs proliferation in HIV milieu is not understood. Interleukin (IL)-1 β has been reported to stimulate PECs proliferation. We hypothesize that massive injury of HIV-infected podocytes would stimulate PECs proliferation.

Methods

Immortalized human podocytes were differentiated and transduced with either vector (V-PDs) or HIV (NL4-3, HIV-PDs) and evaluated for pyroptosis. PECs were incubated in 10% of control (V-PDs), and experimental (HIV-PDs) conditioned media for 48 hours. Also, PECs were incubated in 10% control and experimental media with or without IL-1 β (neutralizing) antibodies for 48 hours. Cells were evaluated for proliferation by MTT cell viability assay. To establish an interaction, PECs were grown in outer wells, and V-PDs/HIV-PDs were seeded into inner wells (Trans-well plates). After 48 hours, PDs were assayed for IL-1 β by ELISA. Additionally, PECs grown on coverslips were treated with 10% control and experimental media for 48 hours, followed by immunolabeling for PCNA/Ki67.

Results

HIV-PDs showed a higher percentage of pyroptosed cells (P<0.01 vs. V-PDs). Cellular lysates and incubation media of HIV-PDs showed increased (P<0.05 vs.V-PDs) generation of IL-1β.

Conditioned media of HIV-PDs stimulated PECs proliferation; however, anti-IL-1β antibody

partially inhibited HIV-PDs conditioned media-mediated proliferation. PECs growing in outer wells of trans-well plates containing HIV-PDs showed increased proliferation. PECs treated with HIV-PDs conditioned media showed a higher percentage (P<0.01 vs. V-PDs) of PCNA/Ki67 +ve cells.

Conclusion

HIV-induced podocyte pyroptosis contributes to PECs proliferation.

RS

Title: A Novel Regulatory Role of L-Plastin in IL-1B-mediated Inflammation in Human Chondrocytes

Author(s): Andrew Alejo, Nazar Hussein, Fayez Safadi

Affiliation: Northeast Ohio Medical University

Osteoarthritis (OA) is the most prevalent joint disease worldwide, causing chronic disability in older people. Various factors are associated with its pathogenesis, including aging, obesity, joint instability, and joint inflammation. Several pro-inflammatory mediators such as Interleukin 1. beta (IL-1β) are able to activate NF-kB signaling cascades. There are two distinct pathways, which can activate the NF-kB signaling cascades. The first one termed canonical pathway is the activation of the IKKα/IKKβ/IKK --NEMO complex. The second one, the non-canonical pathway, is the activation of NF-kB-inducing kinase (NIK). L-Plastin (LPL) is an actin-bundling protein essential for actin regulation in multiple cell types. It was reported that LPL protein expression was elevated in rheumatoid arthritis. We hypothesized that LPL might also be a regulator for inflammation in OA. First, we assessed the gene expression/protein levels of LPL in primary human chondrocytes subjected to IL-1β treatment and found that LPL expression increased in the IL-1β-treated chondrocytes compared to controls. Next, we determined role of LPL inhibition by treating TC28 cells with LPL inhibitor post IL-1β treatment. LPL inhibition led to negative modulation of NF-kB signaling cascades in chondrocytes. Also, our data showed that the LPL inhibitor was able to decrease proteoglycan degradation in mouse femoral heads ex vivo organ cultures treated with IL-1β compared to controls. Studies are underway to determine the role of modulating LPL using in vivo studies, which include C57B/6 and LPL-/- mice posttraumatic-induced OA model and determine whether LPL modulates inflammatory osteoarthritis.

B9

Title: STRUCTURE AND ASSEMBLY OF HUMAN MULTI-TRNA SYNTHETASE COMPLEX REVEALS NOVEL MECHANISM OF DISEASE ASSOCIATION

Author(s): Krishnendu Khan

Affiliation: Cleveland Clinic Lerner Research Institute

In mammalian cells, eight cytoplasmic aminoacyl-tRNA synthetases (AARS), and three nonsynthetase proteins, forms a large multi-tRNA synthetase complex (MSC). AARSs have critical roles in interpretation of the genetic code during protein synthesis, and in functions unrelated to translation. Nonetheless, the structure, function and assembly of the MSC remain unclear. We used cross-linking mass-spectrometry (XL-MS) to interrogate the 3-dimensional architecture of the MSC in human HEK293T cells. Using the MS-cleavable cross-linker, DSSO, inter-protein crosslinks spanning all MSC constituents were observed, including cross-links between eight protein pairs not previously known to interact. Molecular docking of the AARS's using spatial restraints obtained by XL-MS resulted in the generation of a 3D model of human holo-MSC. Unexpectedly, an asymmetric AARS distribution was observed featuring a clustering of tRNA anti-codon binding domain on one MSC face which might improve the efficiency of delivery of charged tRNAs to an interacting ribosome during translation. The MSC has been hypothesized to be a molecular depot which helps in sequestering protein components that otherwise would be toxic to the cell in free form. We are currently probing this hypothesis in neurodegenerative diseases, where MSC constituents have been found to play a critical role. In combination with the 3D model of MSC our work provides new insights into translational control mechanisms with possible implications into disease etiology.

B10

Title: Experimental Design of Subcloning and Identification of the IL10 Gene to Determine Its Role as a Disease Marker of Human Heart Failure

Author(s): Neha Chellu

Affiliation: Case Western Reserve University

Background

Human heart failure (HF) has many causes, a change in RNA expression profile of a group of genes (genetic polymorphisms) may contribute to its pathogenesis. The IL10 gene expresses anti-inflammatory properties, regulates cytokine expression and other immune responses. A genetic polymorphism of IL10 is a suspected marker of HF.

Goals

To design an experimental protocol to test the hypothesis that a gene with varied expression in HF patients may act as a disease marker for HF.

Methods

RNA sequencing data from clinical samples was analyzed by NCBI BLAST genome analysis software for candidate genes. Websites (Addgene and Thermo Fisher Scientific) assisted with molecular protocols for RNA extraction and Reverse Transcription. The Primer3web software from University of Tartu Estonian Biocentre helped design appropriate PCR primers, NEBcutter software (New England Biolabs) added restriction enzyme sequences compatible with pcDNA 3.1/myc-His(-) A expression vector. The Invitrogen manual titled "pcDNA 3.1/myc-His(-) A, B, and C" defined the protocol to add the myc-epitope and polyhistidine identification tag to the cloning vector. Finally, the post-PCR protocols including bacterial transformation, transfection, and Western blotting were detailed.

Results

A working experimental design to test the aforementioned hypothesis was established, to find HF disease related genes/markers. Potential function of candidate gene markers can be evaluated by cell culture transfection and gene expression pattern analysis to determine if the selected gene is a real disease marker

Conclusions

A protocol to test if varied expression pattern of IL10/any other gene implied by clinical RNA sequencing data, can cause HF was successfully designed.

B11

Title: Androgen deprivation therapy (ADT) induces transcriptional changes in prostate cancer cells to exhibit stem-like features

Author(s): Shiv Shankar Verma

Affiliation: Research Associate

Background

Clinical data suggest that 30% of prostate cancer patients administered with anti-androgen drug enzalutamide acquire resistance. However, the molecular mechanisms underlying this resistance remain unknown. To improve drug efficacy, current research is aimed to understand the molecular mechanism(s) of drug resistance in prostate cancer.

Methods: We employed NGS using paired enzalutamide-sensitive and resistant human prostate cancer LNCaP and C4-2B cells. The NGS data determine the global transcript pattern of differentially expressed genes. The results were validated using qRT-PCR, western blot, IHC, and mapping the signature signaling and identified pathways associated with the acquisition of drug resistance.

Results: RNA-Seq analysis of LNCaP and C4-2B cells exhibit 35504 expressed genes, 9409 genes were differentially expressed (DEGs) identified in LNCaP enzalutamide resistant cells (NCBI-GEO accession GSE150807), 3027 expressed genes, and 7757 DEGs were identified (NCBI-GEO accession GSE151083) in C4-2B enzalutamide resistant cells. The analysis revealed that genes associated with cancer stem cells such as ALDH1, BMI1, BMP2, CD44, NANOG, POU5F1 (OCT4), POU6F1, SOX2, SOX8, and SOX9 were differentially upregulated in enzalutamide resistant cells. Amongst the pathways enriched in the enzalutamide-resistant cells were those associated with β-catenin, hedgehog, RUNX2, and molecules associated with elastic fibers. Further examination of a patient cohort undergoing ADT and its comparison with no-ADT demonstrated high expression of ALDH1, POU5F1, and SOX2 in ADT specimens, suggesting that they may be clinically relevant therapeutic targets.

Conclusion: Our approach identified that stem cell marker genes may be responsible for enzalutamide drug-resistant, and future putative therapeutic targets, demonstrating their translational significance.

B12

Title: Novel combinatorial therapy to combat abiraterone resistance in castration resistant prostate cancer

Author(s): Spencer Lin

Affiliation: Case Western Reserve University

Background. Abiraterone acetate (Abi), a drug for the treatment of castration-resistant prostate cancer (CRPC), exhibits a survival advantage in patients. However, ~30% of patients develop resistance after treatment. Abi-resistant tumors poorly respond to chemotherapy and other treatment modalities. Therefore, identification of an effective therapeutic alternative is needed.

We have demonstrated that a combination of simvastatin (SIM) and metformin (MET) is effective in CRPC with minimal effect on prostate epithelial cells. We investigate whether SIM and MET could be effective in the treatment of Abi-resistant cells.

Methods. C4-2B-Abi resistant cells were developed by continuous Abi exposure (1-20 μ M) over 60 days and maintained in 5 μ M Abi in the culture medium. Cells were treated with SIM (4 μ M) and MET (2mM) individually and in combination, followed by assessment of various cell growth and functional assays.

Results. C4-2B-Abi cells treated with SIM and MET at pharmacological doses (500nM- $4\mu M$ SIM and $250\mu M$ -2mM MET). Combination treatment with $4\mu M$ SIM and 2mM MET led to significant inhibition of cell viability, migration, invasion, and cell cycle blockade in cancer cells. Individual treatments with SIM or MET exhibited a minimal effect on these cells. Furthermore, the SIM+MET combination decreased the expression of AR, PSA, and Wnt signaling members including cyclinD1 and c-Myc, an effect more pronounced than the treatment with Wnt inhibitors ICG001.

Conclusion. Our results suggest that the combination of SIM+MET may be an effective regimen for treatment of Abi-resistant prostate cancer.

B13

Title: Examining Peripheral Immune Cell Phenotypes in NSCLC Patients Undergoing Chemoimmunotherapy

Author(s): Rahul Jain

Affiliation: Westlake High School

Chemotherapy consists of cytotoxic drugs that attack cancerous and normal body cells. Immunotherapy consists of antibodies which allow the immune system to identify and target tumors. It is important to investigate the efficacy of immunotherapy after chemotherapy, considering the negative effects of chemotherapy on immune cells. Examining circulating immune cell phenotypes (specific immune cell subset counts) via flow cytometry and RNA sequencing can be a valuable method to detect whether a patient will respond to chemoimmunotherapy.

The goal of this research is to investigate the relationship between chemoimmunotherapy and immune cell phenotypes and determine whether early indicators of patient antitumor response can be identified

The PubMed database was used to find published research that examined the relationship between peripheral immune cell phenotypes and patient antitumor response.

Responders to specific treatment regimens were found to exhibit a higher number of certain immune cell subsets, leading to a greater antitumor response. The peripheral blood monoclonal cells (PBMCs) of responders exhibited an initial dip following chemotherapy, but rebounded significantly after immunotherapy. The PBMCs of nonresponders did not exhibit this trend, suggesting that responders had an overall greater immune regulation of tumor growth than nonresponders.

Identification of differential responses in peripheral immune cell populations early in treatment has the potential to give early indications of overall response to specific treatment regimens, and can prove valuable in patient care.

B14

Title: The role of sex steroids in Irisin's neuroprotective effect

Author(s): Giovanna Leone

Affiliation: Northeast Ohio Medical School

Alzheimer's is a devastating neurodegenerative disease caused by amyloid plaques and neurofibrillary tangles. It is estimated that 5.4 million Americans have the disease. [1]

The polypeptide Irisin may yield sex differences in tauopathy model mice. This model creates widespread neurofibrillary tangles, mimicking the pathology of Alzheimer's. A recent study conducted in our lab by graduate student Katie Bretland revealed neuroprotective effects especially on female htau mice.[2] Currently, we are attempting to explain the results of the preliminary study showing Irisin's neuroprotective effects on particularly female mice. The method of distinguishing the gender differences must begin with removing the physiological discrepancy between male and female mice. We did this by performing bilateral ovariectomies two mice types, htau and C57 female mice. By removing the ovaries, the site of female gamete development, we eliminate a factor that may contribute to the difference in effects of Irisin on males and females. The mice will be carefully monitored during the next weeks to evaluate changes attributed to Irisin treatment. After 10 days recovery, the models were treated with either Irisin or Saline for 4 weeks. The hippocampus of each specimen was removed, and a Western Blot will be conducted to reveal the ptau protein expression. While this study is not finished, we predict that females ovariectomized female mice may not show the same neuroprotective effects when treated with Irisin.

B15

Title: A very uncommon case of Myxedema coma: Rediscovery of an old presentation

Author(s): Zain Mousa Aref AlShanableh

Affiliation: St. Vincent Charity Medical Center

"Myxedema coma is defined as severe hypothyroidism leading to decreased mental status, hypothermia, and slowing of function in multiple organs. It is an uncommon but potentially lethal condition. Overt congestive heart failure is rare in the absence of preexisting cardiac disease.

81 year old female with past-medical history of hypertension, transient ischemic attack, dementia and primary hypothyroidism presented with a one-day history of worsening shortness of breath. She developed altered mentation and became mute the week prior to presentation. She was unable to feed herself nor consume medications and developed facial and lower limb swelling.

On examination, the patient was hypothermic (34.7C), alert but disoriented and non-communicative. She had facial puffiness, jugular venous distension, bilateral coarse crepitations on auscultation, muffled heart sounds and cool extremities with bilateral pitting edema in lower limbs. She soon developed cardiogenic shock with respiratory failure requiring intubation and pressor support.

Lab investigations revealed TSH 103uIU/mL, free T4 0.11ng/dL, free T3 <0.5pg/ml and random free cortisol of 68ug/dL. No leukocytosis, bicarbonate 18mm/L, creatinine 1.94mg/dL, ALT 136U/L, AST 303U/L, troponin 0.06ng/ml. Chest X-ray revealed vascular congestion. EKG revealed T-wave inversions in lateral leads and prolonged QT. Transthoracic echocardiogram revealed ejection fraction of 25-30%, dilated cardiomyopathy, pericardial and pleural effusions.

Diagnosis of Myxedema coma with cardiopulmonary failure was subsequently made. She received IV levothyroxine, steroids and appropriate cardiopulmonary support. Patient gradually regained consciousness, was extubated and eventually discharged. We present this case to emphasise the importance of early diagnosis and management of an almost forgotten and potentially fatal condition."



Quality Improvement Research Abstracts

Q1

Title: Importance of Maintaining a Healthy Lifestyle while Recovering from Addiction

Author(s): Poojajeet Khaira

Affiliation: Northeast Ohio Medical University

Through the Leroy Rodgers Scholarship and the Ohio Academy of Family Physicians, I completed a summer preceptorship at AxessPointe Community Health Centers in Barberton and Kent with Dr. Paul Coleman. Addiction has become a major problem in the United States, especially in certain counties such as Summit or Portage, in the past few decades. My preceptor had a lot of experience with addiction medicine and had multiple patients who were addicts. Dr. Coleman, my preceptor, actually saw every patient who was under Medication-Assisted Treatment (MAT) in the AxessPointe network. MAT consisted of giving patients Suboxone or Vivitrol which helped ease their withdrawal symptoms and made it easier for them to recover from their addiction since it also eases cravings. Dr. Coleman explained to me that MAT is only effective when used in conjunction with other lifestyle changes such as therapy or changes that lead to a healthier lifestyle. Thus, I created a project that focused on the importance of maintaining a healthy lifestyle while in recovery. I created two documents for my project: a questionnaire to access if patients were actually actively making changes in their lives to become a healthier individual and a patient education pamphlet that contained tips on maintaining a healthy lifestyle while in recovery. The questionnaires were administered to each MAT patient and each of those patients were also given the pamphlet.

Q2

Title: Responding to Unexpected Loss During the Covid-19 Pandemic and the Role of the Palliative Care Interdisciplinary Team

Author(s): Josh Wiener

Affiliation: University Hospitals Cleveland Medical Center - Case Western Reserve University

"Background: The role of the interdisciplinary team (IDT) in meeting the emotional needs of patients also extends to their loved ones, family, and friends. This is especially important when family members are left to grieve from the sudden loss of a loved one. This case is an example of a hybrid in-person/tele-visit model that we have adopted during the Covid-19 pandemic and employed over 300 times.

Case Description: A 73-year-old woman was admitted for treatment of acute decompensated liver Cirrhosis. After a goals of care discussion, the patient was amenable to home hospice with the goals of pain management and maximizing time with family outside of the hospital. After comprehensive discussion with our team, the patient and her husband, although initially in disagreement, felt mutually accepting and comfortable with initiating hospice care. Due to Covid-19 restrictions and ongoing concerns for PPE management, a hybrid visit was conferred involving the physical presence of the Palliative Chaplain along with a simultaneous tele visit from our Music Therapist. The next morning the patient was found to be unresponsive. She was pronounced deceased. The widower espoused gratitude for the care provided by the entire staff. He later sent a thank you note with an accompanying Mass Card, outlining in detail the impact of the last IDT visit, which created a legacy of love for them.

Conclusion: We have established a hybrid in-person/tele-visit model, which has enabled us to support our patients and their families 300+ times.

Q3

Title: Is Orange Juice Guilty?

Author(s): Vivek Mathur, Rupesh Raina, and Saveta Mathur

Affiliation: Summa Health System

"A 31-year-old female is admitted for diabetic ketoacidosis (DKA). She has a history of diabetes mellitus type 1 and chronic kidney disease (CKD) stage 3 on angiotensin receptor blocker.

The DKA resolved however she suffered from labile blood glucoses and hyperkalemia, as high as 6.9 mmol/L. She had at least six episodes of hypoglycemia.

Hypoglycemic episodes were treated with orange juice. It is estimated she was given approximately 56 ounces of orange juice in a 24 hour time period.

Orange juice has 12.7 meq of potassium and 21 grams of sugar in eight ounces. It is a common treatment for hypoglycemia due to accessibility and the assumption that it does not cause side effects. She received up to 25 meq of potassium at once despite normokalemia.

D50 ampules (commonly 12.5 or 25 grams) would have been better, as there is no potassium in these formulations and have a similar sugar content as four to eight ounces of orange juice.

Easier access to IV D50 or oral glucose gels should be considered to decrease the use of orange juice as hypoglycemic treatment. These may prevent hyperkalemia, especially in those with CKD and/or on hyperkalemic-potentiating medications. This illustrates the importance of reviewing a patient's comorbidities and medications before recommending any treatment.

The patient's potassium was brought down to a normal range through medical intervention. Had the patient been treated with D50 ampules initially, hyperkalemia would have been avoided.

04

Title: Evaluating the Social Media Boosted Poll Feature for Surveying Older Adults in

Author(s): Hebah Hussain, Harini Prabhakaran

Affiliation: Northeast Ohio Medical University

"Previous studies documented that boosted posts can increase survey response rates. This project was an evaluation of the use of boosted Facebook surveys in Northeast Ohio older adults. We wanted to determine if using Facebook was a useful form of collecting community assessment data for older Northeast Ohio county residents, and if we could generate better response rates by using boosted poll survey.

Over three weeks, Lake County General Health District's staff paid \$50 per week to boost a three-question survey on their Facebook page, and the same questions were posted with no boosting on the Stark County Health Department Facebook page. For Lake County, there were 241 total responses for all the questions, while Stark County had 21 responses. In Lake County, 187/240 (77.92%) were 65 years or older, for 168/241 (69.71%) said that posts were not at the top on the page, and 139/239 (58.16%) said Facebook surveys are a good way to reach them. For Stark County, the responses were 1/21 (4.76%), 18/21 (85.71%), and 17/21 (80.95%), respectively.

In conclusion, we saw Lake County's boosted survey had higher participation rates than Stark County's non-boosted survey overall and in the target population of 65 years and above. In addition, more than half of each county's respondents stated that Facebook surveys are a good way to ask them questions.

Ο5

Title: Evaluating the Social Media Boosted Poll Feature for Surveying Older Adults in Northeast Ohio

Author(s): Harini Prabhakaran, Hebah Hussain

Affiliation: Northeast Ohio Medical School

Previous studies documented that boosted posts can increase survey response rates. This project was an evaluation of the use of boosted Facebook surveys in Northeast Ohio older adults. We wanted to determine if using Facebook was a useful form of collecting community assessment data for older Northeast Ohio county residents, and if we could generate better response rates by using boosted poll survey.

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Q6

Title: Impact of COVID-19 on the Society for Vascular Surgery Vascular Quality Initiative Arterial Procedure Registries

Author(s): Jay P. Natarajan

Affiliation: Northeast Ohio Medical University

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Q7

 $\label{thm:continuous} \textbf{Title: Efficacy of the influenza vaccine in hospitalized children: Systematic Review and Meta-Analysis}$

Author(s): Neha Chellu

Affiliation: Beachwood High School

"Background

Each year, influenza results in substantial disease burden in persons of all ages, with highest attack rates in school aged children. Annual influenza vaccination was recommended for all children aged 6 months to 18 years by 2008 (ref) although vaccination for persons at higher risk has been in place since 1960s. Despite this, little data is available about the efficacy of the influenza vaccine in preventing hospitalization in children.

Methods

We conducted a pubmed search for published studies meeting inclusion criteria and included studies of virologically confirmed influenza infections in hospitalized children. Unlike adult studies, we could not find randomized controlled trials to assess vaccine efficacy. We restricted our studies to publications in English and where English translation was available. Where possible, pooled estimates of effect using random-effects meta-analysis models was performed.

Results

Of the initial 106 studies identified on pubmed, 12 studies were eligible for inclusion. These included 4 case control studies, 3 prospective studies, 3 surveillance studies and 4 hospital based studies. Meta-analysis indicated a pooled vaccine efficiency ratio of 73.2%.

Conclusion

Influenza vaccine can provide protection against virologically confirmed influenza and reduces the rate of hospitalization. Further studies including randomized control trials in children will be helpful to determine vaccine efficacy to reduce morbidity and mortality."

Q8

Title: The Best Treatment Options for Nutcracker Syndrome

Author(s): Arul Mehta

Affiliation: Saint Ignatius High School

Nutcracker syndrome is a rare vein compression disorder. It occurs when arteries, most often the abdomen's aorta and superior mesenteric artery, compress the left renal vein. Though uncommon, it is an essential diagnosis due to the illness, problems, and diseases associated with it, including the risk of chronic kidney disease from long-term left renal vein hypertension and the risk of left renal vein thrombosis. The treatment options may vary but the most common type of surgery includes vascular surgery to relieve the pressure on your left renal vein.

Goals:

Identify common treatment types and analyze if less commonly used procedures may offer the patient more benefit

patient more bene

Methods:

Using 9 different articles/sources in order to find what the best mode of treatment is for a patient with nutcracker syndrome formatted in a literature review.

Results

Open, laparoscopic, and endovascular techniques have been developed to decrease the venous outflow obstruction of the LRV. Up to now, open surgical intervention, specifically LRV transposition, has been considered by some experts the mainstay for the treatment of nutcracker syndrome.

Conclusion

Robotic-assisted surgery, laparoscopic treatment, and endovascular surgery are the three most beneficial and safe approaches towards treating this syndrome. The absence of data and research regarding the management of this uncommon disease process poses a challenge for adequate recommendations of the best treatment modality. Further research is needed on the best management techniques for Nutcracker syndrome.

Q9

Title: ASSESSMENT OF EFFECTIVE COMMUNICATION WITH POTENTIAL DONORS TO A STUDENT RUN FREE CLINIC

Author(s): Sanjay Jinka

Affiliation: Northeast Ohio Medical University

Securing funds is a priority for student run free clinics (SRFCs). The SRFC at NEOMED implements an annual fundraising event generating profit of over \$10,000. Analyzing effective modes of communication between students and donors will allow similar organizations to develop a framework for future fundraising endeavors. Donor lists from 2018 and 2019 were reviewed to determine the relationship between initial mode of communication (email, in-person, website, phone call, social media, or postal mail) or type of potential donor (internal NEOMED employee, external business, or external individual) and whether a response/donation was received. Data was evaluated via chi-square analysis with post-hoc testing and Bonferroni corrections. The relationship between driving distance of a potential donor from the SRFC and whether a response/donation was received was evaluated via logistic regression analysis. Inperson communications were significantly (p<0.05) more likely to elicit responses and donations compared to other modes of communication, namely phone calls. Website communications were also significantly more likely to elicit a response but had no influence on donation status. Individual potential donors were significantly less likely to respond while internal potential donors were significantly more likely to donate compared to other types of donors. Businesses with decreased spatial distance from the SRFC were significantly more likely to respond but had no influence on donation status compared to donors with increased spatial distance. Overall, charitable organizations, namely SRFCs, should prioritize in-person communications with internal or spatially close potential donors to maximize donations and provide better patient care

Q10

Title: Patient Safety Alert: Preventing Infection from Misuse of Medication Vials

Author(s): Jay Patel

Affiliation: Northeast Ohio Medical University

"Introduction: The Joint Commission (JC) issues periodic sentinel event alerts to promote improvements in patient safety.

Methods: We highlight JC sentinel event alert #52, Preventing Infections from Medication Vial Misuse

Results: Thousands of patients have been adversely affected by misuse of single-dose/single use and multiple-dose vials with hepatitis B and C and bacterial infections reported in multiple outbreaks. Causes of misuse Include 1) use of SDV on multiple patients; 2) use of the same syringe to re-enter MDV's multiple times for the same patient with reuse of that same MDV on multiple other patients and 3) reusing a syringe to obtain additional dose(s) from a MDV leaving it for use on another patient, with the risk of back wash of any contaminating blood borne pathogens.

Conclusions: Proposed solutions emphasize: 1) proper use of SDV through the CDC's ONE needle, ONE syringe, ONE time campaign: discarding after single use; never combining content of multiple SDV's to obtain a full dose and not storing SD/SU vials for later use; 2) limiting use of MDV to only one patient whenever possible to reduce risk of contamination, but when used again using a new needle and new syringe every time, not leaving needles in vial entry diaphragms between uses, appropriate disinfection of the rubber septum and not using beyond use dating; and 3) periodically review and directly observe step-by-step aseptic training practices of dermatology office personnel who mix and administer all injectable medications including buffered lidocaine, corticosteroids, and botulinum toxin.

Q11

Title: The Prevalence of Obesity among Food Insecure School-aged Children in a Family Medicine Residency Practice

Author(s): Anna Cherian

Affiliation: Northeast Ohio Medical University

"Background: Food insecurity, a social determinant of health, can be particularly harmful to children. Almost 13 million children, 17.5% of all children in the United States (US) lived in food-insecure households in 2016. American Academy of Pediatrics (AAP) released a policy statement in 2015 recommending screening all children for food insecurity.

Hypothesis: Among children aged 6-18 years old, those from food insecure households will have a higher BMI and likelihood of being overweight or obese compared to those from food secure households.

Methods:

Design: Mixed methods project: retrospective chart review and food security survey. Participants: Convenience sample of all patients who have children, aged 6-18 years who present for a visit at the family practice residency office during the project period of four weeks. Results: 72 patients between the ages of 6-18 were screened. 19 patients (26%) were identified as food insecure. Out of the 19 patients who were food insecure, 8 (42%) were overweight or obese and 11 were a healthy weight. 53 patients (74%) were identified as food secure. Out of the 53 patients who were food secure, 19 (35%) were overweight or obese and 34 were a healthy weight.

Conclusion: A two-item food security survey is a quick and easy tool for health professionals to be successful in identifying patients who are food insecure. Food insecurity and obesity co-exist within children and increased referrals to food assistance programs such as SNAP and WIC can ameliorate food insecurity and the negative health consequences associated with it.

012

Title: Teres minor and quadrilateral space syndrome: a review

Author(s): Nicholas Dalagiannis

Affiliation: Northeast Ohio Medical School

The teres minor is one of four rotator cuff muscles that is involved in many shoulder pathologies. The integrity of the teres minor can be indicative of treatment success for disorders including rotator cuff tears, impingement syndrome, and quadrangular space syndrome. Quadrangular or quadrilateral space syndrome is a debilitating disorder that may require surgical intervention in chronic cases and can lead to atrophy of the teres minor. Methods for diagnosing QSS may include a variety of tests and procedures to rule out other diagnoses. Point Tenderness over the quadrilateral space is almost always present in patients with QSS and can be used as a strong identifier of pathology. There is little discussion related to optimal treatment and surgical intervention. A review of the diagnostic techniques and treatment methods for disorders involving teres minor, with a focus on quadrilateral space syndrome, are presented in order to summarize the current understanding of this pathology.



Clinical Research Abstracts

C:

Title: Do Topical Corticosteroids induce histologic remission and improve clinical symptoms in Eosinophilic Esophagitis? A systemic review and Meta-Analysis of Randomized Controlled Trials

Author(s): Faris Hammad, Abdulrahman Al-Armashi, Hadeel Abuteer, Isaac Alsallamin, Ameed Bawwab, Sami Ghazaleh.

Affiliation: St. Vincent Charity Medical Center

Introduction

Eosinophilic Esophagitis (EoE) is a chronic allergic inflammatory condition, characterized by dense eosinophilic infiltrate into the epithelial lining of the esophagus due to an allergic response against ingested food. Inflammatory mediators induce a chronic inflammatory reaction that contribute to progressive remodeling and narrowing leading to strictures and fibrosis. Different treatment modalities have been used including Dietary elimination, PPI, oral or Topical corticosteroids and endoscopy. The goal of treatment is to control the symptoms and prevent relapses by cutting the inflammatory cascade. In our study, we aim to assess the histologic remission rate, symptomatic improvement rate and the risk of developing candidiasis while using TCS.

Method

Literature review for RCTs with primary endpoints of histologic remission and symptomatic improvement rates in EoE patients on TCS versus Placebo. Histological remission was evaluated comparing the mean eosinophil level found on biopsies versus the pretreatment level. Symptomatic improvement was evaluated using the frequency and severity of Dysphagia and Odynophagia.

Resul

We included 9 RCTs, with a total population of 483. We found that the relative risk to develop histologic remission was 12.5(95% CI 6.04-25.88), the relative risk to develop symptomatic improvement was 1.84(95% CI 1.02-3.32) the risk ratio to develop oral or esophageal candidiasis post TCS was 4.31(95% CI 1.53-12.18).

Discussion

we conclude that Patients with EoE who were on TCS were 12.5 times more likely to develop histologic remission, 1.84 times more likely to develop clinical symptomatic improvement, and 4.31 times more likely to develop oral or esophageal candidiasis.

C.

Title: KIDNEY INVOLVMENT IN MULTISYSTEM INFLAMMATORY SYNDROMEC: A PEDIATRIC NEPHROLOGIST'S PERSPECTIVE

Author(s): Rama Safadi, Rupesh Raina

Affiliation: Bio-Med Science Academy. Internal Medicine, Pediatric Nephrology, Akron Children's Hospital

Coronavirus disease (COVID-19) has become a global pandemic. There is sufficient data in the adult population with underlying kidney disease, showing worse outcomes than those without it. There is a lack of evidence relating to underlying conditions with severe illness in children. Methods: A literature search was performed between 1946 and 2020 to include studies related to MIS-C and Acute Kidney Injury. A standardized data collection form was used to extract the following information from each article: the first author's last name, study type, location, number of MIS-C patients in the study, AKI incidence, and use of renal replacement therapy. All statistical analyses were performed using Excel and graphPad PRISM. Results: A total of 1311 MIS-C patients [18 studies] were analyzed, of which 731 (56%) were males, and 513 (40%) were females. The mean age of the study was 9 ± 1.21 years [18 studies]. The incidence of AKI was 239 (19.48%) [95% Confidence Interval (CI): -3% to 42%; 16 studies]. There was no significant difference found between male and female sex getting AKI affected with MIS-C. Based on 4 studies, 5/116 (4%) population with AKI received KRT. Conclusion: Although there has been an increasing number of published data, the overall population-specific incidence of MIS-C is still unknown. Post-viral immunological reaction to COVID-19 remains the bestimplicated theory behind this disease's pathogenesis. A better understanding of the kidney physiology in COVID-19 and treatment available for children with renal dysfunction and MIS-C shall help better care of this subset of children.

C3

Title: Randomized Phase 2 Study of Nivolumab (nivo) plus Either Standard or Reduced Dose Bevacizumab (bev) in Recurrent Glioblastoma (rGBM)

Author(s): Yasmeen Rauf, Lakshmi Nayak, Eudocia Quant Lee, Tyler Alban, Justin Lathia, David Peereboom, Patrick Wen, David Reardon, Manmeet Ahluwalia

Affiliation: Cleveland Clinic

Background: Trials with anti-PD1 in rGBM have shown limited efficacy. VEGF is highly upregulated proangiogenic growth factor in GBM contributing to tumor-associated immunosuppression. Preclinical data suggests a potential dose effect of anti-VEGF therapy on immunomodulation. Hence, a combination of anti-PD1 and anti-VEGF may be a promising approach in rGBM.

Methods: 90 patients with first-recurrent GBM were randomized(1:1) to nivolumab (240 mg IV Q2 weeks) and bevacizumab at standard (10 mg/kg; Arm A) or low dose (3 mg/kg; Arm B) IV Q2 weeks. Eligibility also required KPS \geq 70% and dexamethasone \leq 4 mg/day. Stratification included extent of resection, age, performance status and MGMT methylation status. Single cell RNA sequencing with CITE-seq was used to analyze blood samples from pre- and 8 weeks post-treatment among 8 responders and 8 non-responders.

Results: 90 patients were enrolled (May 2018- Jan 2020) and median follow-up is 5.5 months. Characteristics in 2 arms were comparable. Median age was 60.5 years (range 27-86), median KPS was 80.35 patients were MGMT methylated, 53 unmethylated and 2 indeterminate. Estimated progression free survival (PFS) and median overall survival (OS) in arm A are 6.13 and 10.85 months and 4.59 and 9.61 months in Arm B, respectively for 16 patients underwent including 8 responders and 8 non-responders. Cohort A patients had decreased myeloid derived suppressor cells and an inflammatory response gene signature by CITE-seq. Most frequent toxicities included fatigue (51%), headache (31%), diarrhea (30%) and hypertension (23%). Toxicity was comparable between 2 arms, except hypertension was more common in arm A.

Conclusions: PFS and OS rates appear similar for nivolumab with either standard or low-dose bevacizumab. Ongoing response evaluation and immunocorrelative data will be presented.

C4

Title: Impact of KRAS Mutation Status on the Efficacy of Immunotherapy in Lung Cancer Brain Metastases

Author(s): Adam Lauko, Rupesh Kotecha, Vineeth Tatineni, Manmeet S. Ahluwalia

Affiliation: Cleveland Clinic

Immune checkpoint inhibitors (ICI) have resulted in improved outcomes in non-small cell lung cancer (NSCLC) patients. However, data demonstrating the efficacy of ICI in NSCLC brain metastases (NSCLCBM) is limited. We analyzed overall survival (OS) in patients with NSCLCBM treated with ICI within 90 days (ICI-90) and compared them patients who never received ICI (no-ICI). We reviewed 800 patients with LCBM who were diagnosed between 2010 and 2019 at a major tertiary care institution. OS from BM was compared between the ICI-90 and no-ICI groups using the Log-Rank test, and Cox proportional hazards model. Additionally, the impact of KRAS mutational status on the efficacy of ICI was investigated. After accounting for known prognostic factors, ICI-90 led to significantly improved overall survival (12.5 months vs 9.1, p<0.001) in patients with LCBM. In the 109 patients that had both a known PD-L1 expression and KRAS status, 80.4% of patients with KRAS mutation had PD-L1 expression vs 61.9% in wild-type KRAS patients (p=0.04). In patients without a KRAS mutation, there was no difference in OS between the ICI-90 vs no-ICI cohort with a one-year survival of 60.2% vs 54.8% (p=0.84). However, in patients with a KRAS mutation, ICI-90 led to a one-year survival of 60.4% vs 34.1% (p=0.004). Patients with NSCLCBM that received ICI-90 had improvement in OS compared to no-ICI patients. Additionally, this benefit appears to be observed primarily in patients with KRAS mutations that may drive the overall benefit, which should be taken into account in the development of future trials.

C5

Title: Cardiorenal Syndrome

Author(s): Avani Shah, Nikhil Nair, Brinda Shah, Rupesh Raina

Affiliation: Skyline High School

Cardiorenal Syndrome (CRS) covers a myriad of clinical scenarios where the crosstalk between heart and kidney in pathological conditions. Though incidence of CRS is increasing, the pathophysiology and management of lag increasing both morbidity and mortality for patients. Recent studies demonstrate that renal insufficiency in the case of heart failure is one of the most common comorbidities for both congestive heart failure (CHF) and acute decompensated heart failure (ADHF). In this review, we summarize the existing conceptual pathophysiology behind the established types of cardiorenal syndrome and delve into the associated therapeutic modalities with a focus on pediatric cases.

C7

Title: Cardiorenal Syndrome

Author(s): Brinda Shah, Avani Shah, Nirav Agrawal, Rupesh Raina

Affiliation: Case Western Reserve University

Cardiorenal Syndrome (CRS) covers a myriad of clinical scenarios where the crosstalk between heart and kidney in pathological conditions. Though incidence of CRS is increasing, the pathophysiology and management of lag increasing both morbidity and mortality for patients. Recent studies demonstrate that renal insufficiency in the case of heart failure is one of the most common comorbidities for both congestive heart failure (CHF) and acute decompensated heart failure (ADHF). In this review, we summarize the existing conceptual pathophysiology behind the established types of cardiorenal syndrome and delve into the associated therapeutic modalities with a focus on pediatric cases.

C6

Title: High-Volume Hemofiltration for Acute Kidney Injury in critically ill patients

Author(s): Ira Mehta, Nirav Agrawal, Rupesh Raina

Affiliation: Lake Ridge Academy, North Ridgeville, OH

Introduction:

Septic shock and severe sepsis are one of the leading causes of death in the intensive care unit (ICU). It is a systemic infection leading to multi-organ failure and dangerously low blood pressure. As there is a surge in bacterial toxins and inflammatory markers in the bloodstream, removing them from the bloodstream with the help of an extracorporeal blood purification technique like high-volume hemofiltration (HVHF) can be beneficial to critically ill patients in the ICU.

Methods:

A literature search was performed in PubMed/Medline. All the studies were included if there was a need for HVHF either for sepsis or acute kidney injury (AKI) in critically ill patients. Two independent reviewers conducted the selection of articles, and a third resolved any conflicts.

Results

A total of 809 patients were analyzed (11 studies), the mean (SD) population age was 42.17 \pm 13.2 years. Based on nine studies, 47.7 % (386/809) of patients received HVHF as a therapy. 7 of 11 (64%) studies showed significant improvement in patient health; of which 4 (57%) studies showed improvement of clinical symptoms and 3 (43%) studies showed decrease in mortality. However, 4 of 11 (36.4%) studies showed no benefit of receiving HVHF as a treatment.

Conclusion:

This review shows some evidence of benefit in patient's survival; however, there is insufficient evidence available in the literature to recommend the routine use of HVHF in critically ill patients. Further studies need to be conducted to measure clinically relevant outcomes, comparing therapeutic extracorporeal therapies for septic AKI.

C8

Title: Unrecognized Side Effects of the Face Masks: A Prospective Survey Study During the COVID-19 Pandemic

Author(s): Shamai Kurbitaeva, Keyvan Ravakhah

Affiliation: St Vincent Charity Medical Center Internal Medicine Residency

Background

SARŠ-CoV-2 has infected almost 60 million individuals worldwide and caused more than 1.3 million deaths. Face masks remain one of the cornerstones in slowing the spread of the infection. However, despite occasional reports of facial pressure injuries, rashes, and communication problems, the adverse effects of prolonged mask wearing have not been investigated.

Method

This is an observational survey study. A questionnaire was electronically distributed to the employees of St. Vincent Charity Medical Center in Cleveland, OH.

Results

Total of 263 people completed the survey. 94.7% reported having at least one side effect from face masks. The most common reported adverse reactions were: skin rash (45.8%), nasal congestion or dryness (44.7%), social and communication issues (42.0%), facial itching (34.0%), shortness of breath (32.6%), ear pain (28.8%), and excess facial sweating (27.7%).

Conclusion

Wearing face masks on a daily basis and for prolonged periods of time is associated with a number of side effects that affect quality of life and may also reduce compliance with face mask policies. Further research is needed to identify associated risk factors.

C9

Title: Common Variable Immune Deficiency, an Outpatient Experience

Author(s): Shamai Kurbitaeva, Carmen Popa, MD, Robert Fishcher, MBBS, Shamai Kurbitaeva, MD, Keyvan Ravakhah, MD

Affiliation: St Vincent Charity Medical Center Internal Medicine Residency

Background: Common variable immunodeficiency (CVID) is one of the most common primary immunodeficiencies encountered by physicians, yet it is still poorly described and vastly underdiagnosed and underreported. It is characterized by low levels of immunoglobulins IgG, IgM and IgA, recurrent infections, and increased incidence of autoimmune conditions and malignancies. Diverse clinical presentation, poor understanding of its true prevalence, and the daunting, rarely ordered, diagnostic testing make this disease incredibly difficult to diagnose in a primary care setting.

Objective: To establish a simple marker that can be used in a primary care setting to raise suspicion of CVID and prompt further diagnostic testing. The second objective was to demonstrate that the true prevalence of CVID is much higher than previously reported.

Methods: Data on 441 patients who underwent immunoglobulin electrophoresis testing over a 4-year period was analyzed retrospectively for the presence of hypogammaglobulinemia and number of clinic visits for infectious processes.

Results: Average number of clinic visits prior to testing in patients with no identified antibody deficiency was 1.89, and in patients with any deficiency 2.22. Odds ratio (OR) for each additional visit was 1.089 which was not statistically significant (p=0.103). When the data was re-coded to be capped at six clinic visits, OR for each visit up to six was 1.119 which was marginally significant (p=0.058).

Conclusion: Patients with immunoglobulin deficiencies tend to have a higher number of office visits related to infectious processes. This difference, however, wasn't statistically significant in our study, likely due to the small number of participants. Our study also demonstrated that prevalence of CVID is likely much higher than currently reported, and it highlights the difficulties related to the convoluted diagnostic process of this disease.

Keywords: Common variable immunodeficiency; CVID; hypogammaglobulinemia; immunoglobulin deficiency; antibody deficiency.

Key points: CVID is more common than diagnosed, CVID is frequently missed.

C10

Title: A Survey Analysis of TeleHealth Access to Geriatric Patients During COVID-19

Author(s): Sohi Mistry

Affiliation: Northeast Ohio Medical University

COVID-19 increased the need for remote access to healthcare; however, there remains the concern that the patient population has the capability to use the software to employ TeleHealth. This study focused on elucidating the most effective way to reach out to the patient population for educational intervention. We surveyed participants from Summa Health Akron City Hospital and the Direction Home Akron Canton Area Agency on Aging and Disabilities on the current use of TeleMedicine both prior to and during the pandemic. 16 out of 22 (72.7%) participants participated in the survey. The participants consisted of 5 (33.3%) physicians. 11 participants (73.3%) noted that less than 25% of their patients reside in nursing homes. We further explored the practitioner's perception on the patient capability to employ TeleHealth. 9 (60.0%) of the participants use TeleHealth, of which 5 (55.6%) started utilizing it within the past six months. In assessing comfort level among patients using TeleHealth, a majority (69.2%) of the participants state that their patients feel somewhat uncomfortable to completely uncomfortable in utilizing TeleHealth. A greater majority (76.9%) state that their patients feel a medium level of comfort utilizing devices such as blood pressure monitors and glucose machines at home. Finally, 12 participants (92.3%) state that a volunteer service to aid patients and/or caregivers in use of medical devices and TeleHealth would be extremely useful. Our goal is to use this data to develop a student-led virtual program to provide assistance to patients in using medical devices.

C11

Title: Acute Kidney Injury in COVID-19 Pediatric Patients: Analysis of the Virtual Pediatric Systems data

Author(s): Isabelle Mawby, Rupesh Raina

Affiliation: Northeast Ohio Medical University & Department of Nephrology, Akron Children's Hospital, Akron, OH

Background

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is responsible for the 2019 novel coronavirus disease pandemic (COVID-19). Despite vast research about the adult population, there has been little data collected on acute kidney injury (AKI) epidemiology, associated risk factors, treatments, and mortality in pediatric COVID-19 patients admitted to the ICU. AKI is a severe complication of COVID-19 among children and adolescents. Therefore, understanding all aspects of the disease is crucial to further developing treatment and preventative care strategies to reduce morbidity and mortality.

Objective

This study aims to identify the epidemiology, associated risk factors, treatments, and mortality of AKI in pediatric COVID-19 patients admitted to the intensive care unit (ICU) in North America using the Virtual Pediatric Systems (VPS) database.

Method

This is a retrospective study of COVID-19 pediatric patients (age \leq 24 years) in the pediatric ICU within North America using the VPS COVID-19 database between January 1, 2020 and June 30, 2020.

Result

Data regarding 1240 pediatric COVID-19 patients was analyzed. 172 of these patients had renal/urinary system involvement. Of the 172 patients with renal involvement, there were 19 confirmed deaths. 36 patients received renal replacement therapy (RRT). Of these 36 patients, there were 2 confirmed deaths. 264 (24.67%) patients were diagnosed with Multisystem Inflammatory Syndrome in Children (MIS-C).

Conclusion

Although COVID-19 in the pediatric population tends to present more favorably, renal involvement among the pediatric COVID-19 patient population may be considered a negative prognostic factor with respect to patient outcomes.

C12

Title: LONG TERM RENAL OUTCOMES IN CHILDREN WITH ACUTE KIDNEY INJURY POST CARDIAC SURGERY [ROCKS TRIAL]- RESULTS OF ISN CLINICAL RESEARCH PROGRAM GRANT

Author(s): Aadi Pandya, Rupesh Raina

Affiliation: Cleveland Clinic Akron General Medical Center

Introduction: Studies have shown that acute kidney injury (AKI) is associated with poor short-term outcomes: mortality, longer hospital stay, ventilation duration. Long-term renal outcomes of survivors of pediatric AKI haven't been studied extensively.

Objective: Study long-term renal outcomes and kidney injury markers in pediatric patients following cardiac bypass surgery.

Methods: Prospective study of infants and children who underwent cardiac bypass surgery (2010 - 2017) were evaluated. Exclusion criteria: pre-existing CKD, history of hypertension, previous AKI. Evaluation of GFR (measured by Schwartz formula and Cystatin-C), serum blood urea nitrogen, serum creatinine, urine albumin/creatinine ratio, serum cystatin-C levels, serum Betatrace protein. Urinary biomarkers: NGAL, L-FABP, KIM-1, IL-18.

Results: 9.8% of 2,035 patients developed AKI postoperatively. Forty-four patients had a long-term follow up and met inclusion criteria; they were matched to 49 controls. Patients who developed AKI had higher baseline serum creatinine, higher postoperative serum creatine, longer ICU stay, weight gain, longer CPB time, higher sepsis rate. Patients with postoperative AKI had higher serum creatinine and urinary KIM-1 levels, lower GFR. There was a significant difference between children who did/didn't develop AKI postoperatively; backward linear regression analysis was conducted with GFR as dependent variable. Weight, baseline serum creatinine, postoperative AKI, CPB time, and sepsis were independent variables. CPB time remained the only risk factor associated with GFR. CPB time and AKI remained the only risk factors associated with KIM-1.

Conclusion: In children with congenital heart disease, cardiopulmonary bypass time associated with decrease in GFR and rise in kidney injury biomarker KIM-1 level independent of postoperative AKI.

C13

Title: Rash from fire- a case series

Author(s): Anita Mason-Kennedy

Affiliation: St. Vincent Charity Medical Center

Erythema ab igne is an uncommon hyperpigmented dermatological disorder caused by repeated exposure to heat sources. Its reticulated configuration closely resembles that of livedo reticularis and as such it can be easily mistaken for the latter. Due to this, extensive workup usually ensues for a disorder that is benign and easily treated. We present three patients who presented with non pruritic, painless, hyperpigmented or erythematous, reticulated rash of weeks duration with a significant history of repeated heat exposure to the affected area. Patient 1:49 year old Caucasian woman, with a reddish hyperpigmented rash to pretibial region of legs for three weeks – prior space heater use. Patient 2:34 year old Caucasian woman whose hyperpigmented rash was located to the lower back – prior heating pad use; Patient 3: 28 year old African American woman, hyperpigmented rash to plantar aspect of feet – foot warmer use. Examination of each patient was significant for a hyper pigmented reticulated rash in the affected areas. The clinical diagnosis of Erythema Ab Igne was made without further clinical investigations. Avoidance of continuous direct heat exposure without pharmacological management was advised with complete resolution of rash after a few months of follow up.

Erythema Ab Igne is an uncommon disorder, its exact incidence is unknown. Its main mimic is livedo reticularis, which is not localized, frequently associated with systemic symptoms, and sometimes requires extensive evaluation. Erythema ab igne is diagnosed clinically and treated with removal of the offending agent.

C14

Title: Spontaneous Urinary Bladder Rupture Mimicking Acute Renal Failure

Author(s): Ameed Bawwab MD, Abdul R Al Armashi MD, Hadeel Abuteer MD, Faris Hammad MD, Keyvan Ravakhah MD

Affiliation: St. Vincent Charity Medical Center

Spontaneous rupture of the urinary bladder without a history of antecedent trauma is a rare occurrence, and when encountered, it is a diagnostic challenge. Patients usually present with features of acute abdomen, acute renal failure, urinary ascites, and sometimes urinothorax.

Our patient is a 46-year-old Hispanic woman presented to the emergency department with sharp, stabbing abdominal and pelvic pain for one week. Computerized Tomography was significant for a slight amount of fluid in the pelvis and a likely ruptured ovarian cyst.

The workup revealed abnormal renal function, large ascites, and large right pleural effusion. The patient then underwent multiple paracentesis and thoracentesis, but the fluid quickly reaccumulated. She subsequently had a chest tube placed.

The nephrology service was consulted for abnormal renal function. A kidney biopsy was done and was unremarkable. The pleural fluid analysis showed elevated Creatinine suggesting a urinothorax. Hence the urology service was consulted.

Cystoscopy showed a large bladder perforation; therefore, an exploratory laparotomy for repairing the bladder perforation was successfully performed. The renal function improved back to normal, and the chest tube was removed.

The patient's unique presentation prompts consideration and discussion of spontaneous bladder rupture and its manifestations.

C15

Title: Uncommon cause of fever in a child with steroid-dependent nephrotic syndrome

Author(s): Ritika Chakraborty, Rupesh Raina

Affiliation: Cleveland Clinic Akron General Medical Center, Akron, Ohio, USA

Background: Pediatric cases of nephrotic syndrome are vulnerable to developing infections due to conditions of relative malnourishment, overall immunodeficiency, and use of immunosuppression.

Case characteristics: Here, we report the case of a 3-year-old child with steroid-dependent nephrotic syndrome, who presented to the clinic with high fever of unknown origin.

Observation and Outcome: The patient was found to have an atypical mixed infection with mycoplasma and cytomegalovirus based on a computed tomography scan of the chest and abdomen and raised IgG and IgM antibody titers. The infection completely resolved with appropriate treatment and lowering of immunosuppression.

Message: Persistently febrile pediatric patients, especially in the setting of recent immunosuppression and absence of otherwise-identified infectious pathogens, are at risk and should be screened for atypical mixed infections.

C16

Title: An unusual case of acute cholecystitis and bradycardia (Cope's sign)

Author(s): Kanchi Patell, Isaac Alsallamin MD, Keyvan Ravakhah MD

Affiliation: St. Vincent Charity Medical Center

INTRODUCTION- Patients with acute cholecystitis present with right upper quadrant or epigastrium pain, nausea and vomiting. Fever, leukocytosis and a positive Murphy's sign support the diagnosis. Oftentimes, acute cholecystitis may mimic cardiovascular disease. Bradycardia is one of the rare presentations of cholecystitis and is called the "Cope's sign." Sir Zachary Cope was the first patient who presented with cardio-biliary reflex in 1970. Very few cases have been reported

CASE PRESENTATION- 55 year old male presented with retrosternal chest pain, diaphoresis and vomiting followed by epigastric pain. Symptoms started one night before and were attributed to raw chicken. Examination showed a diaphoretic man with abdominal tenderness and bradycardia. His symptoms were concerning because the chest pain and bradycardia were compatible with inferior-wall MI. Troponins were negative. EKG showed sinus bradycardia with 42 beats/min. Abdominal US revealed gallstones, pericholecystic fluid and gallbladder wall thickening. He was managed as acute cholecystitis with IV fluids, pain control and antibiotics. Surgery recommended urgent cholecystectomy.

DISCUSSION- Cardio-biliary reflex exists and can result in serious consequences. Bradyarrhythmia is the most common presentation of cardio-biliary reflex. Cardio-biliary reflex is believed to be vagally mediated and notably has been triggered by pain in the gallbladder via autonomic vagal innervations. A case-control study by Kaufman and Lubera reported that the increased vagal tone caused by the gallbladder could mimic myocardial infarction or cause bradyarrhythmia and even complete heart block. Patients with acute cholecystitis having abnormal ECG changes should be managed cautiously to avoid possible complications."

C17

Title: Metastatic breast cancer to a J-shaped muscular bag- The stomach

Author(s): Kanchi Patell, Abdul R Al Armashi MD, Francisco Somoza MD, Anita Mason-Kennedy MD, Keyvan Ravakhah MD

Affiliation: St. Vincent Charity Medical Center

INTRODUCTION-

Breast cancer is the most common malignant neoplasm in the female population. Metastatic involvement of the gastrointestinal tract is infrequent, with an estimated incidence rate of approximately 0.3% and related mainly to lobular infiltrative breast carcinoma.

CASE PRESENTATION-

Our patient is a 75-year-old female with a past medical history of stage IIIB, right-sided triplenegative invasive breast carcinoma with clear cell and glycogen rich features diagnosed one year
before presentation. She presented to the emergency department complaining of dizziness and
unsteady gait for the past two days. Physical examination revealed right-sided hemiparesis and
pronator drift. MRI of the brain showed possible infarcts from a subacute stroke so the patient
was started on dual antiplatelet therapy. Two days following admission, she had an
asymptomatic drop in hemoglobin with a positive fecal occult blood test
Esophagogastroduodenoscopy showed several gastric ulcers with raised mucosa on the greater
curvature of the stomach. Multiple biopsies were obtained revealing metastatic, poorly
differentiated adenocarcinoma consistent with primary breast cancer. Subsequently, CT of the
abdomen showed several metastatic lesions in the lungs, liver, left breast, and an intraperitoneal
mass. The patient was diagnosed with Stage IV metastatic invasive breast carcinoma with clear
cell features. Due to her low-performance status, palliative care was considered.

DISCUSSION-

This case highlights the rare metastatic spread to the GI tract from a primary breast tumor. Gastric metastasis can negatively impact survival and must be investigated with gastric endoscopy in cases of GI symptoms, even when the symptoms are vague.

C18

Title: Dialysis Disequilibrium Syndrome

Author(s): Sarisha Mahajan, Rupesh Raina

Affiliation: Revere High School

Introduction

Dialysis disequilibrium syndrome (DDS) is a rare clinical complication in patients with End-Stage Kidney Disease on hemodialysis (HD). Patients with preexisting neurological conditions and of extreme ages are at increased risk. Due to the difficulty in confirming the diagnosis and underreporting, DDS incidence is not well known. The literature review aims to provide a clear picture of the pathogenesis, and effective management strategies of the syndrome.

Methods:

A literature search was performed in PubMed/Medline and Embase. After review by three independent reviewers, studies were included if there was a development of DDS in patients undergoing HD. A descriptive analysis was conducted analyzing the frequencies of symptoms and various treatment management.

Results:

A total of 49 studies (321 samples) were included out of 276 articles. The subjects included 127 adults, and 75 children. The most common symptoms were headache, nausea, vomiting, confusion, and seizure. HD was the most common dialysis reported (43 studies). Twelve studies either immediately switched to or began their dialysis with CVVH/CVVHDF or PD. Conclusions:

DDS was most prevalent during HD. Patients who initially received or switched to CVVH/CVVHDF, PD, or HF showed little to no symptoms of DDS. Decreasing the speed of dialysis can also reduce symptoms of DDS. Another strategy to reduce symptoms with rapid HD is to replace the loss of urea with active substrates like sodium, mannitol, glucose, and or by urea itself. Early recognition of DDS symptoms and timely preventive measures are crucial to improving patient outcomes.

C19

Title: The Use of the Renal Angina Index in Predicting Acute Kidney Injury

Author(s): Nikhita Kumar, Isabelle Mawby, Rupesh Raina

Affiliation: Akron Children's Hosptial

In recent years, the use of the renal angina index (RAI) to calculate and accurately predict risk for the development of acute kidney injury (AKI) has been heavily explored. AKI is traditionally diagnosed by an increase in serum creatinine (sCr) concentration or oliguria, both of which are neither specific or sensitive, especially among children. An RAI score may be calculated by combining objective signs of kidney dysfunction (such as sCr), and patient context, (such as risk factors for AKI), thus potentially serving as a more accurate biomarker for AKI. Due to the propitious and novel nature of RAI, this systematic review aims to analyze how well RAI serves as a predictor of AKI outcomes. A comprehensive literature search was conducted in PubMed/Medline and Google Scholar.

The literature that studied the prognostic aspect of early prediction of AKI in the pediatric and adult population via renal angina index versus Cr was included.

The initial literature search included 149 studies and a total of 10 studies reporting the outcomes of interest were included. The overall sample size across these studies was 11,026. The predictive ability of RAI included a pooled (95% CI) sensitivity of 79.21%, specificity of 73.22%, and negative predictive value of 94.83%.

Currently, without RAI, clinicians lack a way to risk stratify patients capable of developing AKI. RAI shows benefit in the prediction of AKI among adult and pediatric populations.

C20

Title: Case Report: Delirium tremens and acute coronary syndrome

Author(s): Francisco J. Somoza-Cano, Abdul R. Al Armashi MD

Affiliation: St. Vincent Charity Medical Center Internal Medicine Department

Delirium tremens is a condition characterized by hallucinations, tachycardia, hypertension, hyperthermia, agitation, and diaphoresis in the setting of acute reduction or abstinence from alcohol. This abrupt discontinuation causes a sympathetic overdrive, increasing oxygen consumption in organs throughout the body. Moreover, chronic alcohol use causes perivascular fibrosis and vascular cell edema in the small vessels of the heart, impairing adequate vasodilation when needed.

A 63-year-old male with a past medical history of non-obstructive coronary artery disease, dilated cardiomyopathy, chronic obstructive pulmonary disease, alcohol and cocaine use disorder, hypertension and hyperlipidemia presented to the emergency department for chest pain and shortness of breath. His last alcohol drink was the night before admission. Physical examination revealed tachycardia and hypertension. Cardiac enzymes were elevated, and an electrocardiogram showed new T wave inversions in lateral leads compared to one done one month earlier. Blood alcohol level was high, and urine toxicology was positive for cocaine. He was admitted as a type 2 myocardial infarction and given medical management in the Intensive Care Unit. He was started on a lorazepam protocol for withdrawal. 48 hours after admission, troponins had trended down, electrocardiogram changes returned to baseline, but the patient developed visual hallucinations, tachycardia, hypertension, and restlessness. Clinical Institute Withdrawal Assessment for Alcohol scale, revised score was 20. Patient had not required benzodiazepines until this point. The patient continued to be restless and combative so a dexmedetomidine drip was started with adequate response. However, 8 hours later, ST-segment elevation was noted on the telemetry strip. Cardiac enzymes and B-Natriuretic Peptide trended up and an electrocardiogram showed ST-segment elevation in V3-V5. The patient denied chest pain but continued to be in active delirium. He was started on a heparin and nitroglycerin drip and transferred to a cardiac catheterization capable institution where he recovered

This case illustrates the risks involving the care of patients with delirium tremens and an established coronary artery disease. Although the patient was being treated with the standard protocols for alcohol withdrawal, he developed delirium tremens, nonetheless. This hyperadrenergic state leads to coronary vasospasm and increased myocardial oxygen consumption in an already damaged myocardium. In addition to that, active delirium and medications used for withdrawal mask the symptoms of an acute coronary syndrome, making the diagnosis more challenging.

C21

Title: Post-transplant Recurrence of Focal Segmental Glomerulosclerosis: Critical appraisal and Consensus Guidelines

Author(s): Swathi Jothi, Rupesh Raina

Affiliation: Cleveland Clinic Akron General Medical Center

Introduction: Focal segmental glomerulosclerosis (FSGS) is the leading cause of nephrotic syndrome in both adult and pediatric patients and frequently leads to end-stage kidney disease. Recurrence of FSGS after kidney transplantation increases the morbidity and mortality. There are no consensus guidelines for identifying those patients who are at risk for recurrence or for managing recurrent FSGS (rFSGS).

Objectives: To conduct a critical appraisal of current literature pertaining to rFSGS and provide a consensus guideline on its diagnosis and management.

Methods: We performed a literature search on PubMed/Medline, Embase, and Cochrane with the help of the Cleveland Clinic librarian. The workgroup consisted of two reviewers who screened the identified articles for relevance, and the third reviewer resolved any disagreements. Afterwards, recommendations were proposed and graded for strength of evidence. Of the 614 initially identified studies, 221 were found suitable to formulate consensus guidelines for recurrent FSGS. The following data were extracted from transplant recipients: age, sex, ethnicity of patient, type of donor, number of acute rejection episodes and 5-year graft survival rates. Outcomes (with 95% confidence interval, CI) were the incidence of rFSGS, episodes of acute rejection, and 5-year graft survival. A meta-analysis of these outcomes was conducted.

Conclusion: The guidelines focus on the definition, epidemiology, risk factors, pathogenesis, and management of recurrent FSGS. We conclude that additional studies are required to strengthen the recommendations proposed in this review.

C22

Title: Eculizumab in Management of Gemcitabine-Induced Hemolytic Uremic Syndrome: A Case Report

Author(s): Divya Sharma

Affiliation: Northeast Ohio Medical University

Introduction: Chemotherapy-induced hemolytic uremic syndrome (HUS) is a relatively rare phenomenon. Literature on gemcitabine-induced HUS (GiHUS) is sparse. Here, we describe a case of GiHUS and the use of eculizumab, a C5 complement inhibitor, in the successful treatment of GiHUS.

Methods: We will discuss the clinical course and management of a 64-year-old woman who was found to have GiHUS.

Results: A 64-year-old woman presented with recurrent episodes of abdominal pain associated with acholic stools. Following extensive workup, she was found to have unresectable adenocarcinoma of the pancreatic head and was started on gemcitabine therapy. Following one month of gemcitabine treatment, the patient's condition deteriorated, and she developed rapidly declining renal function with proteinuria and hematuria. Renal biopsy revealed thrombotic microangiopathy secondary to GiHUS. Continuous renal replacement therapy was initiated and was consequently switched to conventional hemodialysis, followed by plasmapheresis with albumin. However, minimal improvement in renal function was noted. As such, eculizumab was initiated at the dose of 1/week, then transitioned to 1/month for a total of nine doses. The patient showed significant improvement in creatinine clearance and markers of hemolysis. Conclusion: Gemcitabine-induced HUS is a relatively rare occurrence. No risk factors have been identified for HUS among those on gemcitabine. Conventional treatment for HUS, including hemodialysis, CRRT, and plasmapheresis, have shown minimal improvement. However, the use of eculizumab has shown rapid improvement in our patient with GiHUS, suggesting a potential autonomous and abhorrent pathway for complement activation. Further investigation into the mechanisms and management of GiHUS is thus warranted

C23

Title: Benign co-secreting unilateral adrenal adenoma - An electrolyte potpourri: A Case Report

Author(s): Bhavya Sharma

Affiliation: Northeast Ohio Medical University

Abstract

Introduction: Adrenal adenomas are relatively common benign masses that are most often inactive in hormone secretion. These tumors do not ordinarily cause symptoms and are regularly incidental findings on imaging. We introduce a common yet complex manifestation of an adrenal adenoma

Methods: Case report of a middle-aged patient in which we identify common symptoms, workup, management, and clinical pearls in diagnosing and treating adrenal adenomas.

Results: A 56-year-old woman with a five-year history of hypertension, recently diagnosed with diabetes mellitus was admitted for acute decompensated heart failure (ADHF) with preserved ejection fraction of 64%. Significant history included uncontrolled hypertension despite multiple anti-hypertensive medications. She was found to have profound hypokalemia despite supplement of 80 (mEq/day). She has a history of frequent admission for ADHF due to hypertensive crisis. Nephrology was consulted for hypokalemia and uncontrolled hypertension (190/100 mmhg). Trans tubular potassium gradient (TTKG) was assessed to evaluate excess mineralocorticoid bioactivity in the distal nephron. Serum aldosterone concentration was higher than normal with low plasma renin activity (PRA), while on lisinopril. Early morning serum cortisol was found to be 14 µg/dl. Abdominal CT scan displayed a right adrenal nodule with calcification (4.6cm). To address the resistant hypertension, spironolactone 50mg twice daily was used with marked improvement in blood pressure and hyperkalemia.

Discussion: Benign adrenal adenomas can co-excrete excess aldosterone and cortisol, which can change clinical management. It is important to recognize co-secreting adrenal adenomas and be watchful for new onset hypertension and insulin resistance.

C24

Title: The Evolution of Extracorporeal Anticoagulants in Continuous Kidney Replacement Therapy: Lessons Learned

Author(s): Nirav Agrawal, Kristen Kusumi, Rupesh Raina

Affiliation: Akron Nephrology Associates/ Cleveland Clinic Akron General Medical Center, Akron, OH

Abstract

Continuous kidney replacement therapy (CKRT) is the primary therapeutic modality utilized in hemodynamically unstable patients with severe acute kidney injury. As the circuit is extracorporeal, it poses an increased risk of blood clotting and circuit loss; frequent circuit losses affect the provider's ability to provide optimal treatment. The objective of this meta-analysis is to evaluate the evolution of extracorporeal anticoagulants for their safety and efficacy in the pediatric CKRT population.

Results

We conducted a literature search on PubMed and Embase for relevant citations. Studies were included if they involved patients under the age of 18 years undergoing CKRT, with the use of anticoagulation as a part of therapy. Only English articles were included in the study. Initial search yielded 58 articles and a total of 24 articles were included and reviewed. A meta-analysis was performed focusing on the safety and effectiveness of regional citrate anticoagulation (RCA) vs unfractionated heparin (UFH) anticoagulants in children. RCA had statistically significantly longer circuit life of 50.65 hours vs. UFH of 42.10 hours. Two major adverse effects metabolic acidosis and electrolyte imbalance seen more commonly in RCA compared to UFH. There was not a significant difference in the risk of systemic bleeding when comparing RCA vs. UFH.

Conclusion

RCA is the preferred anticoagulant over UFH due to its significantly longer circuit life, although vigilant circuit monitoring is required due to the increased risk of electrolyte disturbances. Additional studies are needed to strengthen the study results further."

C25

Title: HEALTH DISPARITIES IN CHILDREN WITH H. PYLORI INFECTION ATTENDING AN URBAN SAFETY NET HOSPITAL IN THE UNITED STATES

Author(s): Aditi Mittal, Reema Gulati

Affiliation: MetroHealth Cleveland Clinic

"Background

H. pylori infection is an important cause of peptic ulcer disease and gastric cancer worldwide. Socioeconomic risk factors like low income, foreign born status, overcrowding, and poor education are associated with this infection in adults in US. Our study aims to examine various markers of health disparities in children with H. pylori infection.

Methods

This is a retrospective study of children (0-18 yrs) who presented with chronic upper gastrointestinal symptoms and were tested for H. pylori infection from 2009-2017 at MetroHealth Medical Center, Cleveland, Ohio. H. pylori positive (cases) and negative (controls) groups were identified based on serology, stool antigen test, breath test, and/or endoscopyhistopathology. Demographic variables were obtained by chart review and were analyzed.

Reculto

16.4% (226/1380) of patients tested for H. pylori were positive. In the multivariate analysis, the following adjusted odds ratios (95% CI) were significant independent risk factors for H. pylori disease in children: government insurance status [1.950 (1.271, 2.994), p=0.002], African-American race [1.568 (1.097,2.243), p=0.014] and age (years) [1.088 (1.050,1.127), p=<0.001]. English as the primary language spoken at home was protective against H. Pylori infection [0.521 (0.337,0.805), p=0.003].

Conclusion

In our study, H. pylori infection in children was associated with African-American race, government insurance status- a surrogate marker of low socioeconomic status; and foreign-born status as reflected by English language (as preferred spoken language) being protective for the disease. Understanding such health disparities will prove useful in developing targeted, publichealth focused interventions for reducing transmission of H pylori infection in vulnerable children."

C26

Title: MANAGING FECAL IMMUNOCHEMISTRY TEST (FIT) AT POPULATION HEALTH LEVEL IN AN URBAN SAFETY NET HOSPITAL

Author(s): Abbinaya Elangovan

Affiliation: Case Western Reserve University/ MetroHealth Medical Center

"Introduction:

Lack of fecal immunochemistry test (FIT) orders is perceived as a barrier to complete CRC screening. We aimed to evaluate bulk ordering FIT as a population health level methodology to improve CRC screening rates.

Method:

Individuals 50-75 years old, who had a primary care provider visit in the MetroHealth System within the preceding 2 years were reviewed between 10/2018 and 04/2019. Individuals at average-risk of CRC who neither completed a FIT in the preceding 11 months nor were assigned to the colonoscopy screening track were identified via querying of the electronic health record (EHR). Bulk orders were placed on eligible individuals once every month and they were informed. FIT orders were released in clinic or mailed upon request. If FIT resulted positive, patients were contacted for a follow-up colonoscopy. FIT numbers at each step of the bulk order were compared to regular orders in usual care to analyze differences in outcome. Results:

From 10/2018 to 04/2019, 27,212 bulk orders and 13,756 regular orders were placed. Only 11.1% bulk orders were released compared to regular orders (48.4%). Higher number of the released regular orders were completed (93.4% vs 53.9%). Among those with positive FIT, significantly higher number of patients obtained a follow-up colonoscopy within 120 days in the bulk order (67.5%) compared to usual care (56.7%), p = 0.04.

Managing FIT at a population health level provides a time-efficient way to identify patients due for CRC screening. Bulk ordering bypasses the need for an in-person encounter for order placement. "

C27

Title: HIGH BURDEN OF OBESITY AND LOW RATES OF WEIGHT LOSS PHARMACOTHERAPY IN INFLAMMATORY BOWEL DISEASE: 10 YEAR TREND

Author(s): Abbinaya Elangovan

Affiliation: Case Western Reserve University/ MetroHealth Medical Center

"Introduction

Obesity and inflammatory bowel disease (IBD) have been increasing in the past decade. There is a paucity of data on the recent trend of obesity and the utilization of anti-obesity pharmacotherapy in IBD. Hence, we aimed to use a population-level database to analyze their trends.

Methods

A retrospective analysis of population-level data 2010–2019 was performed among individuals \geq 18 years of age using a commercial database, IBM Explorys. The prevalence and trends of obesity, diabetes mellitus type 2 (DM2), essential hypertension (HTN), dyslipidemia and/ or hyperlipidemia (HLD), sleep apnea, and anti-obesity pharmacotherapy were studied. Univariate analysis using chi-square test and trend analysis using the Cochrane Armitage test were performed.

Results

Among 39,717,520 adults, 37.3% of IBD patients were obese (CD 36.9% vs UC 38.5%, p < 0.0001). The proportion of IBD adults with obesity and related comorbidities increased from 2010 to 2019: obesity (19.7% to 30.1%), DM2 (8.3% to 12.5%), HTN (25.1% to 33.9%), HLD (22.1% to 32.2%) and sleep apnea (4.1% to 10.8%), p < 0.0001 for all comparisons. Only 2.8% of eligible adults with obesity were prescribed anti-obesity pharmacotherapy in the last 10 years, trend increased from 1.4% to 3.6%, 2010–2019.

Conclusion

With obesity being a harbinger for metabolic syndrome, the increase in obesity in IBD patients was accompanied by a concomitant increase in the diseases associated with obesity in the past decade. However, this alarming rise in obesity was accompanied by a disproportionately small increase in anti-obesity pharmacotherapy."

C28

Title: LITERATURE REVIEW AND SURVEY ON TELEMEDICINE AMONG PEDIATRIC NEPHROLOGISTS AND THEIR PATIENTS IN NORTH AMERICA DURING THE COVID-19 PANDEMIC

Author(s): Nikhil Nair, Rupesh Raina

Affiliation: Case Western Reserve University

Background: The slow increase in telemedicine utilization expanded rapidly, along with reimbursement changes, during the COVID-19 pandemic. Standardized protocols for these services are lacking but needed for effective and equitable healthcare.

Aim: Our aims were to: 1) do a systematic review of the telemedicine literature for nephrology patients and billing; 2) query pediatric nephrologists and their patients about their telemedicine experiences during the pandemic; and 3) make recommendations based on findings.

Methods: For aim one, we conducted a literature review. For aim two, HIPAA-compliant surveys were deployed on-line. Aim three was completed after review of the survey results and discussions with the co-investigators.

Results: Our literature review identified seven underpowered mostly single center trials conducted in adult patients. We collected survey responses from 400 patients and 197 pediatric nephrologists. Patients reported positive experiences with telemedicine visits as it was logistically easier than in-person visits. Patients also felt that the quality of their visits were equivalent to what they would receive in person. Physicians used a wide variety of on-line systems to conduct synchronous telemedicine with ZoomTM (23%), EPICTM (9%), Doxy.meTM (7%) or other services not specified (37%). Most physicians' concerns related to technological issues and the ability to procure physical exams and/or laboratory results.

Conclusions: There is a paucity of published trials on telemedicine services in pediatric nephrology. Virtual care was feasible and acceptable for patients, caregivers, and providers during the COVID-19 pandemic. Suggestions for standardized telemedicine services and reimbursement codes for payers are discussed

C29

Title: A Case of Community Acquired Clostridium Difficile Infection

Author(s): Rangit Vallapureddy, Mythri Mudireddy, Keyvan Ravakhah

Affiliation: St Vincent Charity Medical Center

"Clostridium difficile infection is the most common cause of hospital acquired and antibiotic associated diarrhea. Approximately 4-5% of normal adults and 40-50% of long term care facility residents are asymptomatic carriers. Changes in the fecal microbiome are central in the development of C. difficile colonization. We report a case of a young male with C. difficile colitis with no known risk factors.

A 31 year old man with a significant medical history of ADHD, asthma and seasonal allergies was admitted with a 4 day history of progressively worsening watery diarrhea, abdominal pain, nausea and vomiting associated with on and off fever and chills. Stool was foul smelling associated with abdominal cramping before and during bowel movement. He denied any mucus or blood in the stool, recent antibiotic use or hospitalization, consumption of outside food or similar complaints in other family members. Physical examination was significant for pale conjunctiva and hyperactive bowel sounds. Labs showed leukocytosis with bandemia, severe iron deficiency anemia with Hemoglobin of 8 g/dL and thrombocytosis of 1236 k/uL. Stool occult blood was positive. Stool analysis was positive for WBC and C. difficile antigen. EGD showed antral gastritis and colonoscopy was significant for severe pseudomembranous colitis. Subsequently, he was diagnosed with community acquired clostridium difficile infectio n (CA-CDI) and was isolated with contact precautions. He was started on oral vancomycin and IV iron. He improved symptomatically by day 2 and was discharged home with instructions to continue vancomycin for 14 days.

CA-CDI is defined as symptom onset within the community or within 48 hours of hospital admission. Population-based studies in the USA have shown that approximately 33-41% of C. diff infection cases were CA-CDI. The majority (81%) of CA-CDI cases occur in patients living in their homes, while 19% occur in patients living in long-term care centers. Patients with CA-CDI tend to be younger with lower comorbidities. Possible risk factors include increased use of antacids, food or water contamination, outpatient hospital visits, proximity to farms and the emergence of hypervirulent strains of C. difficile. Presentation may range from simple diarrhea, through pseudomembranous colitis or fulminant colitis, to toxic megacolon. Bloody diarrhea can be seen occasionally and usually treated with metronidazole and oral vancomycin. Monoclonal antibodies (Bezlotoxumab) can be used in conjunction with standard-of-care antibiotics to reduce recurrence. Fecal microbiota transplantation (FMT) has show n promising results.

Overall, clinicians should have a high level of suspicion for C. diff infection when patients present with acute onset of diarrhea even without traditional risk factors. Early identification and adequate treatment of CA-CDI may prevent disease progression, decrease inpatient hospital stay and limit the risk of disease transmission."

C30

Title: Efficacy of Stem Cell Therapy in Patients with Acute Myocardial Infarction: A Systematic Review and Meta-Analysis

Author(s): Neha Chellu

Affiliation: Beachwood High School

"Introduction

Despite significant progress in heart failure management, its burden remains enormous. Clinical studies in mice have shown efficacy of stem cell therapy to restore heart function, but questions of efficacy, lack of mechanistic understanding of underlying biological effect in humans and controversy about its effectiveness and safety profile persist.

Hypothesis

Stem cell therapy would result in greater improvement in ventricular function compared to standard therapy in patients with acute myocardial infarction (AMI).

Methods

A PubMed search conducted using search phrases "stem cell therapy for acute myocardial infarction" yielded total of 1372 articles; 173 articles were reviewed. Studies involving human subjects with AMI, with infusion of stem cells for treatment in English or with English translation were included. Studies without control group, imaging data, those using G-CSF (Granulocyte-colony stimulating factor) & including patients with chronic myocardial infarction/cardiomyopathy were excluded. Data collected included: year of publication, country of study, study design, number and ages of patients in both treatment and control groups, time from symptoms to treatment, number, type and source of stem cells, method of administration, time from symptoms to PCI, time from PCI to infusion, follow-up, ventricular volumes and function, infarct size, wall motion score index and side effects.

Conclusions

Stem cell therapy resulted in slightly greater improvement in left ventricular ejection fraction and wall motion abnormality in most studies. Acute and delayed side effects were mainly cardiac, no allergic reactions noted. Further prospective randomized large scale studies will help delineate the most effective dose and type of stem cell therapy.

C31

Title: Presentation of Chronic Anemia: A Near Miss of Medical Emergency

Author(s): Mythri Mudireddy MD, Rangit Vallapureddy, Keyvan Ravakhah MD

Affiliation: St. Vincent Charity Medical Center - Department of IM

"Anemia is more prevalent in women of childbearing age. In few cases the cause may be readily apparent, however, in many, it is multifactorial or overlooked. Anemia in the setting of concomitant cytopenias with atypical clinical presentation requires high degree of clinical suspicion and thorough evaluation. An accurate diagnosis of the underlying condition is essential for timely intervention to improve patient prognosis. We report a case of acquired thrombotic thrombocytopenic purpura (TTP) who presented with chronic anemia, thrombocytopenia and mild, transient neurological manifestations.

A 37-year-old G6P5 African American female presented to the emergency department (ED) with slurred speech, right upper extremity and right facial numbness for an hour. She had a significant medical history of menorrhagia, hypertension and marijuana use disorder. Her symptoms including slurred speech and numbness resolved shortly after arriving to ED. She also reported heavy vaginal bleeding at presentation. Initial vital signs showed elevated blood pressure. Physical exam was notable for active vaginal bleeding with clots. Labs at presentation were significant for normocytic anemia with hemoglobin of 8.0 g/dL, thrombocytopenia (59 k/Ul) and mild hypokalemia (3.3 mmol/L). Brain CT was negative for intracranial pathology. Abdomen/pelvis ultrasound revealed markedly heterogeneous bulky uterus with extensive fibroid. She was further evaluated for severe thrombocytopenia. Lab results showed low haptoglobin (<8 mg/dL), elevated lactate dehydrogenase (512 U/L). Prothrombin time, partial thromboplastin time, fibringen activity and creatinine were normal. Peripheral blood smear (PBS) showed numerous schistocytes and nucleated red blood cells, suggestive of microangiopathic hemolytic anemia (MAHA). Presumptive diagnosis of thrombotic thrombocytopenic purpura was made. The patient received IV steroids, two units of fresh frozen plasma (FFP) and was transferred to tertiary care center for plasma exchange (PEX) therapy. ADAMTS13 activity drawn prior to FFP transfusion was measured as <2% and the diagnosis of acquired TTP was established. At the tertiary care center, she received PEX therapy for 3 days along with IV steroids. Platelet count (59-->410) and ADAMTS13 activity (2%-->40%) were significantly improved following PEX therapy.

This case exemplifies the unusual presentation of TTP with mild clinical features and underscores the importance of careful evaluation of PBS in any patient presenting with cytopenias. TTP is a clinical diagnosis suspected in patients presenting with MAHA and thrombocytopenia with or without clinically evident etiology. The diagnosis is established by autoantibody-mediated deficiency of ADAMTS13 activity, typically <10%. It is a medical emergency, almost always fatal with a mortality rate of 90% without prompt intervention. PEX is the mainstay of treatment. Administration of glucocorticoids and rituximab is suggestible for presumptive or confirmed cases of TTP. Caplacizumab treatment is recommended for severely ill patients with neurological symptoms or elevated troponin levels."

C32

Title: Extremes of Nutritional Status Adversely Prognosticate Clinical Outcomes in Pediatric Patients Admitted with Acute Pancreatitis.

Author(s): Aravind Thavamani

Affiliation: UH Rainbow babies and Children's hospital

"Introduction: Incidence of acute pancreatitis (AP) is increasing worldwide. With rising prevalence of obesity and undernutrition in pediatric population, we analyzed the effect of nutritional status over the clinical outcomes of AP in children.

Methodology: We analyzed the Kids' Inpatient Database (KID) between years 2003 and 2016 to include all patients (age \leq 21 years) with AP using ICD-9 codes and were classified into three mutually exclusive groups: undernutrition, obese & control groups.

Demographics/etiologies/comorbidities/clinical outcomes were compared. Multivariate regression models were constructed to analyze the association of nutritional status with the primary outcome of severe acute pancreatitis (revised Atlanta classification) and secondary outcomes of length of stay and inflation-adjusted hospital costs.

Results: The total number of AP admissions were 39,805. Adverse nutritional status among AP increased from 7.5%(2003) to 19.5%(2016). The prevalence of severe AP was higher in undernutrition/obese vs controls (15.7% vs 5.8% vs 3.5% respectively, P<0.001). Multivariate regression models showed that undernutrition and obesity were associated with 2.5 (CI: 2.03 to 3.20,P<0.001) and 1.6 times (CI:1.39 to 1.89,P<0.001) increased risk of severe AP. Undernutrition was associated with 6 additional hospitalization days (CI: 5.67 to 6.57, P<0.001) and incurred \$16,000 (CI:14,317 to 17,520,P<0.001) higher total costs. Obesity was associated with 0.5 additional days (CI:0.32 to 0.73,P<0.001) and \$2000 (CI:1,237 to 2667,P<0.001) additional hospitalization costs.

Conclusion: Extreme nutritional status predicts greater severity of AP and healthcare utilization. Nutritional status might be incorporated into predictive models of severe AP and may guide clinicians to tailor management for improved clinical outcomes."

C33

Title: Predictors of diabetes technology adoption in patients with CF related diabetes

Author(s): Ain Shajihan

Affiliation: Northeast Ohio Medical University

Cystic Fibrosis Related Diabetes (CFRD) is a common extrapulmonary complication of cystic fibrosis. Use of continuous glucose monitors (CGM) has shown clinical and economic benefits in patients with type 2 diabetes, but little evidence has been presented in patients with CFRD. We examined CGM and insulin pump use in patients with CFRD and demographic and treatment related elements to determine factors that predict successful implementation of diabetes technology.

This study was a retrospective chart review of patients with insulin treated CFRD at a single center. Demographics, BMI, FEV1, HbA1C, diabetes duration, insurance type, and insulin use were compared between patients who had implemented diabetes technology for at least 6 months and those who had not.

We evaluated 46 patients with insulin treated CFRD, of whom 17 successfully implemented CGMs and 8 implemented pumps. Lab values, office visits, and insurance type were not significantly different between CGM users and non-users. Diabetes duration was significantly longer in those using CGM compared to no CGM. There was a non-significant trend toward lower HbA1C after CGM implementation. Pump users were not different from non-pump users in terms of lab values, diabetes duration, or outpatient visits. However, pump users had a lower HbA1C after successfully implementing pump use.

Longer diabetes duration was associated with sustained CGM use, which may reflect more advanced disease in this group. Our data suggests that patients with CFRD have improvement in diabetes control after technology implementation, but further research is needed to determine which subset of patients benefit most.

C34

Title: Case Report: A Fulminant Case of recurrent strokes in a patient with Membranous Nephropathy

Author(s): Hadeel Abuteer, MD , Abdul R Al Armashi MD, Khaldoun Shaheen

Affiliation: St. Vincent Charity Medical Center - Department of Internal Medicine

Cerebral arterial thrombosis and other types of arterial thrombosis are a rare complication of membranous nephropathy. Stroke associated with Nephrotic syndrome, including Membranous nephropathy has rarely been reported. Our patient is a 79-year-old Caucasian male with a past medical history significant for hypertension, vascular dementia, multiple strokes several years ago, left internal carotid occlusion status post stenting, and peripheral arterial disease and a recent history of subacute left PCA territory infarction, presented with altered mental status of a few hours duration. MRI showed acute to subacute left Anterior Cerebral Artery territory infarction. Of notice, the patient was receiving aspirin and Plavix daily given his recent stroke. During the same admission, the patient had nephrotic range proteinuria, his anti-PLA2R antibody titer was elevated. He underwent a kidney biopsy which showed pathognomonic features of membranous nephropathy. The patient received immunosuppressive therapy with rituximab and was discharged to a skilled nursing facility. Prophylactic Anticoagulation was deferred due to a stroke. Two weeks later, he was admitted again with Acute superimposed subacute infarct of the left paramedian frontoparietal lobes, reflecting a larger distribution than the one seen on the previous admission. And also, additional new acute infarcts were identified in the right paracentral lobule and right middle frontal gyrus. Nephrotic syndrome associated hypercoagulability contributed to the predisposition to thromboembolism in our patient. Still, there is not a unifying hematologic explanation for the strokes seen with nephrotic syndrome, Interplay of three factors has been implicated in the development of thrombot ic complications, including hypercoagulability, platelet hyperaggregability, and endothelial injury. This case emphasizes the importance of recognizing cerebral arterial thrombosis as a potential complication of nephrotic syndrome at both initial presentation and relapse.

C35

Title: Case Report: IFN $\!\beta$ causing Focal segmental glomerulosclerosis in Multiple Sclerosis patient

Author(s): Abdul R Al Armashi MD, Ayesha Khan MD, Keyvan Ravakhah MD

Affiliation: St. Vincent Charity Medical Center

Interferon β is the first-line treatment of relapsing-remitting multiple sclerosis. Side effects are both dose-dependent and idiosyncratic toxicity. There have been rare reports of Interferon β causing Acute Renal Failure and Nephrotic Syndrome, including Focal Segmental Glomerulosclerosis. Our patient is a 53-year-old Caucasian female with a past medical history of Multiple Sclerosis diagnosed 12 years ago, medically treated with IFN-β. She presented to The Nephrology clinic as her routine labs showed elevated serum creatinine. She had no new complaints. Physical examination was significant for bilateral ankle swelling. Lab work was significant for elevated serum creatinine, elevated blood urea nitrogen, decreased albumin, and elevated total cholesterol. Urinalysis showed heavy proteinuria (protein/creatinine ratio 4.8g/g), and albuminuria (albumin/creatinine ratio 3.2g/g). Renal Ultrasound revealed increased cortical echogenicity in the right kidney. The patient subsequently underwent renal biopsy, which confirmed glomerulopathy with moderate glomerulosclerosis, segmental foot effacement, renal tubular injury, and microvillus changes. Due to the absence of classical risk factors for Focal Segmental Glomerulosclerosis, a presumptive diagnosis of medication-induced Focal Segmental Glomerulosclerosis was made. The offending drug was stopped and the patient was started on Steroids and Immunomodulators. She had complete recovery of her kidney function within $\boldsymbol{6}$ months. This case represents a rare adverse effect of INF- β , the mechanism interferon β induces kidney damage is mediated by impairing the charge barrier of the glomerular basement membrane due to an interaction between its positive charge and the negatively charged glomerular basement membrane. Physicians should draw attention to symptoms and findings of nephropathy during the management of patients under treatment of IFN-B, as routine follow-up labs do not include renal function test and urinalysis

C36

Title: Pyopneumothorax, sepsis, and acute heart failure in a patient with infective endocarditis: A case report

Author(s): Abdul R Al Armashi MD, Francisco J. Somoza-Cano MD

Affiliation: St. Vincent Charity Medical Center

"A 31-year-old female with a past medical history of polysubstance abuse presented with one-week history of altered mental status and sudden-onset dyspnea. Physical examination revealed tachycardia, hypotension, diminished breath sounds on the right pulmonary base, and a holosystolic murmur at the left lower sternal border. Chest x-ray showed right-sided pneumothorax. Chest CT scan revealed numerous cavitating septic emboli in both lungs with a left-sided pleural effusion. She was admitted to the Intensive Care Unit as a septic shock where fluids and antibiotics were given, and a chest tube was placed on the right hemithorax, draining purulent material. Transthoracic echocardiogram (TTE) found a 2.5 cm mobile vegetation on the tricuspid valve and an ejection fraction of 50%. 24 hours later, she progressively decompensated, prompting intubation and vasopressors. Repeat TTE noted ejection fraction decreased to 20-25%. Assessment by cardiothoracic surgery for emergent valve repair was made, but due to the immediate high morbidity and mortality risk, the procedure was deferred. The patient was transferred to a long-term acute care facility for pathogen-directed intravenous antibiotics. She expired thereafter as a consequence of two consecutive cardiac arrests.

This case illustrates rare potential life-ending complications such as pyopneumothorax and multiple cavitary infiltrates of a late-presenting infective endocarditis. Prompt evaluation by a cardiothoracic surgeon might be life-saving.

C37

Title: An Interesting Presentation of Sarcoidosis

Author(s): Bryan Margaria, Ashrithpal Police Reddy

Affiliation: MetroHealth

Sarcoidosis is a systemic inflammatory disease characterized by an immune response leading to the formation of granulomas. This disease is considered quite distinct from Multiple Myeloma (MM), a cancer of plasma cells, which are clonal B cells that release antibodies that target specific tissues or cell types. This case is an interesting presentation of a 64-year-old Caucasian male (recently diagnosed with prostate cancer) presenting to an academic hospital with headaches, leg restlessness, and a 25-pound weight loss as well as hypercalcemia discovered on screening labs. Upon admission to the hospital, the patient in question was found to have hypercalcemia, anemia, and acute renal failure, symptoms suggestive of MM. Further workup revealed an equivocal SPEP/UPEP, with MM being considered the most likely diagnosis at this time. Additionally, vitamin D levels in this patient were low and PTH/PTH-rh were low/normal. However, a CT of the abdomen/pelvis revealed an incidental finding of hilar lymphadenopathy suggestive of Sarcoidosis. The patient later had a biopsy confirming the diagnosis and the patient had an excellent response to steroids. This case is unique as the low levels of Vitamin D and PTH-rh would suggest other diagnoses, and the patient had no lung symptoms suggestive of sarcoidosis. An important lesson from this lesson is to always have a broad differential when considering patient presentations, as "classic" illnesses can have atypical presentations.

C38

Title: Modalities of Vascular Access in Pediatric Hemodialysis

Author(s): Hirva Joshi, Rupesh Raina

Affiliation: Northeast Ohio Medical University

"In 2019, the U.S. Renal Data System reported the point prevalence of ESRD as 98.7 children and adolescents per million population. Kidney transplantation is preferred over hemodialysis in younger patients with ESRD due to better outcomes. However, hemodialysis is begun as a bridging therapy until a kidney becomes available, and long-term vascular access is essential. There are three main modalities of vascular access used in children: central venous catheters (CVC), arteriovenous fistulas (AVF), and arteriovenous grafts (AVG).

CVC are ideal for emergent hemodialysis, as they do not require maturation. According to the 2019 National Kidney Foundation Kidney Disease Outcomes Quality Initiative guidelines, CVC placement in the right or left jugular veins has the lowest complication rate. Compared to AVF, the incidence of infection is higher in CVC (0.25/100 vs. 3.2/100 patient-months, respectively, in one study). Additionally, almost half of CVC fail within one year of placement, and 66% of failures arise from thrombus formation.

In contrast, studies have shown that AVF and AVG have much higher patency rates. The Midwest Pediatric Nephrology Consortium study showed that of 103 AVF and 14 AVG placed, only 16/117 (13.6%) developed primary failure, while 14/117 (12.2%) developed secondary failure. Location of the vascular access was predictive of secondary failure; radial sites had the lowest risk. Like CVC, thrombosis is a common cause of AVF and AVG dysfunction, but regular physical examinations can detect alarming signs accurately.

Each vascular access mode has a place in hemodialysis. It is the clinician's responsibility to endorse the best option for patients.

C39

Title: Comparative Changes of Patient Reported Outcomes in Positive Airway Pressure and Upper Airway Stimulation for Obstructive Sleep Apnea

Author(s): Raman Bhambra

Affiliation: Northeast Ohio Medical University (NEOMED)

"Upper Airway Stimulation (UAS) is increasingly being used for obstructive sleep apnea (OSA) treatment, however, data comparing changes in patient reported outcomes (PROs) in response to positive airway pressure (PAP) versus UAS are limited. We hypothesize that there will be no difference in PROs between the two groups after treatment.

UAS and PAP groups were 1:3 matched on age, sex, Body Mass Index (BMI) and Apnea Hypopnea Index (AHI, category 15-30, >30). Linear mixed models assessed the difference of change in Epworth Sleepiness Scale (ESS), Functional Outcomes of Sleep Questionnaire (FOSQ), Patient Health Questionnaire (PHQ9) and Insomnia Severity Index (ISI) measures on matched strata of UAS versus PAP groups, adjusting baseline and matching factors.

The analytic sample comprised 193 PAP patients and 69 UAS patients, with mean age=62.9+/9.4 years, 27.5% female, mean BMI=29.1+/-3.2kg/m2, and median AHI 42.7, IQR: 31.5, 57.2. ESS in PAP (n=190) reduced by -2.63 (-3.38,-1.88) and in UAS (n=56) reduced by -2.22 (-3.34,-1.10), with a mean difference of 0.41 (-0.70, 1.52, p=.46). FOSQ in PAP (n=188) showed a change with a mean difference of 0.43 (-0.23, 1.09, p=.19). PHQ9 in PAP (n=185) showed a significant change with a mean difference of -1.51(-2.93,-0.088, p=.038). ISI in PAP (n=193) showed a significant change with a mean difference of -1.63(-3.62, 0.37, p=.11).

Similar improvements in PROs were observed in both UAS and PAP patient groups, however UAS appeared to confer greater benefit in depressive symptoms. Randomized clinical trials should be designed to confirm these findings."

C40

Title: It's PAH!, No it's HF!, No it's PAH!

Author(s): Nikhil Datla, Prajit Khooblall

Affiliation: NEOMED Medical Student

Right ventricular dysfunction (RVD) can be a barrier as right ventricular (RV) hemodynamics are complicated and we remain limited in our treatment of RV failure. We report a case series of African Americans (AA) with RVD resemblance found in severe pulmonary hypertension (PH), also known as PH phenotype, in the absence of typical PH hemodynamics. Three AA patients with progressive dyspnea and decline in functional capacity were admitted to the hospital. The impressive size and septal shift the RV on transthoracic echocardiogram prompted right heart catheterization (RHC). Aggressive management of comorbidities resulted in improvement of RV dimensions and function upon repeat TTE several months later. RV and diastolic dimensions improved on average by more than two centimeters, with improvement of TAPSE by 0.4 centimeters and tissue doppler's by two centimeters per second. All patients had improvement of 6-minute walk distances of >15% and normalization of proBNP. Imaging demonstrated severe RV dilation and dysfunction, prompting RHC for investigation of WHO group 1 PAH. Patients had overall favorable hemodynamics. With treatment of HF and HF risk factor modification. repeat imaging demonstrated significant improvement in RV dysfunction. RV response to HF and HF risk factors needs to be compared on the large scale between Caucasians and AA. Translational research on underlying genetics may address the differences in RV response to any change in pulmonary pressures. This would have serious clinical implications with regards to treatment of co-morbidities. This would allow better identification of risk for RV dysfunction in the post-cardiac surgery testing.

C41

Title: It's PAH!, No it's HF!, No it's PAH!

Author(s): Prajit Khooblall, Nikhil Datla

Affiliation: NEOMED Medical Student

Right ventricular dysfunction (RVD) can be a barrier as right ventricular (RV) hemodynamics are complicated and we remain limited in our treatment of RV failure. We report a case series of African Americans (AA) with RVD resemblance found in severe pulmonary hypertension (PH), also known as PH phenotype, in the absence of typical PH hemodynamics. Three AA patients with progressive dyspnea and decline in functional capacity were admitted to the hospital. The impressive size and septal shift the RV on transthoracic echocardiogram prompted right heart catheterization (RHC). Aggressive management of comorbidities resulted in improvement of RV dimensions and function upon repeat TTE several months later. RV and diastolic dimensions improved on average by more than two centimeters, with improvement of TAPSE by 0.4 centimeters and tissue doppler's by two centimeters per second. All patients had improvement of 6-minute walk distances of >15% and normalization of proBNP. Imaging demonstrated severe RV dilation and dysfunction, prompting RHC for investigation of WHO group 1 PAH. Patients had overall favorable hemodynamics. With treatment of HF and HF risk factor modification repeat imaging demonstrated significant improvement in RV dysfunction. RV response to HF and HF risk factors needs to be compared on the large scale between Caucasians and AA. Translational research on underlying genetics may address the differences in RV response to any change in pulmonary pressures. This would have serious clinical implications with regards to treatment of co-morbidities. This would allow better identification of risk for RV dysfunction in the post-cardiac surgery testing.

C42

Title: Rising burden of Psychiatric Illness among pediatric Inflammatory Bowel Disease patients and its impact on hospitalization outcomes.

Author(s): Aravind Thavamani

Affiliation: UH Rainbow babies and Children's hospital

"Background: Prevalence of inflammatory bowel disease (IBD) is increasing worldwide along with its co-morbid conditions like psychiatric and behavioral illnesses, which are independent predictors of quality of life.

Methodology: Non-overlapping years of National Inpatient Sample (NIS) and Kids Inpatient Database (KID) were analyzed to include all pediatric patients between 2003 and 2016 with IBD diagnosis. Patients having at least one of the following: depression, anxiety, adjustment disorder, bipolar disorder (BPD), post-traumatic stress disorder (PTSD), stress reaction, personality disorders, ADHD, pervasive developmental disorder, eating disorder, obsessive compulsive disorder (OCD), Schizophrenia and substance abuse were compared with IBD patients without these diagnoses (control group) for various demographic factors, comorbidities/surgeries and for outcomes of severity of IBD and health care resource utilization.

Results: Of the total 161,294 IBD related hospitalizations, the overall prevalence rate of psychiatric/behavioral illnesses was 15.7% and it increased from 11.3% (2003) to 20.6%(2016), p<0.001. Depression, substance use, and anxiety were the predominant psychiatric illnesses. Multivariate regression analysis showed patients with severe IBD (aOR: 1.57, CI:1.47 to 1.67,p<0.001) and intermediate IBD (aOR:1.14, CI: 1.10 to 1.28,p<0.001) had increased risk of associated psychiatric/behavioral illnesses than patients with a low severity IBD. Multivariate linear regression analysis showed psychiatric/behavioral illnesses was independently associated with 1.17 (CI:1.07 to 1.28,p<0.001) additional hospitalization days and additional \$ 8473 (CI: 7520 to 9425 p<0.001) hospitalization charges

Conclusion: Prevalence of psychiatric/behavioral illnesses is steadily increasing, imposing considerable strain on healthcare utilization. This warrants multidisciplinary approach to address comorbidities, improve clinical outcomes and quality of life in IBD patients."

C43

Title: Increased DNA Damage and Oxidative Stress in High-Risk Prostate Cancer Subjects

Author(s): Anmol Kumar

Affiliation: Undergraduate Student

"In the United States, approximately 191,930 new cases of prostate cancer will be diagnosed and 33,330 deaths will occur in 2020. A major risk factor that contribute to the development of prostate cancer is oxidative stress and oxidant/antioxidant balance. Our goal is to investigate oxidative DNA damage and changes in antioxidant status as risk factor for prostate cancer. A total of 40 men in the age range of 52–84 years without any prior drug or treatment were included in the study. Twenty subjects were selected having precursor high-grade PIN and serum PSA >4.0 ng/mL with abnormality in the prostate. Twenty age-matched men designated as controls were recruited in the study. Blood samples were drawn, buffy coat was separated for DNA isolation. A battery of assays for 8-hydroxydeoxyguanosine (8-OHdG) in leukocytes, plasma antioxidant capacity, guanosine 3',5'-cyclic monophosphate (cyclic GMP), nitrite and nitrate levels, glutathione S-transferase P (GSTP1) and O-6-Methylguanine-DNA Methyltransferase (MGMT) were performed.

A significant increase in the levels of 8-OHdG in the buffy coat and cGMP, nitrite/nitrate was observed (p<0.0001) in the plasma samples of high-risk subjects; whereas the levels of GSTP1 and antioxidant capacity were significantly decreased in high-risk subjects, compared to control. An increase in MGMT activity was also noted in the plasma of high-risk subjects, compared to control subjects.

In conclusion, the increased oxidative stress and changes in antioxidant status may lead to the development of prostate cancer."

C44

Title: The Role of Nasal Sill Correction in Secondary Cleft Rhinoplasty

Author(s): Sanjay Jinka

Affiliation: Northeast Ohio Medical University

Patients with nasal deformities secondary to cleft lip and palate require rhinoplasty. Photogrammetric analysis shows which surgical techniques and anthropometric characteristics lead to better outcomes. This was a 10-year retrospective review of 30 consecutive patients with unilateral cleft lip who underwent rhinoplasty by a single surgeon at a single center. Photographs were measured preoperatively (T0) and postoperatively at early and late time points (T1 and T2, respectively). Ten craniofacial clinic members completed subjective ratings of photos utilizing the Unilateral Cleft Lip Surgical Outcomes Evaluation (UCL SOE), to rate the nose, cupid's bow, lateral lip, and free vermillion, each with a score of 0-2. Wilcoxon signed rank test and Spearman correlation coefficients were used for statistical analysis. Nasal UCL SOE and overall UCL SOE significantly (p<0.05) improved from T0 to T1 (0.7 to 1.2, p = <0.001 and 3.6 to 4.7, p < 0.001, respectively) and T0 to T2 (0.7 to 0.9, p = 0.023 and 3.6 to 4.8, p = 0.002, respectively). Nostril height, width, medial quarter height, and columellar angle were significantly (p<0.05) different between T0 and T1. Decreased columellar angle (-0.6, p=0.007), decreased cleft-sided nostril height (-0.4, p=0.041), and increased cleft-sided sill height (0.8, p=0.001) significantly (p<0.05) correlated with improved nasal ratings. Surgical techniques/procedures did not produce significant correlations. Overall, decreased columellar angle, decreased cleft-sided nostril height, and most notably increased cleft-sided sill height correlated with improved subjective outcomes. Further study with larger sample size is required to determine which surgical techniques create significant improvements.

C45

Title: The Use of Intravenous Pegloticase in Patients with Severe Gout Arthritis

Author(s): David Mandel

Affiliation: N/A

Patients with severe gout arthritis may not respond or tolerate oral uric acid lowering treatments. These patients often have visible tophi and complications of hand and foot impairment. We present three patient cases involving severe gouty arthritis, multiple tophi and bony erosive disease. Some of these patients were referred by their podiatrists after having undergone digital amputations. All three patients were successfully treated with intravenous pegloticase."

C46

Title: Clinical Dilemma of Corneal Opacity

Author(s): Siddhartha Singh, Rupesh Raina

Affiliation: Northeast Ohio Medical University

Lecithin:Cholesterol acyltransferase (LCAT) is a liver enzyme necessary for formation of cholesteryl esters in plasma from free cholesterol. The rare autosomal recessive disease resulting from familial deficiency of this enzyme can lead to nephropathy with kidney involvement generally being the most common cause of death. In addition, the disease process can engender corneal opacity, very low HDL, normochromic anemia, and nephropathy. We present this case of a 35-year-old male who initially visited for a second opinion for renal failure and nephrotic range proteinuria. He underwent renal biopsy which displayed FSGS type injury pattern and was started on futile high dose steroid therapy. A second renal biopsy coincided with the development of corneal opacity leading to a confirmatory testing of LCAT deficiency via biochemistry panel.

C47

Title: Statins are not associated with Peripheral Neuropathy: A Systematic Review and Meta-Analysis.

Author(s): Thapat Wannarong

Affiliation: Department of Neurology, University Hospitals Cleveland Medical Center, Cleveland. OH. USA

"Background/Aims: Previous studies showed controversial data between statins and the risk of peripheral neuropathy (PN). This study aimed to comprehensively investigate and summarize their relationship by identifying all available studies and summarizing the results together. Methods: A systematic review was conducted from MEDLINE and EMBASE database from inception to October 31th, 2020. We identified cohort studies and case-control studies investigating the risk of development of PN among patients who take statins versus individuals who did not. Point estimates and standard errors from eligible studies were pooled together using the generic inverse variance method described by DerSimonian and Laird. Visualization of the funnel plot was used to assess for the presence of publication bias.

Results: Of 4,633 retrieved articles, one cohort study and four case-control studies fulfilled the inclusion criteria and were included in the meta-analysis. The pooled analysis did not find a significant association between statin users and PN with the pooled odds ratio of 1.07 (95% CI, 0.82 - 1.40; 12 56%).

Conclusions: The current meta-analysis study emphasizes that statins was not significantly associated with PN."

C48

Title: Association Between Sarcopenia and Diabetic Peripheral Neuropathy: A Systematic Review and Meta-Analysis.

Author(s): Thapat Wannarong

Affiliation: Department of Neurology, University Hospitals Cleveland Medical Center, Cleveland. OH. USA

"Background/Aims: Previous studies have suggested an association between diabetic peripheral neuropathy (DPN) and sarcopenia, although results from those studies were inconsistent. This systematic review and meta-analysis were conducted to comprehensively investigate this relationship by identifying all available studies and summarizing their results together. Methods: A systematic review was conducted in MEDLINE and EMBASE database from inception to May 8th, 2020. We identified all cross-sectional studies that investigated the association between DPN and sarcopenia among diabetic patients. Point estimates and standard errors from eligible studies were pooled together using the generic inverse variance method described by DerSimonian and Laird.

Results: Of 2,865 retrieved articles, four studies met the inclusion criteria and were included in the meta-analysis. The pooled analysis found a significant association between sarcopenia and DPN with the pooled odds ratio of 1.58 (95% CI, 1.22-2.05; 12.0%).

Conclusions: The current study found a significant association between DPN and sarcopenia among diabetic patients."

C49

Title: Incidence and Outcomes of Acute Kidney Injury in COVID-19: A Systematic Review

Author(s): Ronith Chakraborty, Rupesh Raina

Affiliation: Cleveland Clinic Akron General Medical Center

Background & Objectives: The recent worldwide pandemic of a new coronavirus COVID-19 (SARS-CoV-2), has been a multidimensional problem that has left a detrimental worldwide impact on individuals of all ages and various organ systems. Typically, manifestation of kidney involvement is in the form of acute kidney injury (AKI); however, there is lack of consensus data regarding AKI epidemiology in COVID-19. Thus, this systematic literature review aims to bridge this knowledge gap. Design, setting, participants & measurements: Medline and Cochrane Library were systematically searched for literature related to AKI in COVID-19 patients of all ages. MedRxIV was searched for relevant unpublished manuscripts. Two reviewers independently assessed the literature on the incidence of AKI and mortality, extracting the need for kidney replacement therapy (KRT). Results: A total of 60 studies (n = 43,871 patients) were included in this review. The pooled incidence of AKI among COVID-19 patients was 19.45% (95% CI: 14.63% to 24.77%), while the pooled incidence of COVID-19 patients with AKI requiring KRT was 39.04% (16.38% to 64.57%). The pooled proportion of COVID+ patients was significantly lower at 8.83% (5.64% to 12.66%). The overall mortality of COVID-19 patients was calculated to be 17.71% (95% CI: 11.49% to 24.93%) while the mortality among COVID-19 patients with AKI was higher at 54.24% (95% CI: 44.70% to 63.63%). Conclusion: This review found significantly higher incidence and mortality rates in COVID-19 patients with AKI, especially those requiring KRT. This suggests that kidney involvement during COVID-19 is substantial, requiring additional studies to explore KRT treatments.

C50

Title: Quality of Life Changes after Surgery for Metastatic Spinal Disease: A Systematic Review and Meta-analysis

Author(s): Neal Kapoor

Affiliation: NEOMED, Massachusetts General Hospital

Objective: As it remains questionable to what extent surgery improves quality of life (QoL) for metastatic spinal disease, it would be interesting to quantify the magnitude and duration of QoL benefits after surgery for metastatic spinal disease. Therefore, a systematic review and meta-analysis was conducted to assess QoL after surgery for metastatic spinal disease, and how surgery affects physical, social/family, emotional, and functional well-being.

Methods: Included were studies measuring QoL before and after surgery for metastatic spinal disease for various indications including pain, spinal cord compression, instability or tumor control. A random-effect model assessed standardized mean differences (SMD) of summary QoL scores between baseline and 1, 3, 6, or 9-12 months after surgery.

Results: After screening 992 titles and abstracts, 10 studies were included for data extraction. The pooled QoL summary score improved from baseline to 1-month (SMD 1.09, p<0.001), to 3-months (SMD 1.28, p<0.001), to 6-months (SMD 1.21, p<0.001), and to 9-12 months (SMD 1.08, p=0.001). Surgery improved physical well-being during the first 3-months (SMD 0.94, p=0.022), improved emotional (SMD 1.19, p=0.004) and functional well-being (SMD 1.08, p=0.005) during the first 6-months, and only improved social/family well-being at month 6 (SMD 0.28, p=0.001).

Conclusions: Surgery improved QoL for patients with metastatic spinal disease, and rapidly improved physical, emotional, and functional well-being; it had minimal effect on social/family well-being. However, choosing the optimal candidate for surgical intervention in the setting of metastatic spinal disease remains paramount: otherwise postoperative morbidity and complications may outbalance the intended benefits of surgery.

C51

Title: Surveillance, Epidemiology, and End Results Database Update for Pediatric Thyroid Carcinomas Incidence and Survival Trends 2000-2016

Author(s): Ananya Tawde

Affiliation: Northeast Ohio Medical University

Objective: To reflect on trends in pediatric thyroid carcinomas using the Surveillance, Epidemiology, and End Results (SEER) Database.

Methods: The National Cancer Institute's SEER database was used for all cases of pediatric thyroid cancer between the years 2000 and 2016 for patients aged 0-19. Patients were grouped by histological subtype, disease-specific survival (DSS) based on treatment modality, and the following demographic data: age, sex, year of diagnosis, and race. Treatment methods, surgery alone (SA) and surgery with adjuvant radiation (S/R), were compared using Fifteen-Year DSS Curves.

Results: A total of 1175 pediatric patients were identified and the average age-adjusted rate of malignancy was 0.3 per 100,000 patients. The incidence of pediatric thyroid cancer was approximately 1:3.6, male to female. The papillary follicular variant histological subtype was the most common (n=689, 58.6 %), followed by papillary (n=223, 18.9%), follicular (n=153, 13.1%), and medullary (n=110, 9.4%). Overall incidences of thyroid carcinomas were highest in patients aged 15-19 (69.8%) and medullary thyroid carcinomas were highest specifically in patients aged 0-9. Patients aged 10-19 treated with S/R therapy provided the highest DSS fifteenyears past initial diagnoses in all histologic subtypes(p < 0.05). Patients with metastatic medullary thyroid carcinoma at initial diagnosis who underwent SA showed significantly poorer fifteen-year DSS when compared to other histologic subtypes (p < 0.05).

Conclusion: There were significantly improved prognosis in pediatric thyroid carcinomas if diagnosed and treated early. All four major histological subtypes exhibit an increase in overall survival rates, excluding medullary carcinomas 9 or more years after diagnosis.



Association of Indian Physicians of Northern Ohio

3702 Sutherland Rd Shaker Heights, OH 44122 (216) 228-1168 www.aipono.org

ASSOCIATION OF INDIAN PHYSICIANS OF NORTHERN OHIO DISTINGUISHED PHYSICIAN OF THE YEAR CRITERIA

For distinguished physician award recipient to be recognized at AIPNO's Annual dinner, the nominee:

- Shall be member of AIPNO in good standing.
- He/She shall not be member of Awards and Recognition Committee for that year.
- He/She shall not be directly related to Awards and Recognition Committee for that year.
- Direct relation being spouse, sister, brother, son, daughter, parent.
- If selected He/She shall be available to receive award in person.
- The nominees shall be evaluated by point system by Awards and Recognition Committee.
- The decision of Awards and Recognition Committee will be considered final. All records of evaluation will be filed in AIPNO office.

Following point system will be used to evaluate the nominees. The physician with highest score shall be a recipient of award.

1. **Service to AIPNO** - (30 Points)

Includes positions held, physician's effectiveness of role in AIPNO.

2. Academician

Academic Achievement

Highest rank achieved (10 points)

Publications- Peer reviewed (5 points)

Not reviewed by peers including books, journals, editorials, articles

3. Private Practitioner

Academic Achievement

Highest rank achieved (15 points)

4. **Service to other community associations** - (20 points)

e.g. AAPI, FICA, community organizations. Includes positions held, physician's effectiveness of role in these organizations.

5. **Philanthropy** - (15 points)

Donation in funds

Donation of personal time

6. **Medical practice** - (10 points)

Years in practice

Quality of practice.

7. **Non-academic achievement** - (10 points)

rev 10/05

ASSOCIATION OF INDIAN PHYSICIANS OF NORTHERN OHIO MEDICAL STUDENT SCHOLARSHIP AWARD CRITERIA

For student scholarship award of \$1000.00 the nominee:

Final year medical student with place of residence or medical school being Northeast Ohio.

If selected He/She shall be available to receive award in person.

The nominees shall be evaluated by point system by Awards and Recognition Committee.

The decision of Awards and Recognition Committee will be considered final. All records of evaluation will be filed in AIPNO office.

Following point system will be used to evaluate the nominees. The medical student with highest score shall be a recipient of award.

Academic merit - (50 points)

Extra curricular achievements - (25 points)

Community service - (25 points)

GPA, SAT, MCAT, USMLE-I

Sports, music, drama, other hobbies and talents

Publications, research

CSL. 1983

PAST PRESIDENTS

1984	Shashin Shah, M.D.	2002	Sanjay Parikh, M.D.
1985	K.V. Gopalkrishna, M.D.	2003	Saroj Pagedar, M.D.
1986	Arvind Shah, M.D.	2004	Shailesh Nanavati, M.D.
1987	Vinoo Mankad, M.D.	2005	Saroj Mahalaha, M.D.
1988	Parshotam Gupta, M.D.	2006	Arun Gupta, M.D.
1989	H. Sundaresh, M.D.	2007	Sagarika Nayak, M.D.
1990	Atul Mehta, M.D.	2008	Sangita Mehta, M.D.
1991	Raja Shekar, M.D.	2009	Satish Mahna, M.D.
1992	Mohan Durve, M.D.	2010	Geeta Gupta, M.D.
1993	Satish Kalhan, M.D.	2011	Sandhia Varyani, M.D.
1994	Chandra Haria, M.D.	2012	Elumalai Appachi, M.D.
1995	Ashok Patil, M.D.	2013	Beejadi Mukunda, M.D.
1996	Sudhir Mehta, M.D.	2014	Ranjit Tamaskar, M.D.
1997	L.C. Roa, M.D.	2015	Umesh Yalavarthy, M.D.
1998	Vasu Pandrangi, M.D.	2016	Ravi Krishnan, M.D.
1999	Girish Mulgaokar, M.D.	2017	Hari Balaji, MD
2000	Anjali Ambekar, M.D.	2018	Mona Gupta, MD
2001	Ajit Shah, M.D.	2019	Harbhajan Parmar, MD

PAST DISTINGUISHED PHYSICIANS OF THE YEAR

1989	Satish Kalhan, M.D.	2005	Prasanta K. Raj, M.D.
1990	Sharad Deodhar, M.D.	2006	Vasu Pandrangi, M.D.
1991	Gita Gidwani, M.D.	2007	Sanjay Parikh, M.D.
1992	Elizabeth K. Balraj, M.D.	2008	Darshan Mahajan, M.D.
1993	Atul C. Mehta, M.D.	2009	Ashok Patil, M.D.
1994	Raja Shekar, M.D.	2010	Nandlal Varyani, M.D.
1995	Mohan Bafna, M.D.	2011	Arun Gupta, M.D.
1996	Mohan Durve, M.D.	2012	Girish Mulgaokar, M.D.
1997	K.V. Gopalkrishna, M.D.	2013	Shaila Sundaresh, M.D.
1998	H. Sundaresh, M.D.	2014	Sangita Mehta, M.D.
1999	Lilian Gonsalves-Ebrahim, M.D.	2015	Beejadi Mukunda, M.D.
2000	Laxminarayana C. Rao, M.D.	2016	Neil Mehta, M.D.
2001	Chandravadan Haria, M.D.	2017	Jaya Shah, MD
2002	Sudhir Ken Mehta, M.D.	2018	Umesh Yalavarthy, MD
2003	Arvindkumar Shah, M.D.	2019	Samir Kapadia, M.D.
2004	Ajit C. Shah, M.D.		-

PAST MEDICAL STUDENT SCHOLARSHIP RECIPIENTS

1997	Nand Kamath	2007	Malin Anand
1998	Geetha Mohla	2008	Seehtaram Chadalvada
	Ashish Bhatia	2009	Priya Malik
1999	Sarita Shah	2010	Rueben Nair
	Sunita Kuar Saini	2011	Shishir Sharma
2000	Ashok Rajappa Asthagiri	2012	Preethi Mani
	Prashant Tamaskar	2013	Pooja Shah
2001	Sunil M. Patel	2014	Mihir Shah
2002	Sumit Bapna	2015	Amar Shah
	Falguni Patel	2016	Madhulika Eluri
2003	Kris Rajan Jatana	2017	Akshay Sharma
2004	Manish D. Shah	2018	Abhinay Ramachandran
2005	Asghar Ali Fakhri		Shree Agrawal
2006	Saba Mubarka Ali		-

ARTICLES OF INCORPORATION ASSOCIATION OF INDIAN PHYSICIANS OF NORTHERN OHIO, INC.

The undersigned, a majority of whom are citizens of the United States, desiring to form a corporation not for profit under Ohio Revised Code, Section 1702.01, et. seq., So hereby certify:

Article 1- NAME

The name of the corporation shall be the Association of Indian Physicians of Northern Ohio, herein referred to as the Corporation.

Article 2 - PLACE

The place in the State of Ohio where the principal office of said corporation shall be located in the County of Cuyahoga.

Article 3 - NONPROFIT

The Corporation is a nonprofit corporation as described in section 1702.01 of the Ohio Revised Code. The Corporation is not organized for the pecuniary profit of its Trustees, Officers or Members. The Corporation shall not declare nor distribute a dividend, and no part of its net earnings shall inure, directly or indirectly, to the benefit of any Trustee, Officer or Members, but the Corporation shall be entitled to make payments authorized under Article 7 Limitation and any balance of money or assets remaining after the full payment of Corporate obligations of all and any kind shall be solely devoted to the educational and benevolent purposes of the Corporation.

Article 4 - DURATION

The duration of the Corporation is perpetual.

Article 5 - PURPOSES

- A. The Corporation is organized for educational and charitable purposes.
- B. To bring together the physicians of Indian origin practicing in Northern Ohio in one organization, and to enhance their knowledge and mutual understanding.
- C. To assist medical students and physicians to obtain medical training in the United States.
- D. To conduct educational programs to acquaint the members with clinical, scientific and other developments in the field of medicine.
- E. To render medical services to indigent people in the community.
- F. To provide a vehicle for members to contribute to medical care and medical education in India.
- G. To provide mutual understanding and cooperation between members of this Corporation and other local and national organizations of mutual interest in the United States and India.

Article 6 - POWERS

Solely for the forgoing purposes, the Corporation shall have the following powers:

- 1) To publicize and promote the purposes of Corporation to all members of the Corporation and to the public;
- To exercise all rights and powers conferred by the laws of the state of Ohio upon nonprofit corporations; and
- 3) To do such other things as are incidental to the purposes of the Corporation or necessary or desirable in order to accomplish such purposes.

Article 7 • LIMITATION

No part of the net earnings of Corporation shall inure to the benefit of or be distributed to its Members, Officers, or Trustees, but the Corporation shall be authorized and empowered to pay reasonable compensation for services rendered and to make payments and distributions in furtherance of the Purposes as set forth in Article 5, Purposes.

Article 8 - TAX EXEMPT

It is intended that the Corporation shall have the status of a corporation that is exempt from federal income taxation under Section 501(a) of the Internal Revenue Code of 1986, as amended, (the Code), and an organization described in Section 501 (c)(3) of the Code. These Articles shall be construed accordingly, and all powers and activities of the Corporation shall be limited accordingly.

Article 9 - DISSOLUTION

Upon the dissolution of the Corporation, the Board of Trustees shall, after paying or making provision for the payment of all the liabilities of the Corporation, dispose of all the assets of the Corporation exclusively for the purpose of the Corporation, in such a manner, or to such organizations organized exclusively for charitable, religious, cultural or scientific purposes as shall at the time qualify as an exempt organization or organizations under Section 501(c)(3) of the Internal Revenue Code of 1954 or the corresponding provision of any future United States Internal Revenue Law. Any of such assets not so disposed of shall be disposed of by the court of appropriate jurisdiction of the county of which the principle office of the Corporation is then located, exclusively for such purposes or to such organization or organizations as said court shall determine to be organized and operated exclusively for such purposes.

Article 10 • MEMBERS

There shall be three categories of members, voting, associate and honorary.

Article 11 - QUORUM

The quorum for any meeting of the Executive Committee or Board of Trustees shall consist of a simple majority.

Article 12 - OFFICERS

The Corporation shall have a President, President-Elect, Secretary and Treasurer and Immediate Past President. Each officer shall be elected as set forth in the Code of Regulations.

Article 13 - EXECUTIVE COMMITTEE

The Executive Committee shall be composed of the President, President-elect, Secretary, Treasurer, Immediate Past President and ten members at large. Each at large member shall be elected as set forth in the Regulations.

Article 14 - TRUSTEES

The number of Trustees may be increased or decreased from time to time in accordance with the regulations, but shall never be less than three. The Trustees shall be elected as set forth in the Regulations.

Article 15 - NON-STOCK BASIS

This corporation is formed on a non-stock basis and shall not issue shares of stock.

Article 16 - AMENDMENTS

SECTION I

These Articles of Incorporation and the Code of Regulations, or any articles or sections or any part thereof may be amended, repealed or new by-laws adopted by the affirmative vote of two-thirds of those members entitled to vote at a meeting duly called and held for that purpose. The quorum for such a meeting shall be 20% or 40 members, whichever is the larger number of members entitled to vote.

SECTION 2

Any amendment may be proposed by resolution adopted by the Executive Committee or by at least 20 active members of the Corporation. Said such proposed amendments shall then be submitted by the Executive Committee to the entire membership entitled to vote, at least 45 days prior to calling a meeting for the purpose of amending these Articles.

Article 17 PARLIAMENTARY AUTHORITY

Officers, Trustees and Members shall guide conduct business of the Foundation using Robert's Rules of Order, unless otherwise specified in these Articles or Code of Regulations.

Article 18 - INDEMNIFICATION

The Corporation shall indemnify each Trustee and Officer of the Corporation to the fullest extent permitted by the law.

CODE OF REGULATIONS ASSOCIATION OF INDIAN PHYSICIANS OF NORTHERN OHIO, INC. AN OHIO NONPROFIT CORPORATION

Article 1- CODE OF REGULATIONS

These regulations constitute the Code of Regulations adopted by the Corporation for the regulation and management of its affairs.

Article 2 - PURPOSES

This Corporation is organized and shall be operated for the purposes set forth in the Corporation's Articles of Incorporation.

Article 3 - POWERS

Solely for the foregoing purposes, the corporation shall have the powers set forth in the Corporation's Articles of Incorporation.

Article 4 - MEMBERSHIP

SECTION 1 - Voting Members

Active membership is open to all physicians of Indian origin who are practicing medicine or are retired in Northern Ohio who maintain high moral, ethical, and professional standards. They shall have the right to vote and are eligible to hold office; Active members may become Life Members by paying the dues for lifetime membership. The dues for life membership will be determined by the Board of Trustees. The Corporation shall have voting members (Active) who shall have all rights and privileges of members of the Corporation.

SECTION 2 - Associate Members

Physicians in training, dentists, medical scientists and medical students of Indian origin residing in Northern Ohio. They shall have the right to vote but are not eligible to hold office.

SECTION 3 – Honorary Members

Honorary membership may be conferred by the Board of Trustees upon physicians and spouses of deceased members, who have shown outstanding achievements and special interest in this Corporation. Honorary members will not be eligible to hold office.

Article 5 - DUES

Active and Associate members shall pay annual dues which shall be determined and reviewed as needed by the Executive Committee. Honorary members are not required to pay dues. The fiscal year shall be from January 1 through December 31. Annual dues shall be due and payable on or before January 1 of each year. If the dues or any part thereof remain unpaid after March 15 of any year, a note of delinquency will be sent. After June 1, if the dues remain unpaid, the membership and all its rights and privileges may be suspended until such dues are paid in full.

Article 6 - ADMINISTRATION AND OFFICERS

The governance of the Corporation shall be vested in the Executive Committee and Board of Trustees.

Article 7 - BOARD 0f TRUSTEES

SECTION 1

The Board of Trustees will have the ultimate authority for ensuring its fiscal welfare and financial stability; however, it will not interfere with the regular operation of the Corporation.

SECTION 2

In case of crisis, at the request of the Executive Committee, the Board will act as the mediator to resolve the dispute. The decisions of the Board of Trustees in these disputes will be binding.

SECTION 3

The Board of Trustees will be the custodian of all the assets of the Corporation and will make all decisions regarding disbursement of the funds in case of dissolution of the Corporation.

SECTION 4

The Board of Trustees will consist of nine members each being elected by the eligible voting membership. At least five Trustees of the Board will be from amongst the past presidents of the Corporation.

SECTION 5

The term of the trustees will be straddled.

SECTION 6

The term of the trustees will be limited to three years.

SECTION 7

Members of the Board of Trustees will not be members of the Executive Committee.

SECTION 8

A Chairperson of the Board will be elected by the Board amongst its members. The term of the Chairperson shall be limited to a maximum of two years. The Chairperson shall be ex-officio, nonvoting member of the Executive Committee and a voting member of the Finance Committee.

SECTION 9

The Board will act as the Trustee of the Endowment Fund of the Corporation. It will be responsible for long range planning, for constitutional and legal matters, and for safeguarding the tangible assets of the Corporation. The Board of Trustees is specifically required to pre-approve any expenditure item of more than \$5,000.

SECTION 10

The Board will meet at least once a year. A record of the minutes of the meeting will be maintained. The President of the Corporation will attend the meetings of the Board as an ex-officio, non-voting member. Quorum consists of members attending duly convened meeting, except for pre-approval of expenditure items of more than \$5,000 for which minimal of 5 affirmative votes are needed for passage of the item.

Article 8 - COMMITTEES

SECTION 1

The following shall be the Standing Committees of the Corporation. The chairpersons of these committees, with the exception of the Executive Committee, shall be appointed by the President and chosen from among the members of the Executive Committee. The remaining members of the committees may be selected from the voting and honorary membership.

- 1. Executive
- 2. By-Laws Committee
- 3. Membership
- 4. Finance
- 5. Medical Education and Research
- 6. Nominations and Elections
- 7. Publications and Public Relations
- 8. Awards and Recognition Committee
- 9. Endowment Fund Committee

SECTION 2

The Executive Committee shall be composed of the President, President-Elect, Secretary, Treasurer and the Immediate Past President and ten members-at-large.

SECTION 3

The Chairperson of the Special Programs and Entertainment shall be selected from the General Membership or their spouses.

SECTION 4

Nominations and Election Committee: The Nominations and Election Committee will consist of the President, the President-Elect, the Immediate Past President, one member of the Board of Trustees and one previous president. It will be chaired by the Immediate Past President.

SECTION 5

Endowment Fund Committee: This committee will consist of at least five members, two of whom will be from the Board of Trustees. The committee will be responsible for raising funds for charitable causes, and will make recommendations to the Executive Committee.

SECTION 6 – The Finance Committee shall be comprised of Chairman of the Board of Trustees, President, President-Elect, Treasurer, Past President, and 2 Members-at-Large (volunteers or elected by the Executive Committee.)

Article 9 - TERMS OF OFFICE

SECTION 1

The terms of office of the President, President-Elect and Secretary shall he for a period of one year. The term of Treasurer shall be for two years. The President may serve once only. Other officers and trustees may be re-elected.

SECTION 2

Terms of office of the members at large shall be for two years. Five members-at-large shall be elected during odd years and the other five members-at-large shall be elected during even years.

SECTION 3

In the event a member of the Executive Committee is unable to complete his/her term, a replacement will be appointed upon recommendation from the President with the approval of the Executive Committee, to complete the remaining elected term of the vacating member.

SECTION 4

In the event the office of President is vacated, the succession shall be by the President-Elect, Secretary, and Treasurer, in that order.

Article 10 - ELECTIONS

SECTION 1

Elections shall be held each year four weeks prior to the annual meeting of the general membership in the month of November or December.

SECTION 2

The Nominations and Elections Committee shall conduct the elections.

SECTION 3

Elections to all offices shall be by secret ballot. Candidates shall have the right to send their representatives to witness the counting of the ballot.

SECTION 4

The Nominations and Elections Committee shall invite nominations for various offices and trustees from the general membership by mailing the forms for nominations. The completed nomination paper, which should have the signature of the candidate signifying his/her consent, should be received by the deadline set by the Chairperson of the Nominations and Elections Committee. Applicants with incomplete or incorrect nomination forms will be given at least one week notice to correct the form prior to the nomination deadline. The Committee will submit the entire slate of candidates for vote to the eligible general membership by mail.

SECTION 5

Members of the Nominations and Elections Committee may not nominate themselves for office. They may not contest any elected position in the organization. If there is an insufficient number of nominees the Committee can submit nominations with the approval of the nominee.

Article 11- DUTIES OF OFFICERS

SECTION 1- Executive Committee

- A. The Executive Committee shall have the duties and powers as ordinarily delegated to the governing board of a non-profit incorporated association. It shall govern and direct activities of the Corporation as described in this Code.
- B. It shall fill any vacancies of the office of President-Elect, Secretary, and Treasurer and members of the Executive Committee by appointment in accordance with the provisions set forth in this Code.
- C. It shall appoint all standing committees and direct their activities.
- D. The Executive Committee shall determine the dues of the Corporation and review the dues as necessary.
- E. It may remove by two-thirds vote any member from the rolls of the Corporation for conduct detrimental to the Corporation.
- F. It may by two-thirds vote of its members present at the meeting that has been properly called, remove any member from any elected or appointed office. If the individual concerned is a member of the Executive Committee or Board of Trustee, he/she shall not vote on such motion
- G. Any member, officer or trustee removed from the Corporation under Article 11, Section I, paragraph E and F may appeal such a decision by the Executive Committee and ask for vote by the Board of Trustees. They may be re-instated by the approval of two-thirds majority of the membership at the General Body Meeting.

SECTION 2. President

- A. The President shall be the Chief Executive Officer of the Corporation and shall perform all other duties incident to the office of President and such other duties as may be designated by the Executive Committee or Board of Trustees.
- B. He/She shall preside at all meetings of the Corporation and of the Executive Committee.
- He/She shall make such appointments as authorized by Code, Executive Committee or Board of Trustees.
- D. He/She shall designate all official delegates and representatives to other groups.
- E. He/She shall appoint such Special and Ad Hoc Committees as may be necessary to further the Corporation's objectives and he/she may discontinue any such committee when its purpose has been served, in consultation with the Executive Committee or Board of Trustees.
- F. The president is authorized to donate up to \$5,000.00 to non-profit groups or events without prior approval of the Board of Trustees or Executive Committee.

SECTION 3 - President-Elect

- A. The President-Elect shall perform the duties of the President in his/her absence.
- B. The President-Elect may be assigned one or more special projects and is the Endowment Chair.

SECTION 4 - Secretary

The Secretary shall keep the minutes of the meetings of the Corporation, the Executive Committee and Board of Trustees, and perform all duties assigned to him/her by the President, Executive Committee or B.O.T.

SECTION 5 - Treasurer

- A. The Treasurer shall receive and be the custodian of the funds of the Corporation, and will chair the Finance Committee.
- B. He/She shall present to the Board of Trustees a proposed budget for the ensuing fiscal year and this budget in the final form shall be approved by the Board of Trustees prior to the beginning of the fiscal year. Any single expenditure item of more than \$5,000 should be pre-approved by the Board of Trustees.
- C. He/She shall make a complete financial report at the annual business meeting of the Corporation. The financial report should be audited by a C.P.A.
- D. Life membership dues will be placed in a separate income bearing account. Finance committee is authorized to spend up to 100% of the income for operating expenses.
- E. Endowment Fund: The Corporation will establish an Endowment Fund distinct from other finances. Endowment fund will be maintained by a 3rd party administrator. Fifteen percent of the gross revenues for Endowment fund-raising events will go toward administrative costs. Up to 4% of the market value of the Endowment fund, averaged over previous 3 years, may be distributed annually for Charity and operating expenses, while continuing the growth of the corpus. Fifty percent (2% of the market value) of the distribution of the funds will be used for charitable giving, including a \$1,000.00 medical student scholarship and fifty percent (2% of the market value) of the distribution may be used for operating expenses of the corporation. The scholarship selection will fall under the Awards & Recognition Committee
- F. Funds may be added to the Endowment Fund by donations or by fund-raising events. After paying for the expenses and contribution to the charitable cause (for which the fund-raising event was held), the moneys generated from the fund-raising activity will be added to the AIPNO Endowment Fund. All unidentifiable charitable contributions to the Corporation will be deposited in the Endowment Fund account.

Article 12 - MEETINGS

SECTION 1

There shall be at least one meeting of the entire membership each year at a place and date designated by the Executive Committee.

SECTION 2

The time and place of all meetings shall be decided by the Executive Committee. The notice of the time and place of all meetings, except those of the Executive Committee or Board of Trustees shall be mailed to all officers and members at least 45 days prior to such meetings. Special meetings may be called by the President, by majority of the Executive Committee or Board of Trustees, or by 10% or 25 members, whichever is the larger.

SECTION 3

The Executive Committee shall meet once a month or as needed to conduct its business.

SECTION 4

If a member of the Executive Committee fails to attend three consecutive meetings of the Executive Committee without a proper excuse, he/she may be dismissed from the Executive Committee by two-thirds of its members.

SECTION 5

The quorum for any meeting of the Executive Committee or Board of Trustees shall consist of a simple majority.

SECTION 6

Parliamentary Procedure - In the absence of any provision in the Code of the Corporation, Board of Trustees, Executive Committee, and all Committee Members shall be guided by the Parliamentary Rules as used and contained in the current edition of the Roberts "Rules of Order".

Article 13 - LIABILITY OF MEMBERS

No member of the Corporation shall be personally liable to the creditors of the Corporation for any liability or indebtedness, and any and all creditors shall look only to the assets of the Corporation.

Article 14 - AMENDMENTS

SECTION 1

This Code of Regulations, or any articles or sections or any part thereof may be amended, repealed or new Code adopted by the affirmative vote of two-thirds of those members entitled to vote at a meeting duly called and held for that purpose. The quorum for such a meeting shall be 20% or 40 members, whichever is the larger number of members entitled to vote.

2011

President: Sandhia Varyani, M.D.

20th Annual Chiraag Fundraiser:

Beneficiary: Marion Sterling Library Renovation Project of the Cleveland Metropolitan School District

Chair: Dr. Appachi Chief Guest: Anand Julka

Donation: \$10,000.00 and Chiraag Continuing Medical Education Program

• Karaoke Night at Landerhaven, sponsored by Gregory Ochalek, CFP of AXA Advisors on March 18, 2011

- Japan Earthquake donation on April 5, 2011
- BAPS Health Fair, May 1, 2011
- By-Laws review & amendments
- Golf Outing Aug. 21, 2011 Avon Oaks Country Club
- Social Dinner at Saffron Patch, Sept. 15, 2011
- Annual Dinner

Chief Guest: Dr. Michael Nochomovitz President, University Hospitals Physician Services

- Annual Continuing Medical Education, Nov. 5, 2011
- Acquisition of CPA firm Dingus & Daga, Inc.
- Shiva Vishnu Temple Health Fair, Sept. 18, 2011
- Bonding of Officers and Board of Trustees.
- Contribution to Project SEVA
- Contributions to Philanthropia
- YATRA Medical Camps in Rishikesh, India

2012

President: Elumalai Appachi, MD

Humanitarian Services Committee, Medical Yatra mission to Gondal, & Ambaji, Guj (India)
 January 27 to Feb. 2, 2012

Establish of Directors & Officers Insurance, March 2012

• Twenty-first Annual Chiraag Fundraising Dinner & CME program:

Beneficiary: American Heart Association

Chief Guest: David L. Bronson, MD, FACP, President of American College of Physicians

Chair: Dr. Beejadi Mukunda

Donation: \$15,000.00

Reinstatement of "The Pulse" on-line AIPNO magazine by Drs. Anupa & Milind Deogaonkar

• Karaoke Night at Bamboo Gardens, July 21, 2012

• Shiva Vishnu Temple & AIPNO Health Fair on September 16, 2012

• Golf Outing at Signature of Solon with Dinner at Saffron Patch on September 23, 2012

• Historic election with over 33% of eligible membership casting ballots.

• Annual Dinner 'Physicians Seminar' on November 10, 2012 at Ahuja Medical Center in Beachwood.

• AIPNO launches a new, updated website engineered by Dr. Anupa Deogaonkar.

• Annual Dinner & Dancing at "Lacentre Banquet Facility" on December 8, 2012.

First induction of "Honorary Members" at the Annual Dinner.

Seventh Annual New Year's Eve Gala - Executive Caterers of Landerhaven

2013

President: Beejadi Mukunda, M.D.

- FICA: Republic Day Celebrations, invited guest speaker
- American Heart Association: Sponsored the Power of Laughter Workshop and Comedy luncheon in June 2013
- Participation in Dinner Reception for Indian Ambassador to US, Honorable Ms. Nirupama Rao
- Participation in the Planning Committee of the first Global Impact Award by Cleveland Council of World Affairs to the Former Ambassador to India and Former Governor of Ohio, Richard Celeste
- 22nd Annual Fundraiser "Chiraag", first sold-out event in the history of AIPNO, with record amount of monies collected.

Chairperson – Ranjit Tamaskar ,M.D.

Beneficiary – Alzheimer's Association, Cleveland Area Chapter, Hospice of Western Reserve, Food Bank of Cleveland

Chief Guest - Chief Justice Maureen O'Connor, Supreme Court of Ohio

- CME at Lake West Hospital, facilitated by LakeHealth
- AIPNO Pulse and updating of AIPNO website
- Meeting with AAPI President Elect, Ravi Jahagirdar, MD, and requested hosting of Annual Conference of AAPI
 and Governing Body Meeting. Apprised of improvement in availability of convention facilities in Cleveland.
 Requested better representation of AIPNO at the national level in AAPI
- Efforts throughout the year to rejuvenate and resurrect AIPNO, improved communication with members and families, improved relationship between the Executive Committee and Board of Trustees.
- Efforts to change bylaws to improve operations of the organization.
- Idea of Legacy Gift and third party management of Endowment fund to provide perpetuity to the organization via an Ad-hoc committee chaired by Vasu Pandrangi, MD
- Karaoke Night, June 22nd at Bamboo Gardens
- Golf Outing at Signature of Solon Country Club, June 2nd
- Golf Outing at Hawthorne Valley Country Club, July 28
- Shiva Vishnu Temple Health Fair, September 15th
- BAPS Swaminaryan Temple Health Fair, September 29th
- Sponsorship of Downtown Cleveland Alzheimer's Walk, Oct. 13th
- 30th Annual Dinner with Research Showcase at Cleveland Convention Center & Global Center for Health Innovation, November 2, 2013

Chief Guest – U.S. Senator Sherrod Brown

- Invitation and participation of majority of health care systems, nursing facilities, business leaders and media involvement.
- Research poster competition to showcase the research activities from Northern Ohio, to help network between researchers, physicians and nurse/nurse practitioners in training with practicing physicians with the vision to attract, recruit and retain talent in Northern Ohio
- Kala, Art exhibition and Sale
- General Body Meeting, December 15
- Encouragement to involvement of non-Indian physicians and healthcare workers with Medical Yatra
- Encouragement to start a Youth arm of Medical Yatra to encourage participation of younger families of AIPNO and their friends.
- Encouragement to Project Seva and changes in bylaws to help facilitate reinstatement of support to Project Seva

2014

President, Ranjit Tamaskar, M.D.

- FICA: Supported and participated in Republic Day Celebration
- 23rd Annual Fundraiser Chiraag
 - **Chairperson** Dr. Umesh Yalavarthy
 - Chief Guest Dr. Kris Ramprasad, President, State Medical Board, OH
 - Beneficiary Kidney Foundation \$21,000, Dyslexia Association 3,000, Shiksha Daan \$3,000
- CME at Lake West Hospital, facilitated by Lake Health System
- Picnic at Metro Park, organized by Dr. Umesh Yalavarthy
- Two Golf Outings at Signature of Solon, organized by Dr. Arun Gupta and Dr. H. P. Sundaresh
- Karaoke Night, Bamboo Garden, organized by Dr. Parag. Kanvinde
- Health Fair at Shiva Vishnu Temple, organized by Dr. Lal Arora Chief Guest – Dr. David Perse
- New partnership with Cleveland Foundation to manage AIPNO Endowment Fund
- Legacy Gift for Cleveland Sight Center: More than 7000 preschool children will be screened for vision every year for next five years.
- Sponsored "White Cane Walk" a fundraising event for Cleveland Sight Center
- Medical Yatra, Sponsored one Medical Resident to India, both AIPNO and non AIPNO members provided medical care in Rural India
- 31st Annual Dinner and Second Research Showcase at Cleveland Convention Center Chief Guest – Mr. Sam Pitroda
- Organized and hosted APPI Governing Body Meeting at Cleveland Convention Center
- Membership drive that resulted in more new life members to the organization and participation of physicians in training in AIPNO activities
- General Body Meeting on December 13th at Ahuja Hospital
- Ninth annual New Year's Eve Gala, Dr. Umesh Yalavarthy and Dr. Arun Gupta
- Participated in meetings that led to the partnership of "Helping Hands" and SEVA International to create a social network of volunteers to help the community
- Represented AIPNO at Cleveland City Hall for Asian Heritage Day

Distinction:

- **Dr. Anupa Deogaonkar** was awarded "Bharat Gaurav"
- Dr. Beejadi Mukunda, Chief of Staff Elect and Director of Medicine, Hillcrest Hospital
- Dr. Rajesh Sharma, Chief of Staff, Lutheran Hospital
- Dr. Sandhia Varyani, Chair Robotic Surgery Committee, UH
- Dr. Praveer Kumar, Chief of Medicine, Bedford Hospital

2015

President, Umesh Yalavarthy, M.D.

- FICA: Supported and participated in Republic Day Celebration, January 24
- Supported Annual Medical Yatra trip to Mysore/Bangalore, India, January 1828
- 24th Annual Endowment Fund raiser, Chiraag, April 25
 Chairperson: Ravi Krishnan, M.D.
 Chief Guest: Sister Judith Ann Karam CSA, FACHE of SVCH
 Beneficiary: Minds Matter, Cleveland Chapter, \$16,000.00, Ride for World Health, \$500.00
- **CME Symposium** at Lake Hospital, facilitated by Lake Health System
- Supported Shiva Vishnu Temple **Health Fair** on May 17
- Summer **Golf Outings** on June 7 and August 9 at Signature of Solon Country Club, chaired by H.P. Sundaresh, M.D. and Arun Gupta, M.D.
- Chaired **AIPNO Family** Picnic on August 22 at Brecksville Reservation
- Karaoke night at bamboo gardens on September 12
- Legacy gift beneficiary, sight center, Donation: \$20,000
- Met with Bill Spiker, Director of Development for Cleveland Sight Center to facilitate coordination between AIPNO and sight center
- Attended Cleveland Sight Center's annual gala, Spellbound, September 26
- Supported **BAPS Health Fair** on October 4.
- AIPNO 32nd Annual Dinner, Annual Report, 3rd Research Showcase and 1st Annual Huron, Hillcrest and Southpointe Alumni Dinner on October 24 at the Global Center for Health Innovation. Chief Guest and Key Note Speaker: Jeffrey Susman, M.D., Dean, College of Medicine, NEOMED
- General Body meeting on November 28

Distinctions:

- Dr. Beejadi Mukunda: Chief of Staff, Hillcrest hospital
- Dr. Umesh Yalavarthy: "Physician Collaboration Excellence award," University Hospitals, Geauga medical center
- Dr. Mohan Durve: "PRAVASI RATTAN AWARD," from NRI Welfare Society of India
- **Dr. Mohan Durve:** "THE MOST DISTINGUISHED SERVICE AWARD", American Association of Physicians of Indian Origin (AAPI)
- Dr. Mona Gupta: Co-chair palliative care for Indo American Cancer Association
- **Dr. Mona Gupta:** Vice-chair for the Visionary Executive Leadership Team of Elite Women Around the World

2016

President, Ravi Krishnan, M.D.

• FICA: Supported and participated in Republic Day Celebration, January 23

• Supported Annual **Medical Yatra** trip to Dharampur & Guj, Jan 18 to Jan 28

• 25th Annual Endowment Fundraiser, Chiraag, April 9

Chairperson: Harigopal Balaji, M.D.

Chief Guest: Scott Hamilton, Olympic Gold Medalist

Beneficiary: Scott Hamilton CARES Foundation

CME Symposium at Lake Hospital, facilitated by Lake Health System

- Supported Shiva Vishnu Temple **Health Fair** on May 15
- Fall **Golf Outing** on September 18 at Signature of Solon Country Club, chaired by H.P. Sundaresh, M.D. and Arun Gupta, M.D.
- Legacy gift beneficiary, sight center, Donation :\$20,000
- Attended Cleveland Sight Center's annual gala, Spellbound, September 24
- Supported **BAPS Health Fair** on October 2.
- AIPNO 33nd Annual Dinner, Annual Report, 4th Research Showcase and 2nd Annual Huron, Hillcrest and Southpointe Alumni Dinner on October 22 at the Global Center for Health Innovation.

Chief Guest: Campy Russell, Cavaliers Director of Alumni Relations and FOX Sports Analyst for "Cavaliers Live" Pre & Post Game Show

Key Note Speaker: Harry Boomer, Anchor/Reporter Cleveland 19 News

2017

President, Hari Balaji, M.D.

- Supported Annual Medical Yatra trip to Bhopal, MP, January of 2017
- Held a "Karaoke Night" at Holiday Inn on April 22, Dr. Rupesh Raina, CME speaker.
- Medical Yatra Recognized by Million Dollar Roundtable
- Supported Shiva Vishnu Temple **Health Fair** on May 21
- Supported **Golf Outings** on June 25 and September 10 at Signature of Solon Country Club, chaired by H.P. Sundaresh, M.D. and Arun Gupta, M.D.
- Legacy gift beneficiary, sight center, Donation:\$20,000
- "Yoga in Medicine" a introduction to Yoga CME conducted in association with SEVA and Metro Health.
- Attended Cleveland Sight Center's annual gala, Spellbound, September 15
- AIPNO 34nd Annual Dinner, Annual Report, 5th Research Showcase, 26th Chiraag and 3rd Annual
 Huron, Hillcrest and Southpointe Alumni Dinner on September 23 at the Global Center for Health
 Innovation.

Chief Guest – Diane Wish, CEO at Centers for Dialysis Care

New Website @ www.AIPNO.org enhancing user friendly features.

2018

President, Mona Gupta, M.D.

- Initiated AIPNO support to "Visa, Passport and Consular Services Day" in collaboration with TANA (Telugu Association of North America) and FICA (Federation of India Community Associations of Northeast Ohio), January 20
- Supported and participated in FICA republic day celebration, January 20
- Combined EC/ BOT meeting and ratification of nomination committee appointments, January 21
- Bylaws review and clarification of Board and Officers selection, January 21
- Supported Medical Yatra trip to Gujrat/Banglore, India and Jaipur gift of artificial limb appreciated by Lions Club and community, January 11-18 and 19-25
- Global Grant to Women's Clinic-Medical Yatra, February
- Meeting with Cleveland Foundation to review AIPNO endowment fund management and year-end financial information, February 15
- Initiated new endeavor for AIPNO by supporting local and national dance talent and sponsored "Naach Di Cleveland" dance competition from across the country hosted by CWRU teams at Playhouse Square, February 17
- Initiated a new endeavor for AIPNO "Amit Tandon- live in Cleveland" show. Provided special discount for AIPNO members, March 9
- Initiated a new tradition for AIPNO Community collaboration in Cleveland- Holi Ke Rang Apno Ke Sang: joint venture in collaboration with other organizations ICAGA (Indian Community Associations of Greater Akron) and Marwari Association of Ohio (MAOH), March 18
- Invited Chief guest at BAPS "Shri Swaminarayan Jayanti and Shri Ram Navami" celebration, April 8
- First ever Bollywood show in history of AIPNO fundraiser "Mystic India" attended by an audience of 1500. Beneficiary: Benjamin Rose Institute on Aging. Huge marketing for AIPNO via media, local grocery stores, collaboration with local organizations, social media, online newspaper, e-blasts, electronic marketing, local distribution, electronic and postal mails, April 14
- Media involvement both television and newspaper to promote "Mystic India"
- Supported Cleveland International Hall of fame to recognize Inductee Dr. Atul Mehta-AIPNO member and past president. April 17
- Cleveland International hall of Fame inductions ceremony sponsored and promoted our annual dinner. April 17
- Presented check to our Chiraag Beneficiary 2017 Recovery Resources at their Annual Gala from April 18
- First time project for AIPNO- Sponsored NEOMM Northeast Ohio Maratha Mandal fundraiser show to promote AIPNO fundraiser "Mystic India" show, April 27
- Invited Guest at Shiva Vishnu Temple Health Fair organized by Dr. Gopal Kapoor, May 18
- Golf outing at Signature of Solon Country Club, chaired by Dr. Arun Gupta, June 18
- Meeting with AAPI president Dr. Gautam Samadder, and chairman of the board of trustees, Dr. Mohan Kothari and requested hosting of governing AAPI board meeting in Cleveland, July 3
- First time project for AIPNO-Sponsored India food fair, St. George's Church, and marketed our annual fundraiser dinner, July 18

2018 continued

- Supported FICA Independence day celebration and represented AIPNO, August 18
- Sponsored Shiksha Daan Volunteer Appreciation Luncheon at Shiva Vishnu Temple, September 8
- First time endeavor-Sponsored India fest USA, participated in awards ceremony and promoted our annual fundraiser dinner, September 15
- Invited as Lead Guest at the inauguration ceremony of BAPS Charities Health Fair at BAPS Temple, September 23
- Invited to attend Cleveland Sight Center "Spellbound" Dinner & Fundraiser, September 28
- First time initiative- Sponsored Annual Fundraiser for "Save A Child" program to help the orphan and poor children in India, October 5
- CME at South Pointe Hospital facilitated by American College of Family Physicians October 6
- 35th Annual Dinner, Fundraiser and RSC at a new venue Public Auditorium, October 6

Chief Guest: Todd Park, Chair Devoted Health

Keynote speaker - Rohit Khanna US Rep California

Beneficiary - Mayor Jackson Scholarship Program administered through "College Now"

- Invitation and participation by major health systems, nursing facilities, business leaders, and media involvement
- Plan to attend and present check to AIPNO Mystic India Beneficiary- Benjamin Rose Institute on Aging at their Annual Gala, November 8
- General body meeting, December 9
- Quarterly Executive Committee meetings- Jan 21, April 3, June 19
- Legacy gift beneficiary, Cleveland Sight center, donation \$20,000
- Ongoing efforts throughout the year to reinvigorate and revitalize AIPNO improve communication between members and families; improve relationship between the membership, executive committee, and the board of trustees
- Increased social media presence recognizing AIPNO events and marketing our sponsors.
- Ongoing efforts throughout the year for updating AIPNO website making it more user friendly to market AIPNO events.
- Membership drive that resulted in more new life members to the organization and participation of physicians in training with AIPNO activities.
- New public platform to AIPNO by collaboration with local organization, Mystic India Bollywood show and extensive marketing via social media, TV media, newspapers, online, newsletters, advertisements
- First ever family friendly New Year's Eve party 2018 which was a tremendous success and a sold out event.

Distinctions

Dr. Murthy Vuppala awarded Appreciation from Lions.

Dr. Atul Mehta inducted at the Cleveland International Hall of Fame

Dr. Ajit Kothari, Chairman Board Of trustees, American Association of Physicians of Indian Origin (AAPI)

2019

President: Harbhajan Parmar, MD

- Supported Medical Yatra trip to Gandevi in the western part of India, January
- Organized an AIPNO Picnic at Highland Heights park for all AIPNO members on June 9, supported by Corey Kimble of Merrill Lynch
- Supported the June 30 Golf Outing at Signature of Solon, organized by Dr. Arun Gupta
- Continued with support for the Annual Fundraiser for "Save A Child" program to help orphaned and poor children, July
- Initiated AIPNO's First Health Fair, coordinated with University Hospitals on August 24 at Willow Praise Church in Willowick, OH, offering consultation with 13 specialties, education, vaccines and testing
- CME at Regency Hospital on November 9
- Public Relations Committee was reactivated
- 36th Annual Dinner, Fundraiser and RSC at Landerhaven, Mayfield Heights on November 9
 - ✓ Chief Guest: Melody J. Stewart, Justice of the Supreme Court of Ohio
 - ✓ Keynote speaker Marc Byrnes, Chairman of Oswald Companies
 - ✓ Beneficiary- WomenSafe Inc. "The Green House", Chardon, OH
- Invitation and participation by major health systems, nursing facilities, business leaders, and media involvement
- General body meeting in December 2019
- Legacy gift beneficiary, Cleveland Sight Center, completed \$100,000 commitment in March of 2019
- Supported the Board of Trustees in the selection of AIPNO's second Legacy Gift beginning 2020

Distinctions

Dr. Rupesh Raina: Most Distinguished YPS (Young Physician) Award of 2019 at the AAPI Annual meeting in Atlanta., GA on July 4, 2019.

Dr. Mona Gupta:

- Advanced to American Geriatric Society (AGS) Fellow status.
- Co-chair palliative care at American Geriatric Society and Indo-American Cancer Association
- · Chair, Health and Wellness, IndiaFest USA

Dr. K.V. Gopalakrishna:

• Laureate Award by ACP Ohio Chapter on Oct. 17, 2019

Dr. Neil Mehta:

- Appointed Associate Dean for Curricular Affairs at Cleveland Clinic Lerner College of Medicine and Case Western Reserve University
- Jones Day Endowed Chair in Medical Education at Cleveland Clinic

Dr. Jaya and Mr. Ramesh Shah:

• Honored by the India Association of Greater Akron for 20 years of Humanitarian Services to the indigent rural population of India on Oct. 19, 2019

2020

President: Rupesh Raina MD

- FICA: Supported and participated in Republic Day Celebration,
- Supported I Medical Yatra ventures through rotary club serving underserve population in India.
- The 37th Annual Gala with 8th Research Showcase and 29th Fundraiser "Chiraag"

GALA will be held virtually this year due to Covid-19 restrictions.

CHIEF GUEST: Sherrod Brown, U.S. Senator

KEY NOTE SPEAKER: John Langell, MD, Ph.D., M.P.H. M.B.A., President, NEOMED

- Beneficiary AIPNO has selected a major beneficiary every year since 1992. This year we are supporting NKF "National Kidney Foundation"; which is a lifeline for all people affected by kidney disease, and Hattie Larlham Foundation; which creates opportunities for children and adults with intellectual and developmental disabilities.
- AIPNO Pulse and updating of AIPNO website
- Efforts throughout the year to rejuvenate and resurrect AIPNO, improved communication with members and families, improved relationship between the Executive Committee and Board of Trustees.
- Efforts to change bylaws to improve operations of Medical yatra organization under the banner of humanitarian service. Encouragement to start a Youth arm of Medical Yatra to encourage participation of younger families of AIPNO and their friends.
- Karaoke Night, with fund raising for family services on March 3, 2020 at Marriot in Beachwood Ohio.
- Golf Outing at Signature of Solon Country Club
- Tennis Tournament in September 2020
- Invitation and participation of majority of health care systems, nursing facilities, business leaders and media involvement.
- Research poster competition to showcase the research activities from Northern Ohio, to help network between researchers, physicians and nurse/nurse practitioners in training with practicing physicians with the vision to attract, recruit and retain talent in Northern Ohio
- General Body Meeting, March 3, 2020
- Our team along with several AIPNO members hosted the annual AIPNO fundraiser to raise funds for healthcare facilities, private practitioners, and the local foodbank.
- AIPNO and SEWA launched a 24/7 COVID-19 Convalescent Blood Plasma Registry for Northeastern Ohio. This national registry allows for plasma collection from donors who had complete COVID symptom-resolution in order to save the lives of patients currently suffering from COVID-19.
- Our team worked with several medical educators in order to create an informative web series aimed at
 teaching students, residents, and physicians' evidence-based medicine centered around COVID-19.
 These hour-long webinars gave participants an opportunity to ask questions and dispel myths about the
 coronavirus while learning how to combat this global health crisis.
- AIPNO along with SEWA International worked with world-renowned singer, lyricist, and music composer Padma Shri Kailash Kher in order to create an online concert dedicated to frontline COVID-19 Healthcare Workers. This concert, "Music is the Medicine of the Mind", drew several thousand viewers and was a monumental success in de-stressing healthcare workers around the global.

MILESTONES 2020 continued

- In collaboration with SEWA International, our AIPNO Executive Committee, including Dr. Sundaresh and Dr. Ahluwalia, undertook a noble initiative labeled "Quilts for Kids". AIPNO called for volunteers around the community to sew quilts for local children's hospitals and anticipate on donating several dozen blankets
- In anticipation of the COVID-19 patient surge, AIPNO member providers will be caring for patients with an unfamiliar diagnosis or in unfamiliar settings. Dr Neil Mehta and Dr Vikram Kumar our CME chairs collaborated with Cleveland Clinic to have access an online curriculum, available to all physicians in AIPNO, to prepare you to care for patients with and without COVID-19 in the ICU, inpatient and ambulatory settings
- AIPNO President and the Executive committee are introducing the initiative for serving food to the
 Homeless shelter every month in collaboration with SEWA International and local homeless shelters in order
 to serve food to the most vulnerable patient-populations in Northeast Ohio. This initiative will continue for
 the next 24 months
- AIPNO President Announces AIPNO First Youth Initiative Program for High School And College Students This Year In The Fall Of 2020.
- In collaboration with several other organizations, including SEWA and FICA, the organization has
 undertaken the enormous task of rallying support for the healthcare community and collaboratively
 impacting local, national, and international counties in a positive manner.
- We are in process of research endowment for minority students of Cleveland to assist the community through
 education, research and service. We are in the process of establishing AIPNO Research Scholarship to
 encourage researchers to focus on community friendly projects.

Association of Indian Physicians of Northern Ohio

* AchanFati, Babu MD	* Appachi, Elumalai MD
18101 Lorain Rd Office: 216-476-7157	Pediatrics
Cleveland, OH 44111	
Neonatology	* Appachi, Mala MD
	Pediatrics
* Adhvaryu, Hareendra G. MD	
7215 Old Oak Blvd # A-416 Office: 440-816-1977	* Apte, Manohar MD
Middleburg Hts, OH 44130	Family Practice
Psychiatry	*4 . C . MD
* A II	* Apte, Susan MD
* Adhvaryu, Neela MD	Surgery, Cardiothoracic
Pediatrics	* Aroro D Lal MD
*Adityanjee, A MD	* Arora, P. Lal MD Geriatrics – Retired
24700 Center Ridge Rd. #230 Office: 440-872-6548	Germins – Minen
Westlake, OH 44145	* Arora, Urmila MD
Psychiatry	1736 Belle Ave Office: 330-264-2844
	Wooster, OH 44691
* Adur, Anjali P. MD	OB/GYN
University Hospital Office: 216-844-7330	
Cleveland Medical Center,	Augustin, Toms MD
Cleveland OH 44106	1730 W. 25th, Suite 1E Office: 216-363-2311
Pediatric Anesthesia	Cleveland, OH 44113
** 15.135	General Surgery
*Agarwal, Rajesh, MD	*DC MI ME
6770 Mayfield Rd. #425 Office: 440-312-9041	* Bafna, Mohan MD
Mayfield Hts. OH 44124	Internal Medicine – Retired
Internal Medicine	* Rafaa Shamile MD
* Aggarwal, Saroj MD	* Bafna, Shamik, MD 7001 S. Edgerton Rd. Suite B Office: 440-526-1974
2595 Hickory Lane Office: 440-473-0930	Brecksville, OH 44141
Cleveland Ohio 44124	Ophthalmology
Ophthalmology – Retired	1 ····································
ı cv	* Bahuva, Rubin MD
*Ahluwalia, Harneet MD	9500 Euclid Ave Office: 216-444-8728
9500 Euclid Ave Office: 216-280-2412	Cleveland, OH 44114
Cleveland, OH 44195	Hospitalist
Sleep Medicine	***************************************
*ALL II W . WD	* Baishnab, Radha MD
*Ahluwalia, Manmeet MD	Internal Medicine – Retired
9500 Euclid Ave. CA5 Office: 216-444-6145	* Pala:: Haricanal MD
Cleveland, OH 44195 Oncology	* Balaji, Harigopal, MD 464 Richmond Rd. Office: 216-486-3233
Oncowy ,	Richmond Heights, OH 44143
* Ahluwalaia, Charanjit MD	Internal Medicine
3809 Deerpath Drive Office: 419-626-1313	
Sandusky, OH 44870	* Balraj, Elizabeth MD
Cardiology	Former Coroner Of Cuyahoga County 440-248-4337
	Forensic Pathologist – Retired
Ahuja, Payal, MD	· ·
7800 Pearl Road Office: (216) 844-3345	* Bandi, Ram MD
Middleburgh Hts., OH 44130	275 Graham Rd. Suite 11 Office: 330-920-1212
Family Medicine	Cuyahoga Falls, OH 44223
* AL. J A at all MD	Gastroenterology
* Ambekar, Anjali MD 525 Featown Pood Office 410 008 4467	* P
525 Eastown Road Office: 419-998-4467 Lima, OH 45805	* Bapna, Sumit MD 34055 Solon Road, Suite 108
Radiation Oncology	Solon, OH 44139
Tamming Citions	Facial Plastic Surgery/Otolaryngology
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* Batchu, Chandra, MD 27100 Chardon Rd Office:(440) 585-6301 Richmond Hts, OH 44143 Diagnostic Radiology * Bhaiji, Alok MD 7225 Old Oak Blvd. B31L Middleburg Hts. OH 44130	Chand, Prakash MD 38780 French Creek Rd Office: 330-263-8477 Avon, Ohio Internal Medicine/Hepatology * Chandar, Krishan MBBS, MRCP (London) 5950 Buckboard Lane, Solon, OH 44139 Neurology
Internal Medicine * † Bhaiji, Khushal C. MD Cardiology	* Chari, Vedantum Ramanuja MD 11201 Shaker Blvd.# 140 Office:216-761-3565 Cleveland, OH 44104 Surgery, General
* Bhavani, Sekar MD 9500 Euclid Ave Office:216-444-8782 Cleveland, OH 44195 <i>Anesthesiology</i>	* Chatterjee, Arup Kumar OD 3547 Midway Mall Office: 440-324-9779 Elyria, OH 44035 Optometry
* Bhakta, Shyam MD 323 Marion Ave. NW, #200	* Chawla, Ash, MS, RPh 24700 Center Ridge Rd #110 Office: 440-871-1721 Westlake, OH 44145 Pharmaceutical Industry
* Bhalla, Anita MD	- 1.00 marcon -
* Bhalla, Rakesh MD 18101 Lorain Ave Office: 216-476-0189 Cleveland, OH 44111 Internal Medicine	* Chawla, Rakesh, MD 10229 Wellington Boulevard 614-599-0677 Powell, Ohio 43065 Interventional Cardiologist
* Bhatt, Mukesh MD 9708 Washington Street# 203 Office: 330-722-5422 Medina, OH 44256 Hematology/Oncology	* Cherukuri, Subbarao MD 4654 Oberlin Avenue Office: 440-960-2885 Lorain, OH 44053 <i>Urology</i>
* Bhavnani, Sanjeev MD 12301 Snow Rd Office: 440-740-0457 Parma, OH 44130 Geriatrics	Chhibber, Aditya, DDS 137 Benedict Ave Office: 419-668-1686 Norwalk, OH 44850 Orthodontist
* Bhimani, Jayantilal MD 2709 Franklin Blvd. 2E Office: 216-363-2203 Cleveland, OH 44113 Internal Medicine	Chhibber, Surabhi, DDS 660 Dover Ctr. Rd. Suite 17 Office: 440-892-5556 Bay Village, OH 44140 Pediatric Dentist
* Bindra, Sanjit MD 14601 Detroit AVE # 140 Office: 216-529-5300 Lakewood OH 44107 Endocrinology	Chimalakonda, Ravi, MD 2600 Sixth Street Office: 330-633-2180 Canton, OH 44710 Hospitalist
* Bolla, Ravisankar MD 25200 Center Ridge Rd. #1100 Office: 440-895-5044 Westlake, OH 44145 Cardiology	* Chouksey, Akhilesh MD 2500 MetroHealth Drive Office: 216-778-1381 Cleveland, OH 44109 Allergy & Immunology
* Brahmanandam, Maddikunta MD Cardiology	* Cupala, Homai MD 26900 George Zeiger Drive, # 302-4 Office: 216-316-0883 Beachwood,Ohio 44122 Psychiatry
* Brahmbhatt, Ramesh MD 21851 Center Ridge Rd Office: 440-333-0060 Rocky River, OH 44116 Cardiology	*† Cupala, Jitendra MD

* Dacha, Harinathrao MD 125 East Broad Street #119 Office: 440-329-7397 Elyria, OH 44035 Pulmonary Medicine	* Dipali, Aravind MD 29099 Health Campus Dr #325 Office: 440-835-6165 Westlake, OH 44145 <i>Pediatrics</i>
* Dahodwala, Ty DC 1730 W. 25th Str Ste 1000 Office: 216-685-9975 Cleveland, OH 44113 <i>Chiropractic</i>	* Diwan, Renuka MD 29101 Health Campus Dr Office: 440-871-9832 Westlake, OH 44145 <i>Dermatology</i>
* Dalal, Bankim MD 1430 Lindwood St Office: 559.732.1660 Vaisalia, CA 93291	* Dravid, Sheela MD Family Practice
Gastroenterology	* Durve, Mohan MD 6681 Ridge Road #305 Office: 440-845-7272
* Das, Jagannath MD OB/GYN, Retired	Parma, OH 44129 Allergy/Asthma
* Dasari, Narayana MD 25200 Center Ridge Rd. #2300 Office: 440-333-3904 Westlake, OH 44145 <i>Internal Medicine</i>	* Ebrahim, Lilian MD 9500 Euclid Ave Office: 216-444-2197 Cleveland, OH 44195 Psychiatry
† Deodhar, Sharad MD Pathology, Immunology	* Ebrahim, Zeyd MD 9500 Euclid Ave Office: 216-444-6550 Cleveland, OH 44106
† Deogaonkar, Anupa, MD Anesthesiology	Anesthesia
* Deogaonkar, Milind, MD Functional Neurology	* Gatha, Harilal MD Family Practice, Retired
Desai, Dipali, MD 600 W. 3rd Street Office 419-522-6191 Mansfield, OH 44906 Family Medicine	* Ghasia, Fatema, MD 9500 Euclid Ave Office: 216-444-0999 Cleveland OH 44106 Ophthalmology
* Desai, Mihir MD A-100 Euclid Ave Office: 216-445-1185	* † Ghose, Manesh K. MD Nephrology
Cleveland, OH 44195 Cardiology	* Gidwani, Gita MD OB/GYN - Retired
* Deshpande, Krishna MD Surgery, General	* Gill, Inderjit MD 2500 Metro Health Drive Office: 216-778-4304 Cleveland, OH 44109
* Devarajan, Jagan 29652 Devonshire Oval Office: 216-318-7310	Cardiothoracic Surgery
Westlake, Ohio 44145 Anesthesiologist	Ginwalla, Mahazarin, MD 11100 Euclid AveOffice: 216-844-2500 Cleveland, OH 44106
* Dhillon, Harmohinder MD	Cardiology
125 East Broad #202 Office: 440-329-7306 Elyria, OH 44035	* Godbole, Medha S. MD
Internal Medicine	6733 Winston Lane Phone 440-241-3167 Solon, OH 44139
* Dhillon, Jagprit MD 6100 Rockside Woods Blvd. #105 Office: 216-674-1217	Pathology
Independence, OH 44131 Emergency Medicine	* Gogate, Prema MD 10701 East Blvd Office: 216-791-3800, ext 5141
* Dhingra, Rahul MD 125 East Broad Street #202 Office: 440-329-7305 Elyria, OH 44035	Cleveland, OH 44106 Pathology
Cardiology	* Denotes Life Mem

* Hegde, Shura MD 6133 Rockside Rd., Suite 207 Office: 440-320 5169 Rockside Square Bldg. II Independence, OH 44131 Psychiatry
Holla, Ira, MD 11100 Euclid Ave. Office: 517-303-7448 Cleveland, OH 44120 Neonatology
* Iyer, Inderisha, MD Office – 440-585-7006 Cardiac Electrophysiology
* Iyer, Sridhar K. Texas <i>Pulmonology</i>
* Jagannathan, Ramya, DDS 8523 Ridge Road Office: 440-237-7730 North Royalton, Ohio 44133 Dentist
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Jain, Mukesh MD Wolstein Research Bldg, Room 4-405 Office: 216-368-3607 2103 Cornell Road Cleveland, Ohio 44106 Cardiology
Jain, Rachana MD 5227 Stonebridge Court
* Jain, Rajneesh MD 300 Locust # Suite 200 Office: 330-253-7753 Akron, OH 44302 Pediatrics
* Jain, Rashmi, MD REJ BuildingOffice: 440-668-1966 Avon, OH Internal Medicine
* Jain, Vikas, MD 2500 MetroHealth Dr Office: (216) 778-4016 Cleveland, OH 44109 Radiology
* Jawa, Prem S. MD 6801 Mayfield Rd Office: 440-449-5668 Mayfield Hts, OH 44124 Urology
* Jayaswal, Bijay MD 3647 Medina Rd Office: 330-722-6143 Medina, OH 44256 Cardiology * Denotes Life Member

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† Deceased

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Jhala, Nilamba MD 18101 Lorain Ave Cleveland, OH 44111	* † Kapadia, Gautam MD Anesthesia
Internal Medicine * Jhala, Varsha MD Anesthesia – Retired	* Kapadia, Jyotika MD 19250 E. Bagley Rd Office: 440-826-3240 Middleburg Hts., OH 44130 Anesthesia
* Jhaveri, Nalini MD OB/GYN–Retired * John, Kuruvilla MD	* Kapadia, Mansavee MD U.H. Eye Institute Office: 216.844.1132 11100 Euclid Avenue Cleveland, OH 44106
S-3 Neurological Inst Office: 216-445-1384 9500 Euclid Ave Cleveland, OH 44195	Ophthalmology * Kapadia, Samir MD
Neurology * Joshi, Vinod MD Anesthesia	9500 Euclid Ave F25 Office: 216-444-6735 Cleveland, OH 44195 Cardiology
* Julka, Neeraj MD Family Practice – Retired	* Kapoor, Gopal MD 16111 Lorain Ave Office: 216-252-8444 Cleveland, OH 44111 Internal Medicine
* Kalepu, Anand Rao, MD 429 Medway RdOffice: 440-785-2574 Highland Heights, Ohio 44143 General Surgery	* Karimpil, Joseph MD 763 E. 200th Street Office: 216-481-0073 Euclid, OH 44119 Internal Medicine
* Kalepu, Sudheera, MD L.S. V.A. Med. Center Office: 216-791-3800 10701 East Blvd. Cleveland, OH 44143 Internal Medicine	Kashyap, Sangeeta MD 9500 Euclid Ave. F20 Office: 216.444.2679 Cleveland, OH 44195 Endocrinology
* Kalhan, Santosh MD 9500 Euclid Ave Office: 216-444-3482 Cleveland, OH 44106 Anesthesia	Kashyap, Vikram MD 11100 Euclid Ave Office: 216-844-3013 Cleveland, OH 44106 Vascular Surgery
* Kalhan, Satish MD 2074 Abington Rd Office: 216-778-8643 Cleveland, OH 44106 Pediatrics	* Kedia, Kalish MD 19250 Bagley Rd. #201 Office: 440-891-6500 Middleburg Hts, OH 44130 <i>Urology</i>
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* Kansal, Sunil MD 18820 East Bagley Rd #106 Office: 440-243-1616 Middleburg Hts., OH 44130 Internal Medicine	* Khambatta, Parvez MD 5035 Mayfield Rd. #201 Office: 216-382-0092 Lyndhurst, OH 44124 Gastroenterology
* Kantharaj, Belagodu MD Hematology Oncology Center, Ind. Mercy Cancer Center 41201 Schaden Rd. Unit #2 Office: 440-324-0401 Elyria, OH 44035 Fax: 440-324-0405	* Khandekar, Prakash MD 6803 Mayfield Rd Office: 440-442-3334 Mayfield Rd, OH 44124 Dermatology
Hematology/Oncology	* Denotes Life Memb

* Khandelwal, Anand MD 970 E.Washington #302 Office: 330-723-7999 Medina, OH 44256 Pulmonary Medicine	* Krishnan, Ravi MD 6559 A Wilson Mills Rd #106 Office: 440-449-1540 Mayfield Village, OH 44143 <i>Internal Medicine</i>
Khanna, Ashish, MD 9500 Euclid Ave Office: 216-444-7988 Cleveland, OH 44195 Anesthesiology, Critical Care Medicine	* Kumar, Namrata MD 210 E. Broad St Office: 440-322-0872 Elyria, OH 44025 Gastroenterology
* Khatri, Saloni MD 5172 Leavitt Rd Office: 440-282-7420 Lorain, OH 44052 Internal Medicine	* Kumar, Praveer MD 11100 Euclid Avenue Office: 216-291-4886 Cleveland, OH 44106 Internal Medicine
* Kherani, Kausar MD 805 Columbia Rd #115 Office: 440-899-0200 Westlake, OH 44145 Pediatrics	* Kumar Sanjay, DO 5319 Hoag Drive Suite 115 Elyria, OH 44035 Physical Medicine & Rehabilitation
* Kondapaneni, Meera MD 2500 MetroHealth Dr Office: 216-778-7713 Cleveland, OH 44109 Interventional Cardiology	* Kumar, Suresh MD 7225 Old Oak Blvd. C302 Office:216-398-5314 Middleburgh Hts., OH 44130 Neurology
* Kosaraju, Vijaya, MD Muskuloskelatal Radiology	* Kumar, Unni P.K. MD 6707 Powers Blvd #102 Office: 440-886-5558 Parma, OH 44129
* Kotak, Sandeep MD 36100 Euclid Ave Office: 440-953-6294 Willoughby, OH 44094 Internal Medicine	* Kumar, Vikram MD 24055 Lorain Road, #303 Fairview Park, OH 44126
* Kothari, Ajeet MD 23524 Wingedfoot Dr Office: 440-289-1000 Westlake, OH 44145 OB/GYN	Endocrinology Kundu, Sunanda MD 18101 Lorain Rd Office: 216-476-7000 Cleveland, OH 44111
* Kothari, Purnima MD 23524 Wingedfoot Dr Office: 440-822-8300 Westlake, OH 44145 OB/GYN	* Lachwani, Deepak MD PO Box 112412 Office; +917 2 501 9000, ext. 41054
* Kothari, Samir MD 27069 Oakwood Circle #105 Office: 440-377-0263 Olmsted Falls, OH 44138 Internal Medicine	Abu Dhabi UAE Epilepsy Lalwani, Vidya MD Internal Medicine - Retired
* Krishnamurthi, K.C. MD 1941 S. Baney Rd Office: 419-289-3355 Ashland, OH 44805 <i>Urology</i>	* Lele, Anju S. MD 9000 Mentor Avenue Office: 440-974-4484 Mentor, OH 44060 Internal Medicine
* Krishnamurthi, Smitha * Krishnamurthi, Venkatesh MD 9500 Euclid Ave Office: 216-444-0393 Cleveland, OH 44195	* Lele, Shreeniwas MD 9000 Mentor Avenue Office: 440-974-4484 Mentor, OH 44060 Internal Medicine
Transplantation Surgery * Krishnan, Nagureddi MD Ophthalmology	* Madan Mohan, Gayatri MD 1000 E. Washington St Office: 330-225-8555 Medina, OH 44256 Pathology

* Madan Mohan, Sri MD 11100 Euclid Ave. Lakeside 5038 Office: 216-844-0332 Cleveland, OH 44106	* Mallik, Gagan MD ENT - Retired
* Mahajan, Darshan MD 673 East River Street Office: 440-323-6422	* Maniar, Smita MD Lake County East Hospital Office: 440-350-0832 Painesville, OH 44004 Anesthesia
Elyria, OH 44035 Neurology * Mahajan, Neeraj, MD	* † Mankad, Devi MD <i>OB/GYN</i>
6525 Powers Blvd	* † Mankad, Vinoo MD Internal Medicine
* Mahajan, Nitika, MD 8787 Brookpark Rd. Office: 216-739-7000 Parma, OH 44129 Psychiatry	* Maroo, Praful V. MD 18099 Lorain Rd Office: 216-252-2770 Cleveland, OH 44111 Cardiology
* Mahajan, Subhash MD 7215 Old Oak Blvd Office: 440-816-2733 Middleburg Hts., OH 44130 Gastroenterology	* Marshall, Brian, DO 9700 Garfield Blvd # 1090 Office: 216-441-3223 Cleveland, OH 44125 Orthopedics
Mahajan-Khanna, Niyati, MD 9318 State Rte.14 Office: 330-626-4080	* Marshall, Cyril MD Orthopedics - Retired
Streetsboro, OH 44241 Pediatrics, Primary Care	* Mathur, Monica DPM Podiatrist Office: 616-706-5347
* Mahalaha, Saroj MD OB/GYN - Retired * Maheshwer, C. MD	* Mehta, Adi MD 9500 Euclid Avenue Office: 216-445-5312 Cleveland, OH 44195 Endocrinology
24723 Detroit Rd Office: 440-892-1440 Westlake, OH 44145 Orthopedic Surgery	* Mehta, Atul MD 9500 Euclid Avenue A90 Office: 216-444-2911 Cleveland, OH 44195
* Mahna, Satish MD 7750 Reynolds Rd #100 Office: 216-577-0224 Mentor, OH 44060	Pulmonary Medicine * Mehta, Dharmesh MD
* Majmudar, Himanshu MD 18599 Lakeshore Blvd Office:216-383-6021	36100 Euclid Ave. Suite 350 Office: 440-960-8300 Willoughby, OH 44094 <i>Internal Medicine</i>
Euclid, OH 44119 Internal Medicine * Makadia, Ashok P. MD	* Mehta, Gita MD 29001 Cedar Rd #300 Office: 440-461-8844 Lyndhurst, OH 44124 <i>OB/GYN</i>
3600 Kolbe Rd. #109 Office: 440-960-5688 Lorain, OH 44053 <i>Pulmonary</i>	* Mehta, Govind MD 125 E.Broad St. #322 Office: 440-329-7345 Elyria, OH 44035
*Makkar, Ritu, MD (see Malhotra)	ENT
* Makkar, Vinit, MD 6780 Mayfield Road Office: 440.312.4569 Mayfield Heights, OH 44124 Hematology/Oncology	* Mehta, Hetal RPh * Mehta, Madhu MD Pathology
* Malhotra, Ritu, MD 8565 Mentor Ave Office: 440-554-6335 Mentor, OH 44060 ENT/facial plastic surgery	
JI	* Denotes Life Memb

* Mehta, Neil MD 9500 Euclid Avenue A91 Office: 216-445-6512 Cleveland, OH 44195 Internal Medicine	* Mulgaokar, Girish MD 11100 Euclid Ave Office: 440-205-4505 Cleveland, OH 44106 Anesthesia
* Mehta, Rajendra MD 5109 Broadway Ave. #410 Office: 216-441-5665 Cleveland, OH 44127 Internal Medicine	* Murthy, Prabha MD Pathology - Retired * Murthy, P.S.S. MD 400 Austin Avenue NW Office: 330-837-9299 Massillon, OH 44646
* Mehta Patel, Sangita MD 850 Brainard Road Office: 440-442-8329 Highland Hts, OH 44143 Ophthalmology	Forensic Pathology Muthusamy, Preetha, MD 2420 Lake Ave Office: 440-994-7544 Ashtabula, OH 44004
* Mehta, Sudhir Ken, MD Pediatric Cardiology - Retired	Neurology
* Mehta, Usha MD 13810 Spring Street #405 Office: 440-834-4455 Burton, OH 44021 Internal Medicine	Nadkarni, Vivek MD 1170 E. Broad St., #102 Office: 440-323-3574 Elyria, Ohio Nephrology
	* † Nair, Daksha MD
* Mendpara, Suresh MD 970 E. Washington St. Ste 4D Office: 330-722-5422 Medina, OH 44256 Hematology/Oncology	* Nair, Ravi, MD 9500 Euclid Ave. Desk J2-3 Office: 216-444-6160 Cleveland, OH 44195 Cardiovascular Med./Intervention
* Meyyazhagan, Swarnalatha MD 12200 Fairhill Rd Office: 216-844-6370 Cleveland, OH 44120 <i>Geriatrics</i>	* Nair, Siva S. MD Gastroenterology - Retired
	* Nanavati, Shailesh MD
* Mistry, Darshan MD 18181 Pearl Rd. #A206 Office: 440-816.5220	Pediatrics - Retired
Strongsville, OH 44136 Internal Medicine	* Narichania, Dilip MD 7225 Old Oak Blvd. A-311 Office: 440-816-5483 Middleburg Hts., OH 44130
* Mistry, Niraj MD 125 E. Broad Str #202 Office: 440-329-7305	Surgery, General
Elyria, OH 44035 Internal Medicine	* Natesan, Arumugam MD 5109 Broadway #405 Office: 216-251-1070
* Mistry, Vijay MD	Cleveland, OH 44127 Gastroenterology
6770 Mayfield Rd Office: 440-442-2040 Mayfield Hts, OH 44124	* Natesan, Corattur, MD
Cardiology	464 Richmond Rd Office: 216-486-3233 Richmond Hts. Medical Center, 44143
* Mitra, Kunal MD 750 E. Washington #A2 Office: 330-725-7100	Internal Medicine
Medina, OH 44256 Cardiology	* Nayak, Hemanta MD 12301 Snow Road Office: 216-362-2421
* Mude, Jagdish L. MD	Parma, OH 44130 Internal Medicine
1799 Kendal Dr Office: 440-740-1430 Broadview Hts., OH 44147	* Nayak, Sagarika MD
Psychiatry	29099 Health Campus Dr #390 Office: 440-250-0325 Westlake, OH 44145
* Mukunda, Beejadi N. MD 6559 A Wilson Mills Rd #106 Office: 440-449-1540 Mayfield Village, OH 44143 Internal Medicine	Neurology

11100 Euclid Ave	
* Palekar, Sanjay MD * Patel, Ashwin MD * Surgery, Orthopedic - Retired * Pallaki, Muralidhar MD * Patel, Bhupendra MD	
10701 East Blvd Office: 216-791-3800 x5260 Cleveland, OH 44106 Geriatrics * Panchagnula, Sastry MD 2420 Lake Avenue Office: 440-997-66 Ashtabula, OH 44004 Radiology * Patel, Chandrakant MD	591
Pulmonary Medicine - Retired One Perkins SquareOffice: 330-543-80 Akron, OH 44308 * Pandit, Mukul MD * Pediatric Cardiology)48
14208 Kinsman Road)44
* Pandit, Vidya MD 32730 Walker Rd Bldg H Office: 440-930-4959 Avon Lake, OH 44012 * Patel, Chetan MD Thernal Medicine * 7879 Auburn Rd. Suite 1A Concord, OH 44077	
* Pandrangi, Vasu MD 7225 Old Oak Blvd. #C212 Office: 440-816-2725 Middleburg Hts., OH 44130 * Patel, Deodutt MD Surgery, Plastic * Patel, Deodutt MD Radiology	
* Pania, Vimla D. MD Internal Medicine - Retired * Patel, Dhruv MD 673 East River Street Office: 440-323-64 Elyria, OH 44035	í 22
* Pannu, Kulbir S. MD 8523 Ridge Road Office: 440-237-7112 N. Royalton, OH 44133 * Patel, Dineshchandra MD 436 East River Street Office: 440-323-85 Elyria, OH 44035	515
* Parikh, Kamal MD OB/GYN * † Patel, Dinubhai MD	
* Parikh, Keyur MD 8877 Mentor Ave Office: 440-205-1225 Mentor, OH 44060 * Patel, Kirit MD Gastroenterology Radiology	
* Parikh, Sanjay MD 673 East River Street Office: 440-323-6422 Surgery, Orthopedic, Retired Elyria, OH 44035 Neurology, Pediatric * Denotes Life N	1.1. J

*† Patel, Maheshkumar MD Occupational Medicine	* Prithviraj, Panju MD 615 Fulton Road Office: 419-732-4028 Port Clinton, OH 43452
* Patel, Minal MD EMH, 630 E. River St Office: 440-329-7620 Elyria, OH 44035	* Punjabi, Eshwar B. MD
Pathology Patel, Mita, MD 5054 Waterford Dr Office: 440-934-8344	9000 Mentor Ave Office: 440-974-4100 Mentor, OH 44060 Internal Medicine
Sheffield Village, OH 44035 Breast Surgical Oncology	* † Purohit, Umkant MD Orthopedic
* Patel, Mohan MD Internal Medicine - Retired	Ragagopalan, Sudha MD 9500 Euclid Ave P21 Office: 216-444-6620 Cleveland, OH 44195
* Patel, Narendra MD Anesthesia	Anesthesiology
* Patel, Sachin MD 172 Skye Road Highland Heights, OH 44143	Raina, Rupesh, MD 224 W. Exchange St. Suite 330 Office: 330-436-3150 Akron, OH 44302 Nephrology
* Patel, Tarulata MD 1419 W. 9th St. 1st Floor Office: 216-685-1653 Cleveland, OH 44113	* Raj, Chandra MD Anesthesia
Occupational Medicine	* Raj, Prasanta Kumar MD Surgery, General–Retired
* Patel, Urmila MD OB/GYN	* Rajan, Semur MD Cardiology – Retired
* Patel, Vasant Surgery, General	* Raju, Rajeeva MD 10701 East Blvd
* Patel, Vijaykant MD Emergency Medicine - Retired	Cleveland, OH 44106 Pathology
* † Patil, Ashok MD Occupational Medicine	* Rakhit, Ashis K. MD 10850 Pearl Rd #D2 Office: 440-572-5578 Strongsville, OH 44136
* Paul, Bobby MD 3985 Warrensville Center Rd Office: 216-283-4494 Cleveland, OH 44122	Cardiology Ram, Dasarathi MD
Internal Medicine * Paul, Randhir MD	Office: 440-526-8525 <i>Radiology</i>
	Ramachandran, Mangalakaralpudur, MD 9500 Euclid AveOffice: 216-444-5581 Cleveland, OH 44195
*† Perumbeti, Prasad MD Anesthesia	* Ramachandran, Saraswati MD
* Pillai, Latha MD 22750 Rockside Rd Ste 100 Office: 440-735-2832 Bedford, OH 44146 Internal Medicine	Ashtabula County Medical Ct Office: 440-964-5551 Ashtabula, OH 44004 Anesthesia
* Pola, Laxshimaiya MD Gastroenterology - Retired	* Ramana, C.V. MD Radiology
* † Pradhan, Minal MD Anesthesia	* Rakesh Ranjan, MD 801 E. Washington STE 150 Medina OH 44256 Psychiatry

* Rao, Akhilesh MD 9050 N. Church Dr Office: 440-292-0226 Parma Hts. OH 44130 Nephrology	Roy, Aparna, MD 11100 Euclid Ave Office: 440-879-3235 Cleveland, OH 44106 Pediatric/ICU
* Rao, Kancherla S. MD 6140 South Broadway Office: 440-233-7232 Lorain, OH 44053 Psychiatry	* Roy, Somnath D. MD 125 E. Broad St. #122 Office: 440-329-7350 Elyria, OH 44035 Internal Medicine
* Rao, L.C. MD L. C. Rao M.D. Consultants, Inc Office: 330-225-6458 2088 Oxford Circle Hinckley, Ohio 44233 Pulmonary Medicine	* Sandhu, Satnam S. MD 4200 Warrensville Ctr Rd #320 Office: 216-491-7205 Warrensville Hts, OH 44122 Nephrology
* Rao, Neelima MD 4176 Route 306 Willoughby, OH 44094 Internal Medicine	* Saraiya, Jayshree MD 6225 Lochmoor Court
* Rao, Pratibha, MD Endocrinology, Diabetes	* Saraiya, Rajesh MD 6225 Lochmoor Court
* Rao, Shakuntala MD 6803 Mayfield RdOffice: 440-460-2838 Mayfield Hts, OH 44124 <i>Pediatrics</i>	* Saralaya, Sparsha, MD 18101 Lorain Ave Office: 216-445-8383 Cleveland, OH 44111 Internal Medicine
*Rao, Sheela M. MD 10701 East Blvd. (Palms W113) Office: 330-733-5454 Cleveland, OH 44106 <i>Pediatrics</i>	* Sawhny, Bhupinder MD 7255 Old Oak Blvd #C408 Office: 440-891-8880 Middleburg Hts., OH 44130 Neurosurgery
* Rao, Vikram MD 36060 Euclid Ave Office: 440-269-8346 Willoughby, OH 44094 Vascular Surgery	* Sehgal, Ashwini MD 2500 Metro Health Drive Office: 216-778-7728 Cleveland, OH 44109 Nephrology
* Ravishankar, K.C. MD 7215 Old Oak Blvd #A410 Office: 440-826-9221 Middleburg Hts, OH 44130 Neurologist	* Sehgal, Bindu MD 25200 Center Ridge Rd. Suite 2450 Westlake, OH 44145 Family Practice
* Reddy, Kalva S. MD 436 E. River Street #2 Office: 440-323-8515 Elyria, OH 44035 Anesthesia	* Sekhon, Baldev MD 29099 Health Campus Dr. #380 Office: 440-827-5390 Westlake, OH 44145 Cardiothoracic Surgery
* Reddy, Madhu MD 5229 Fleet Ave Office: 216-524-6767 Cleveland, OH 44105 Internal Medicine	* Sequeira, Thomas Mark MD 11201 Shaker Blvd Office: 216-368-7065 Cleveland, OH 44104 Cardiology
* Reddy, S. Sethu MD Internal Medicine * Rohira, Lalsingh MD 347 Midway Blvd#306 Office: 440-324-5430 Elyria, OH 44035	* Shah, Ajit C. MD 7215 Old Oak Blvd #A414 Office: 440-816-2782 Middleburg Hts., OH 44130 ENT
Psychiatry	* Shah, Arunika N. MD Physical Medicine/Rehabilitation

* Shah, Chirag MD UH Parma Medical Center Office: 440-743-3000 Anesthesia	* Shivadas, Anita MD 9500 Euclid Ave Office:(216) 444-1084 Cleveland, OH 44195 Internal Medicine
* Shah, Jaya MD Pediatrics - Retired * Shah, Kalyani MD	* Sidhu, Kanwaljit, MD 2500 Metrohealth Drive Office: 216-778-4801 Cleveland, OH 44109
9500 Euclid Avenue C21 Cleveland, OH 44195 Physical Medicine & Rehabilitation	* Sidhu, Tejbir MD Metrohealth Drive Office: 216-778-4809
* Shah, Pankaj MD 14519 Detroit Ave Office: 216-529-7145 Lakewood, OH 44107 Anesthesia	Cleveland, OH 44109 Anesthesiology * Singh, Annapurna
* Shah, Shashin MD 9700 Garfield Blvd #103 Office: 216-641-0600 Garfield Hts, OH 44125	11100 Euclid Ave BHC3200 Office: 216-844-8503 Cleveland, OH 44106 <i>Ophthalmology</i>
* Shah, Surekha 2500 Metro Health Drive Office: 216-778-1016	* Singh, Arun D. MD 9500 Euclid Ave I30 Office: 216-445-9479 Cleveland, OH 44195 Ophthalmology
Cleveland, OH 44109 Physical Therapy * Shah, Tushar MD	* Singh, Chandra V. MD 125 E. Broad Street Ste 119 Office: 440-329-7397 Elyria, OH 44035
Emergency Medicine Shah, Vaishal, MD 9500 Euclid Ave. R03-60 Office: 216-444-8488	Internal Medicine * Singh, Kuldeep MD Emergency Medicine - Retired
Cleveland, OH 44195 Sleep Medicine * Shaikh, Aasef, MD, PhD	* Sitabkhan, Rayeka MD Pediatrics – Retired
11100 Euclid Avenue Office: 216-381-6736. Cleveland, OH 44110 Neurology, Neurotology, Movement Disorders	Sivalingam, Sri MD 6770 Mayfield Rd Office: 440-461-6430 Mayfield OH 44124 Urology
* Sharan, Vishwa MDOffice: 800-646-9000 Radiation Oncology	Sivaraman, Indu, MD 35040 Chardon Rd Office: 440-946-1200 Willoughby Hills, OH 44094
* Sharma, Rajesh MD 2709 Franklin Blvd. Suite 2E Office: 216-363-5720 Cleveland, OH 44113 <i>Internal Medicine</i>	* Sivashankaran, Subhalakshmi MD 11100 Euclid Ave Office: 216-844-3506
* Sharma, Trilok C. MD 7255 Old Oak Blvd #C208 Office: 440-816-2708 Middleburg Hts., OH 44130	Cleveland, OH 44106 Anesthesia * Sogal, Ramesh MD
* Shekar, Raja MD 3609 Park East Dr #207 Office: 216-360-0456	* Somasundaram, Mey, MD 6701 Rockside Rd. # 100 Office: 216-382-0418
Beachwood, OH 44122 Infectious Disease * Shinde, Sharad MD	Independence, OH 44139 Internal Medicine * Sreshta, Michael, RPh, MS. CDE
130 Jefferson St. #3A Port Clinton, OH 43452 OB/GYN	8300 Hough Ave Office:216-231-7700 ext 1121 Cleveland, Ohio 44103 Director of Pharmacy/ Certified Diabetes Educator

* Subramanian, Thyagarajan MD 9500 Euclid Avenue, S90 Office: 216-444-4270 Cleveland, OH 44195 Neurology	Tirounilacandin, Pazhaniaandi, MD 234 N. Chestnut St Office: 440-576-8933 Jefferson, OH 44047 <i>ACMC, Family Medicine</i>
† Sundaresh, H.P. MD Pediatrics	* Turakhia, Ashwin MD 12301 Snow Road Office: 216-362-2000 Parma, OH 44130
* Sundaresh, Shailaja MD OB/GYN–Retired	Internal Medicine * Udayashankar, S.V. MD
* Suresh, Keelapandal R. MD 21851 Center Ridge Rd #3309 Office: 440-333-8322 Rocky River, OH 44116 Nephrology	* Ujla, Dilip MD Family Practice
Suri, Anu, MD 33100 Cleveland Clinic Blvd. AVW3-2 . Office: 440-695-4330 Avon, OH 44011 Pulmonology and Critical Care Medicine	* Ujla, Rekha 1468 E. 55th Street Office: 216-881-2000 Cleveland, OH 44103 Nurse Practitioner
* Swamy, Kumar MD Allergy - Retired	* Umapathy, Kandasamy MD 25 Tarbell Avenue Office: 440-439-7766 Bedford, OH 44146
* Swarup, Namita MD 2500 Metrohealth Drive Office: 216-778-2687 Cleveland, OH 44109 Pediatrics	* Vaidya, Vijaykumar MD 2351 E. 22nd St Office: 216-861-6200 Cleveland, OH 44115
* Tamaskar, Ila R., MD 6525 Powers Blvd Office:440-743-4747 Parma, OH 44129	Surgery * Vallabhaneni, Raj MD
* Tamaskar, Mandakini	124 Liberty St Office: 440-321-9725 Painesville, OH 44077 Cardiology
Anesthesia	* Vallabhaneni, Rajani MD
* Tamaskar, Ranjit B. MD 36100 Euclid Ave. Suite 270 Office: 440-946-8300 Willoughby, OH 44094 Internal Medicine	124 Liberty St Office: 440-352-4956 Painesville, OH 44077 Family Medicine
* Tamasker, Shobha MD OB/GYN - Retired	* Varma, Kalpana MD 12300 McCracken Rd Office: 216-587-8200 Garfield Heights, OH 44125 Anesthesia
* Tandra, Brahmaiah MD 8577 E. Market St Office: 330-856-6663 Howland, OH 44484 <i>Pediatric Psychiatry</i>	* † Varyani, Nand MD Anesthesia
* Tandra, Usharani MD 18697 Bagley Rd Office: 440-816-8678 Middleburgh Hts., OH 44130 Physical Medicine & Rehabilitation	* Varyani, Sandhia MD UH Ahuja Medical Center 1000 Auburn Drive Office: 216-285-4130 Suite 34, Beachwood, OH 44122 OB/GYN
* Thaker, Niranjana Shah MD OB/GYN–Retired	*† Vasavada, Prasan MD Internal Medicine
* Thakore, Nimish MD	* Vasavada, Sandip MD 9500 Euclid Avenue A100 Office: 216-445-0296
* Thakore, Yuan MD	Cleveland, OH 44195 Urology

* Venkat, Vasuki, MD 27600 Chagrin Blvd. Suite 300..... Office: 216-347-5795 Woodmere, OH 44122 Nephrology * Venna, Prabhakar MD Cleveland VAMC 11A(W) Office:440-562-0762 10701 East Blvd Cleveland, OH 44109-1709 Anesthesiology * Vibhakar, Nilla MD Pediatrics * Vibhakar, Shardul MD Radiology, Diagnostic * Vuppala, Murty MD 6363 York Pearl Rd #103 Office: 440-888-1500 Cleveland, OH 44130 Pediatrics Vyas, Chinmay, MD 600 W. 3rd Street Office: 419-522-6191 Mansfield, OH 44096

Family Medicine

* Wyckoff, Neeti MD 3043 Sanitarium Rd #3 Office: (330) 253-4931 Akron, OH 44312 Pediatrics
* Yadavelli, Gopal MD 11100 Euclid Ave Office: 216-844-2562 Cleveland, OH 44106 Infectious Disease/Internal Medicine
* Yalavarthy, Umesh MD 25301 Euclid Ave Office: 216.261.6263 Euclid, OH 44117 Nephrology
* Zanotti, Salena, MD 36901 American Way Suite A Office: 440-930-6200 Avon, OH 44011 <i>OB/GYN</i>

LISTING OF PHYSICIANS BY SPECIALTY

Allergy

Chouksey, Akhilesh MD Durve, Mohan MD

Anesthesiology

Bhavani, Sekar MD Deogaonkar, Anupa, MD Devarajan, Jagan Ebrahim, Zeyd MD Jagetia, Anil MD Joshi, Vinod MD Kalhan, Santosh MD Kapadia, Gautam MD Kapadia, Jyotika MD Khanna, Ashish, MD Maniar, Smita MD Mulgaokar, Girish MD Patel, Dineshchandra MD Patel, Narendra MD Perumbeti, Prasad MD Pradhan, Minal MD Ragagopalan, Sudha MD Raj, Chandra MD Ramachandran, Mangalakaralpudur, MD Ramachandran, Saraswati MD Reddy, Kalva S. MD Shah, Chirag MD Shah, Pankaj MD Sidhu, Kanwaljit, MD Sidhu, Tejbir MD Sivashankaran, Subhalakshmi MD Tamaskar, Mandakini Varma, Kalpana MD Varyani, Nand MD

Cardiology

Venna, Prabhakar MD

Ahluwalaia, Charanjit MD Bhaiji, Khushal C. MD Bolla, Ravisankar MD Brahmanandam, Maddikunta MD Brahmbhatt, Ramesh MD Desai, Mihir MD Dhingra, Rahul MD Ginwalla, Mahazarin, MD Jain, Mukesh MD Jayaswal, Bijay MD Kapadia, Samir MD Madan Mohan, Sri MD Maroo, Praful V. MD Mistry, Vijay MD Mitra, Kunal MD Osman, Mohammed Najeeb MD Patel, Chetan MD Rakhit, Ashis K. MD Sequeira, Thomas Mark MD Sharma, Trilok C. MD Vallabhaneni, Raj MD

Cardiology, Electrophysiology Iyer, Inderisha, MD

Cardiology, Interventional Bhakta, Shyam MD Chawla, Rakesh, MD Kondapaneni, Meera MD Nair, Ravi, MD

Cardiology Pediatric Patel, Bhupendra MD

Cardiothoracic Surgery Gill, Inderjit MD Sekhon, Baldev MD

Chiropractic Dahodwala, Ty DC

Critical Care Medicine Khanna, Ashish, MD Suri, Anu, MD

Dentistry

Gupta, Nisha DDS Chhibber, Surabhi, DDS (Pediatric) Jagannathan, Ramya, DDS

Dermatology Diwan, Renuka MD Khandekar, Prakash MD

Diabetes (Educator) Sreshta, Michael, RPh, MS. CDE

Emergency Medicine Dhillon, Jagprit MD Gupta, Adarsh MD Paul, Randhir MD Shah, Tushar MD

Endocrinology Bindra, Sanjit MD Kashyap, Sangeeta MD Kumar, Vikram MD Mehta, Adi MD Rao, Pratibha, MD

ENT Haria, Chandra MD Malhotra, Ritu, MD Mehta, Govind MD Shah, Ajit C. MD

Epilepsy Lachwani, Deepak MD

Family Practice Ahuja, Payal, MD Apte, Manohar MD Desai, Dipali, MD Dravid, Sheela MD Tirounilacandin, Pazhaniaandi, MD Ujla, Dilip MD Vallabhaneni, Rajani MD Vyas, Chinmay, MD

Gastroenterology Bandi, Ram MD Dalal, Bankim MD Khambatta, Parvez MD Kumar, Namrata MD Kumar, Unni P.K. MD Mahajan, Subhash MD Natesan, Arumugam MD Parikh, Keyur MD Patel, Dinubhai MD Sehgal, Bindu MD

General Medicine Kundu, Sunanda MD

Geriatrics Bhavnani, Sanjeev MD Gudla, Jyothi MD Gupta, Mona MD Jethva, Natwar MD Meyyazhagan, Swarnalatha MD Pallaki, Muralidhar MD

Hematology/Oncology Bhatt, Mukesh MD Kantharaj, Belagodu MD Mahajan, Neeraj, MD Makkar, Vinit, MD Mendpara, Suresh MD Prithviraj, Panju MD

Hospitalist Bahuva, Rubin MD Chimalakonda, Ravi, MD Gupta, Mohit MD Saraiya, Jayshree MD Saraiya, Rajesh MD

Infectious Disease Gopalakrishna, K.V. MD Shekar, Raja MD Yadavelli, Gopal MD

Internal Medicine Agarwal, Rajesh, MD Balaji, Harigopal, MD Bhaiji, Alok MD Bhalla, Rakesh MD Bhimani, Jayantilal MD Chand, Prakash MD Dasari, Narayana MD Dhillon, Harmohinder MD Goswami, Atul MD Gudla, Jyothi MD Gupta, Arun MD Gupta, Geeta MD Iain, Rashmi, MD Jethva, Natwar MD Jhala, Nilamba MD Kalepu, Sudheera, MD Kansal, Sunil MD Kapoor, Gopal MD Karimpil, Joseph MD

Khatri, Saloni MD Kotak, Sandeep MD

Kothari, Samir MD Krishnan, Ravi MD Kumar, Praveer MD Lele, Anju S. MD Lele, Shreeniwas MD Madan Mohan, Sri MD Majmudar, Himanshu MD Mankad, Vinoo MD Mehta, Dharmesh MD Mehta, Neil MD Mehta, Rajendra MD Mehta, Usha MD Mistry, Darshan MD Mistry, Nirai MD Mukunda, Beejadi N. MD Natesan, Corattur, MD Navak, Hemanta MD Oza, Sudhir MD Pandit, Mukul MD Pandit, Vidya MD Parmar, Harbhajan MD Parmar, Rajvinder, MD Patel, Chetan MD Paul, Bobby MD Pillai, Latha MD Punjabi, Eshwar B. MD Rao, Neelima MD Reddy, Madhu MD Reddy, S. Sethu MD Roy, Somnath D. MD Saraiya, Jayshree MD Saraiya, Rajesh MD Saralaya, Sparsha, MD Sharma, Rajesh MD Shivadas, Anita MD Singh, Chandra V. MD Somasundaram, Mey, MD Tamaskar, Ranjit B. MD Turakhia, Ashwin MD Umapathy, Kandasamy MD Vasavada, Prasan MD Yadavelli, Gopal MD

Neonatology AchanFati, Babu MD Holla, Ira, MD

Nephrology Ghose, Manesh K. MD Nadkarni, Vivek MD Padiyar, Aparna MD Pannu, Kulbir S. MD Patel, Amit, MD Raina, Rupesh, MD Rao, Akhilesh MD Sandhu, Satnam S. MD Sehgal, Ashwini MD Suresh, Keelapandal R. MD Yalavarthy, Umesh MD

LISTING OF PHYSICIANS BY SPECIALTY - continued

Neurology

Chandar, Krishan MBBS, MRCP Deogaonkar, Milind, MD John, Kuruvilla MD Kumar, Suresh MD Mahajan, Darshan MD Muthusamy, Preetha, MD Nayak, Sagarika MD Patel, Dhruv MD Ravishankar, K.C. MD Shaikh, Aasef, MD Subramanian, Thyagarajan MD

Neurology, Pediatric Parikh, Sanjay MD Shaikh, Aasef, MD, PhD Sivaraman, Indu, MD

Neurosurgery Sawhny, Bhupinder MD

Neurotology Shaikh, Aasef, MD

Nurse Practitioner Ujla, Rekha

OB/GYN

Arora, Urmila MD Kothari, Ajeet MD Kothari, Purnima MD Mankad, Devi MD Mehta, Gita MD Parikh, Kamal MD Patel, Urmila MD Shinde, Sharad MD Varyani, Sandhia MD Zanotti, Salena, MD

Occupational Medicine Mahna, Satish MD Patel, Maheshkumar MD Patel, Tarulata MD Patil, Ashok MD

Oncology Ahluwalia, Manmeet MD Gupta, Mona MD Patel, Mita, MD Tamaskar, Ila R., MD

Opthalmology
Bafna, Shamik, MD
Ghasia, Fatema, MD
Kapadia, Mansavee MD
Krishnan, Nagureddi MD
Mehta Patel, Sangita MD
Singh, Annapurna
Singh, Arun D. MD

Optometry Chatterjee, Arup Kumar OD *Orthodontist* Chhibber, Aditya, DDS

Orthopedics Maheshwer, C. MD Marshall, Brian, DO Purohit, Umkant MD

Pain Management Gupta, Parshotam MD Sogal, Ramesh MD

Pathology Deodhar, Sharad MD Godbole, Medha S. MD Madan Mohan, Gayatri MD Mehta, Madhu MD Patel, Minal MD Raju, Rajeeva MD

Pathology, Forensic Murthy, P.S.S. MD

Pediatrics

Adhvaryu, Neela MD Appachi, Elumalai MD Appachi, Mala MD Dipali, Aravind MD Jain, Rajneesh MD Kalhan, Satish MD Khadilkar, Vidula MD Kherani, Kausar MD Mahajan-Khanna, Niyati, MD Rao, Shakuntala MD Rao, Sheela M. MD Roy, Aparna, MD Shah, Shashin MD Sundaresh, H.P. MD Swarup, Namita MD Vibhakar, Nilla MD Vuppala, Murty MD Wyckoff, Neeti MD

Pediatric Anesthesiology Adur, Anjali P. MD

Pharmaceutical Chawla, Ash, MS, RPh Sreshta, Michael, RPh, MS. CDE (Director)

Physical Medicine/Rehabilitation Kumar Sanjay, DO Shah, Arunika N. MD Shah, Kalyani MD Tandra, Usharani MD

Physical Therapy Shah, Surekha

Plastic Surgery Bapna, Sumit MD Malhotra, Ritu, MD Pandrangi, Vasu MD

Podiatry Mathur, Monica DPM

Psychiatry

Adhvaryu, Hareendra G. MD Adityanjee, A MD Cupala, Homai MD Ebrahim, Lilian MD Hegde, Shura MD Mahajan, Nitika, MD Mude, Jagdish L. MD Rakesh Ranjan, MD Rao, Kancherla S. MD Rohira, Lalsingh MD Tandra, Brahmaiah MD (Pediatric)

Pulmonary Medicine
Dacha, Harinathrao MD
Gosain, Sudhir MD
Iyer, Sridhar K.
Khandelwal, Anand MD
Makadia, Ashok P. MD
Mehta, Atul MD
Rao, L.C. MD
Suri, Anu, MD

Radiology, Oncology Ambekar, Anjali MD Patel, Chandralekha MD Sharan, Vishwa MD

Radiology
Batchu, Chandra, MD
Jain, Rachana MD
Jain, Vikas, MD
Kanvinde, Mangesh MD
Kosaraju, Vijaya, MD
(Muskuloskelatal)
Patel, Deodutt MD
Patel, Kirit MD
Ram, Dasarathi MD
Ramana, C.V. MD
Vibhakar, Shardul MD

Rheumatology Hampole, Vagesh MD

Sleep Medicine Ahluwalia, Harneet MD Shah, Vaishal, MD

Surgery, Cardiothoracic Apte, Susan MD Surgery, General
Augustin, Toms MD
Chari, Vedantum Ramanuja MD
Deshpande, Krishna MD
Kalepu, Anand Rao, MD
Kampani, Shanta MD
Narichania, Dilip MD
Patel, Vasant
Vaidya, Vijaykumar MD

Transplantation Surgery
Krishnamurthi, Venkatesh MD

Vascular Surgery Kashyap, Vikram MD Rao, Vikram MD

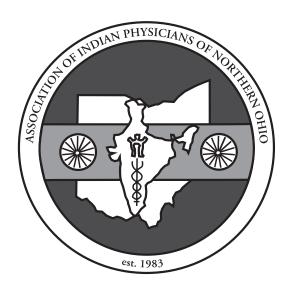
Urology Cherukuri, Subbarao MD Jawa, Prem S. MD Kedia, Kalish MD Krishnamurthi, K.C. MD Sivalingam, Sri MD Vasavada, Sandip MD

AIPNO MEMBERSHIP APPLICATION



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HOME FAX:
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sician; \$125.00 per year per physician couple sician; \$750.00 one-time fee per physician couple rge
PNO n Pawelecki, Executive Assistant 2 Sutherland Road
☐ Home ☐ Office Sician; \$125.00 per year per physician couple sician; \$750.00 one-time fee per physician couple rge PNO Pawelecki, Executive Assistant

Phone: 216-228-1168 • Fax: 216-848-0088 • Email: admin@aipno.com • www.aipno.org



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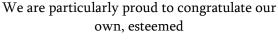
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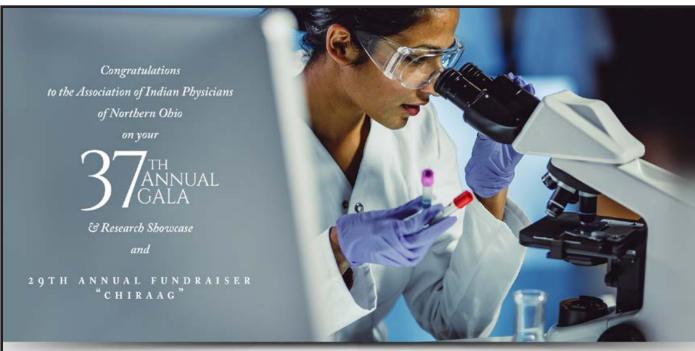
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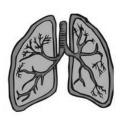
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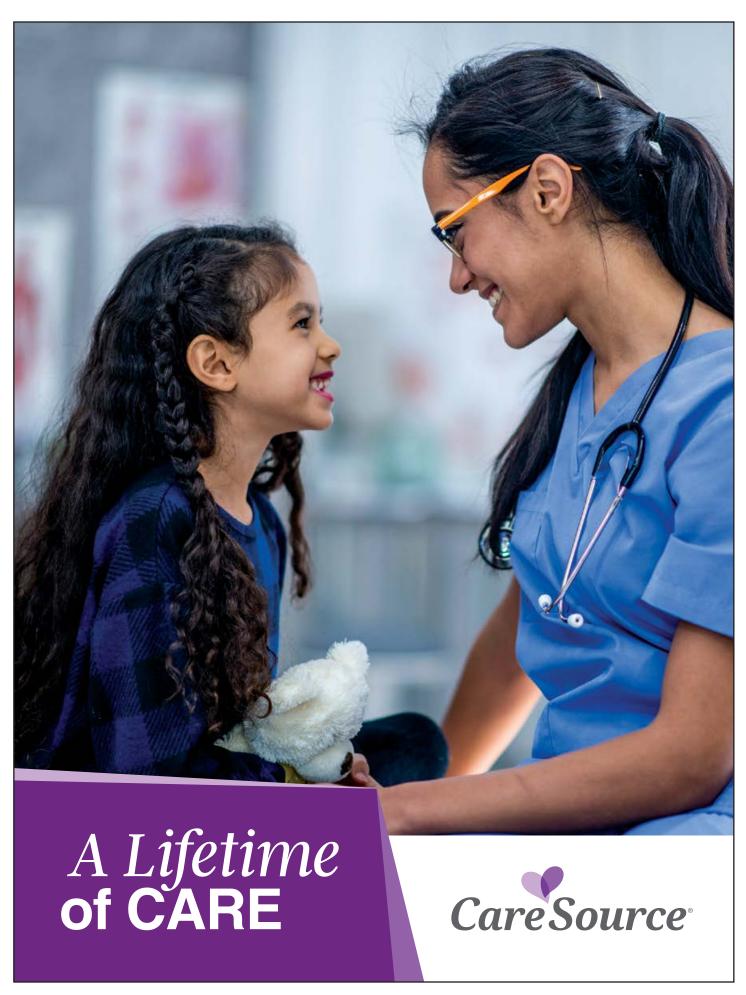
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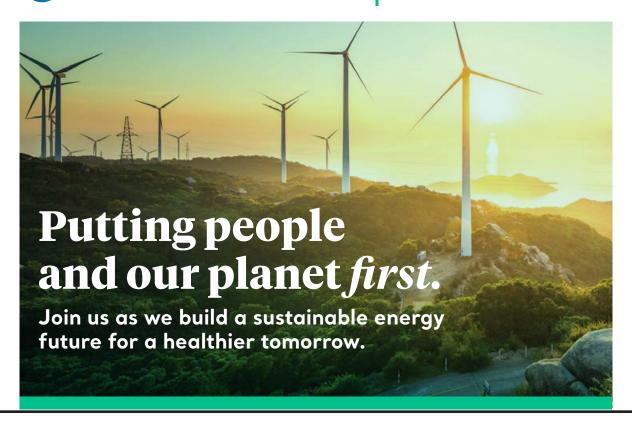
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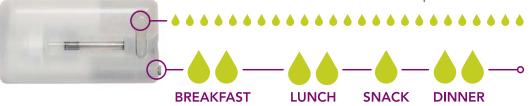
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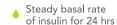
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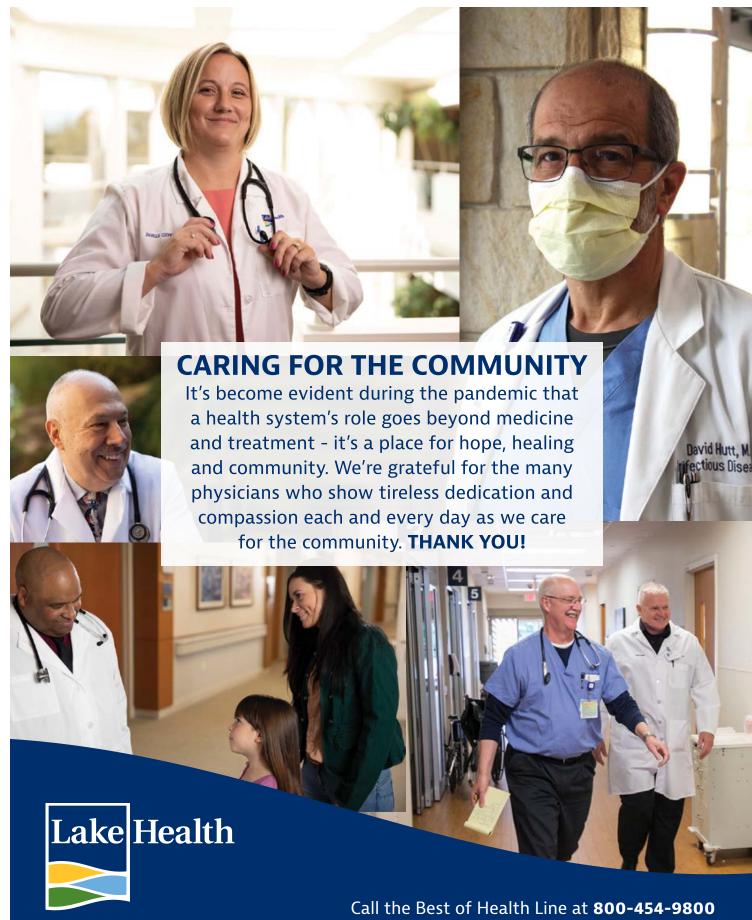
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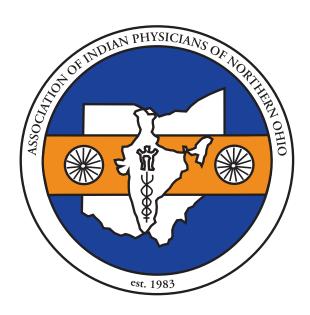


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