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Friends & Family join

AIPNO in congratulating



Dr. Umesh Yalavarthy

2018 Distinguished Physician of the Year in His Achievement

Congratulations!



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PRESIDENT'S MESSAGE



Dear AIPNO members, donors, beneficiaries, friends and families,

As we look back at another year filled with overwhelming success, we look forward to an even more glorious year of giving back. This year we are proud to host our 35th Annual Dinner Gala, 27th "Chiraag" Annual Fundraiser and our 6th Research Showcase. I am honored and privileged to be the President of AIPNO and Co-chair of Research Showcase in such a wonderful time of progress. I am grateful to our founders, our sponsors, our endowment & executive committee and AIPNO Board of Trustees for showering our path thus far with success.

AIPNO has come a long way since it was founded in 1983. We hope to continue and thrive with our unwavering core principles of education, philanthropy and improving health care access. I am proud to say AIPNO is the largest organization in the state of Ohio 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 to under-served population in Ohio and in India. It is undoubtedly a result of our zeal and diligence that we have been able to maintain and draw staunch members. We now have over 400 active members who live and practice in Northern Ohio. We are very involved at local, national as well as international levels. And I would like to reiterate that AIPNO is for all of us - including non-physicians who share the same mission as us. We have had ongoing efforts throughout the year to reinvigorate and revitalize communication between members and families; improve relationship between the membership, executive committee, and the board of trustees

AIPNO believes in contributing to the community we live in. 2018 has been another year of milestones. We are proud and privileged to be able to support great organizations in north east Ohio. Our mission has been to continue to enhance community involvement and coordinate with other local and national organizations. To this effect, we have organized health fairs, CME, and a research showcase with a goal of being more family friendly, involving the younger generation. This year we have strived to refine our online and social media presence and expand & amplify our reach to other geographical areas. We have pledged \$100,000 over 5 years to support Cleveland Sight Center. We will also host a blood donation drive this November in collaboration with Red Cross.

We started a new endeavor and sponsored the community with the sponsorship of "Naach Di Cleveland" dance competition which was hosted by CWRU teams at Playhouse Square and also supported Kuchipudi dance drama hosted by NEOTA. AIPNO participated and sponsored the FICA Republic Day celebration and Project Seva. We were also instrumental in bringing comedian Amit Tandon to perform in Cleveland and started a new tradition -a joint collaboration for the event "Holi Ke Rang Apno Ke Sang" with ICAGA and the Marwari Association of Ohio. AIPNO supported the Medical Yatra trip to Gujarat and Bengaluru along with a global grant to Women's clinic. Mr. Ramesh Shah, Dr Jaya Shah, Dr Murthy Vuppala and their team worked tirelessly to make Medical Yatra 2018 an impactful mission. We sponsored IndiaFest USA along with the fund

for the "Save a Child" program, Cleveland International Hall of Fame, NEOMM-North East Ohio Maratha Mandal, fundraiser India food fair organized by St George's Church, Visa and Passport day in collaboration with TANA and FICA . We sponsored the Shiksha Daan Volunteer Appreciation Luncheon at the Shiva Vishnu Temple. In addition to all this, we proudly presented the biggest event in AIPNO history, the "Mystic India" Bollywood show. The main beneficiary for this fundraiser was Benjamin Rose institute on Aging, and I am proud to say that over 1400 people attended making the show a huge success. AIPNO philanthropy has not gone unnoticed as we humbly accepted invitations from Spellbound, a fundraiser hosted by the Cleveland Sight center. We were also invited as the lead guest for the inauguration ceremony of BAPS charities health fair at the BAPS temple and also at Shiva Vishnu temple.

On behalf of AIPNO, I want to extend my heartfelt thanks and gratitude to Diane Wish, CEO and Gary Robinson, President of Center for Dialysis (CDC) and University Hospitals-UH Community Hospitals esp. Ms Susan Juris-President of Ahuja Hospital that are our presenting sponsors for our Annual Dinner Gala this year. I am thankful to Dr. Umesh Yalavarthy, Dr Amit Patel, Dr Corattur Natesan for their enthusiasm and energy.

I am thankful to Dr. Hari Balaji, Dr. Beejadi Mukunda, Dr Harbhajan Parmar, Dr Saloni Khatri, Dr Dharmesh Mehta, Dr Sangita Mehta, Dr Rupesh Raina for their enthusiastic support.

The future of AIPNO looks bright and prosperous and it is truly astounding to see how the AIPNO family and the community from greater Cleveland come together to give back to the society. This year's membership drive has resulted in even more new life members to the organization.

I invite and urge all who wish to join this movement by participating, sponsoring, and contributing towards making our main goal of quality healthcare that is accessible and affordable for the community. Together, we will continue to grow and expand AIPNO as a leading organization for medical education and philanthropy in Northeast Ohio.

Finally, I would like to sign off by saying a sincere thank you to all the members and sponsors who have supported us through the year. Without your charity, AIPNO would have never made it this far. I hope we continue to do the things we do that garner such unwavering loyalty and support from all the members. With the continued assistance of our AIPNO family, we hope to bring spectacular new events and shows along with providing continued support to the community both locally and abroad.

I would like to thank our executive assistant Binnie Eiger who has been instrumental in putting this gala event together.

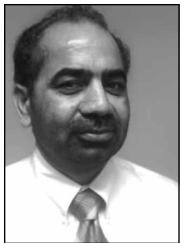
I am especially indebted to my husband Dr. Vijay Rastogi and children Sunay and Krivam for supporting me to serve AIPNO.

Mona Gupta, MD President of AIPNO 2018 Co-Chair Research Showcase

GREETNGS FROM AHUJA FOUNDATION

CONGRATULATIONS
TO
AIPNO!

PRESIDENT-ELECT & ENDOWMENT COMMITTEE REPORT



"Giving is not just about making a donation. It is about making a difference." – Kathy Calvin, CEO & President of the United Nations Foundation

Dear AIPNO friends and families,

Warm welcome to the 27th chiraag annual fund raising dinner. I am honored to be the endowment chair of chiraag. I am thankful to our sponsors, our endowment & executive committee and AIPNO Board of Trustees for this wonderful event.

We are pleased to support "Mayor Frank G. Jackson Scholar Program" administered through "College Now." For 50 years "College Now" of Greater Cleveland has been able to help students pursue educational opportunities that empower them to embark on rewarding careers and strengthen our community. College Now assists over 23,500 students each year, delivering college access and success advising, financial aid counseling and scholarship and retention services in schools, in the College Now Resource Center and through community-based programs and collaborations.

We are fortunate to have two presenting sponsors this year.

On the behalf of AIPNO, I would like to sincerely thank Diane Wish, CEO of Center for Dialysis (CDC) for honoring us with her presence and supporting our mission with generous donations. I am humbled to announce that CDC has been our Presenting sponsor for last five years, including this year. Excellent work done by CDC does not need my recognition. Outstanding service for dialysis and chronic kidney diseases patients across Northeast Ohio speaks for itself. I would also like to thank Dr. Umesh Yalavarthy and Dr. Amit Patel for their impeccable support.

In the same breath, I, also want to thank University Hospitals for being our presenting sponsor. University Hospital system and Rainbow Baby Hospital has been a leader in Providing medical services in various specialities and super specialities in all age groups. The excellent work done by University Hospital System has been recognized not only in Ohio, but all over USA.

I extend my thanks to Mrs. Cynthia Moore-Hardy, Lake Health System, for her magnanimous support for many years.

On the behalf of AIPNO I would like to thank Dr. Keyvan Ravakah for his not only monetary support, but also his help with Research Show Case in various capacities including a being a judge and mentor to many Research Show Case participants. He has helped many students to become

successful physicians. I take this opportunity to thank him for molding my life in to a person as I stand today.

No Money No Mission. Our mission can not fulfill without the generous support of our several

sponsors. I extend my gratitude to all the sponsors for their support to help us achieve our goals. On behalf of AIPNO I want to express my sincere appreciations to all the health care systems of greater Cleveland, including UH Ahuja medical center, Lake Health, Cleveland Clinic Regional Operations, Legacy Health Services, UH Rehabilitation hospital, and community businesses including Key Bank, Merrill Lynch, . We also owe a debt of gratitude for individual donations from Atrium Medical Group, American Kidney Institute, Faith Medical associates, Cleveland Kidney and Hypertension consultants, Dingus and Daga, Saber Health Care Group, Manor care, Great Lake caring, ID consultants, Great Lake Gastroenterology, fersenius, Relypsa, Novartis, Astrazeneca, Chandra and Hansa Haria, Excello Realty. My Sincere gratitude to Dr. Mona Gupta, Dr. Beejadi Mukunda, Dr. Hari Gopal Bala Ji, Dr. Rupesh Raina, Dr. Dharmesh Mehta, Dr. Nanavati, Dr. Sangita Mehta and Dr. Saloni Khatri for their unselfish and timely help.

These resources help us support our charitable activities, medical education programs, Continuing Medical Education, student scholarship, and conduct Research Show case annually.

I take a pride to say that I am working for the largest organization in the state of Ohio dedicated to enhance the quality of health care not only in our local community, but also abroad, in under served areas through Medical Yatra. Dr. Jaya Shah, Mr. Ramesh Shah, Dr. Saroj Mahalah and their team has worked round the clock to make Medical Yatra, a success and helped us to achieve our mission.

Last but not the least my heartfelt thanks to friends, families, everyone present here for their relentless support for AIPNO to live up to its sole mission to giving bak to community and making a difference. I cannot go without mentioning the name of my better half, my wife Dr. Rajvinder Parmar for her selfless support for me.

This gratitude can not be complete without thanking our executive assistant Binnie Eiger who has been the hub of this organization for many years in organizing all the events.

We may not be here tomorrow but the "Light of Chiraag" will keep enlightening the path of generations to come.

Gratitude from the bottom of my heart

Harbhajan Parmar, MD. President-Elect, AIPNO Chair, Endowment Committee

CHIEF GUEST:

TODD PARK

CO-FOUNDER AND EXECUTIVE CHAIRMAN OF DEVOTED HEALTH



Todd Park is Co-Founder and Executive Chairman of Devoted Health, a company focused on dra-matically improving health care for seniors by taking care of every member like family. Prior to De-voted, Todd served as White House technology advisor based in Silicon Valley until January 2017, working to bring top technology talent and best practices into government to improve service deliv-ery, national defense, and more. Prior to this role, Todd served from March 2012 to August 2014 as U.S. Chief Technology Officer and Assistant to the President in the White House Office of Science and Technology Policy. Todd joined the Obama Administration in August 2009 as CTO of the U.S. Department of Health and Human Services, where he functioned as an "entrepreneur-in-residence," helping HHS harness the power of data,

technology, and innovation to improve the nation's health. For his work at HHS, Todd was named one of Fast Company's "100 Most Creative People in Business." Prior to his government service, Todd co-founded Athenahealth in 1997 and co-led its development into a leading provider of cloud-based software and services for physicians and health care practitioners. He also co-founded Castlight Health, an innovative online health benefits plat-form company, in 2008. Todd graduated magna cum laude and Phi Beta Kappa from Harvard Col-lege with an A.B. in economics. He currently serves on the boards of New America and the Biden Cancer Initiative. Todd was elected a Fellow of the National Academy of Public Administration in 2017, and is a member of the 2017 Class of Henry Crown Fellows within the Aspen Global Leader-ship Network at the Aspen Institute.

KEYNOTE SPEAKER:

REP. RO KHANNA



Congressman Ro Khanna represents California's 17th Congressional District, located in the heart of Silicon Valley, and is serving in his first term. Rep. Khanna sits on the House Budget and Armed Services committees and is a vice chair of the Congressional Progressive Caucus.

Rep. Khanna is committed to representing the people and ideas rooted in Silicon Valley to the nation and throughout the world. For each job created in the high-tech industry, another four jobs are created. The tech multiplier is even larger than the multiplier for U.S. manufacturing. Rep. Khanna will work to ensure the technology sector is at the forefront of U.S. economic policy and strive to provide opportunities to those our changing economy and technological revolution has left behind. To do so, the U.S. must implement policies that will not only

create tech jobs in Silicon Valley but across America. This includes job training programs, economic development initiatives, re-wiring the U.S. labor market, and debt-free college to help working families prepare for the future.

A dedicated political reformer, Rep. Khanna is one of just six elected officials to refuse contributions from PACs and lobbyists. He also supports a 12-year term limit for Members of Congress and a constitutional amendment to overturn Citizens United.

Rep. Khanna was born in Philadelphia, PA, during America's bicentennial, to a middle-class family. Both of his parents immigrated to the United States in the 1970s from India in search of opportunity and a better life for their children. His father is a chemical engineer and his mother is a substitute school teacher. Rep. Khanna's commitment to public service was inspired by his grandfather who was active in Gandhi's independence movement, worked with Lala Lajpat Rai in India, and spent several years in jail for promoting human rights.

Prior to serving in Congress, Rep. Khanna taught economics at Stanford University, law at Santa Clara University, and American Jurisprudence at San Francisco State University. He wrote the book Entrepreneurial Nation: Why Manufacturing is Still Key to America's Future and worked as a lawyer specializing in intellectual property law. Rep. Khanna served in President Barack Obama's administration as Deputy Assistant Secretary at the U.S. Department of Commerce. In 2012, California Governor Jerry Brown appointed him to the California Workforce Investment Board. He has also provided pro bono legal counsel to Hurricane Katrina victims with the Mississippi Center for Justice, and coauthored an amicus brief on the fair housing U.S. Supreme Court case, Mount Holly v. Mt. Holly Gardens Citizens in Action, Inc.

Rep. Khanna graduated Phi Beta Kappa with a B.A. in Economics from the University of Chicago and received a law degree from Yale University. As a student at the University of Chicago, he walked precincts during Barack Obama's first campaign for the Illinois Senate in 1996. In his free time, Rep. Khanna enjoys cheering for the Golden State Warriors, watching movies, and traveling. He and his wife Ritu call Fremont, CA, home.

BENEFICIARY STATEMENT



Developing Tomorrow's Talent Today

Mayor Frank G. Jackson Scholarship Program 2018

The Mayor Frank G. Jackson Scholarship Program has been established to support City of Cleveland employees, their children and Cleveland Metropolitan School District (CMSD) students interested in pursuing full-time college educations.

Administered by "College Now", whose mission is to increase postsecondary educational attainment through college and career access advising, financial aid counseling, and scholarship and retention services.

College Now provides Greater Cleveland students with guidance and access to funds to prepare for and graduate from college. For 50 years, our goal has been to help students pursue educational opportunities that empower them to embark on rewarding careers and strengthen our community. College Now assists more than 27,000 students each year, delivering college and career access advising, financial aid counseling, and scholarship and retention services in Greater Cleveland schools, in the College Now Resource Center and through community-based programs. For more information, visit www.collegenowgc.org.

DISTINGUISHED PHYSICIAN OF THE YEAR UMESH YALAVARTHY, MD



The Association of Indian Physicians of Northern Ohio is proud to honor Dr. Umesh Yalavarthy as the recipient of the Distinguished Physician of the Year Award for 2018.

Dr. Yalavarthy is a Board-Certified Nephrologist who has been in private practice at Cleveland Kidney and Hypertension Consultants Incorporated (CKHC). He is on staff at Euclid hospital, Geauga Medical Center and Hillcrest Hospital. He was the recipient of the "Physician Collaboration Excellence" award in 2015 in recognition of excellent collaboration with nurses at Geauga Medical Center. He currently serves as the Medical Director at Centers for Dialysis Care in Heather Hill and Beachwood.

Dr. Yalavarthy graduated from Guntur Medical College, Andhra Pradesh. His internal medicine residency training was at the University of Tennessee, Chattanooga where he served as Chief Resident during his final year of training. He represented the Tennessee Chapter at the American College of Physicians National Jeopardy competition. He received the "Best Teaching Resident" award given by the medical students for his commitment towards excellence in teaching. Subsequently, he finished his fellowship at University of Tennessee, Memphis. During his fellowship he was recognized with the "Fellow Award for Teaching Excellence" presented by the Department of Medicine. He scored 99th percentile in Nephrology In-Training exam.

Dr. Yalavarthy was awarded first place for his poster presentation on Resident Research Day at University of Tennessee, Chattanooga. He was also the recipient of the coveted First Prize in Oral Presentation by the American College of Physicians, Tennessee Chapter. He has presented at national meetings for American College of Physicians, Society of General Internal Medicine and American Society of Nephrology. He has been published in several journals including: Journal for Vascular Ultrasound, Journal of Medical Case Reports and American Journal of Medical Sci-ence.

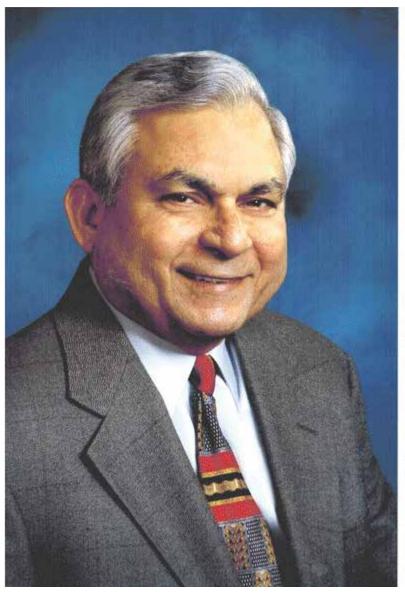
Dr. Yalavarthy is a life member of AIPNO and served on multiple committees over the years including: Executive Committee, Publications Com-mittee, Finance Committee, Nominations & Elections Committee, Awards & Recognition Committee and Research Showcase Committee. As the chair of the Endowment Committee in 2014, he organized "Chiraag," the annual endowment fundraiser, benefiting "The Kidney Foundation of Ohio". During his time as AIPNO president he organized the 32nd Annual Dinner in 2015. He encouraged more involvement of his younger colleagues and physicians from Greater Cleveland and the surrounding areas. He served on the Board of Trustees for Federation of Indian Commu-nity Associations and currently serves on the Board of Trustees of AIPNO.

Dr. Yalavarthy does not have enough words to describe how thankful he is to his parents and sister for their unconditional love and support. He is grateful to his wonderful family and attributes all his accomplishments to constant love, continued support and understanding of his wife Vanitha, daughter Rithika and son Nikhil. He is very appreciative of the support of his colleagues Dr. Lautman and Dr. Mosenkis along with staff at CKHC. He would also like to thank Dr. Mukunda and Dr. Tamaskar for the guidance during his tenure as president of AIPNO.

Dr. Yalavarthy conveys his best wishes to all AIPNO members, supporters, friends and families and requests everyone's continued support to work together and achieve more.

AIPNO is proud to honor Dr. Umesh Yalavarthy as the "Distinguished Physician of the Year"!

In Loving Memory of



Dr. H.P. Sundaresh

AIPNO President - 1989 AIPNO Distinguished Physician of the Year - 1998

RESEARCH SHOWCASE COMMITTEE REPORT





Dear Friends,

Thank you for the honor of serving as the Chairman of the Research Showcase for AIPNO. We started this signature event five years ago in an attempt to further the purposes of AIPNO which includes "To conduct educational programs to acquaint the members with clinical, scientific and other developments in the field of medicine."

The Fifth Research Showcase in 2017 was a grand success with close to one hundred abstracts presented by researchers ranging from high school students to university professors. Money was raised to support Medical Yatra to help take three residents to India. Abstracts were printed in the program booklet and cash prizes were awarded. Younger generations' participation in AIPNO has been achieved with great enthusiasm. This year we are further expanding the program and wish to make this a national level research competition in the near future. I am thankful to Mona Gupta, MD, for enthusiastically cochairing this committee and helping in our goal to take make this event constantly better. Many thanks to the Executive Committee members and the Board Members for their support. Special thanks to Rahul Damania, MD, for his enthusiastic support to all aspects of Research Showcase.

As we celebrate the 35th Anniversary of AIPNO, I am proud to chair this innovative committee. Establishing research grants in the future, bringing more researchers into this great organization, helping younger physicians, nurses and administrators to network and mentor new members are the goals of this committee. This further broadens the purposes of AIPNO. I would like to thank all the members of AIPNO for supporting me to establish the Research Showcase, especially Raja Shekar, MD, Ranjit Tamaskar, MD, Umesh Yalavarthy, MD, and Mey Somasundaram, MD. I am grateful to all the healthcare systems for supporting this effort and especially to Ms. Diane Wish, CEO of CDC for her generous support in being the Presenting Sponsor of Research Showcase this year. Many thanks to all the sponsors and supporters, we are in the process of establishing an AIPNO research grant with your help and support. Heartfelt thanks to Ms. Binnie Eiger, Executive Assistant and Mr. Manohar Daga, for providing accounting oversight.

I am grateful to my children Amrita and Krishna for allowing me to continue to work for AIPNO and to my wife Deepa for all her support.

Dr. Gupta:I would like to thank the board of trustees, executive committee, research showcase participants and judges in making our 6th Research ta huge success.

I would like to thank my husband Dr Vijay Rastogi and my son's Sunay Rastogi and Krivam Rastogi for their conditional support and allowing me to work for AIPNO.

Sincerely, Beejadi Mukunda, MD Co-Chair, Research Showcase Committee Chairman, Board of Trustee, AIPNO

Mona Gupta, MD Co-Chair, Research Showcase Committee









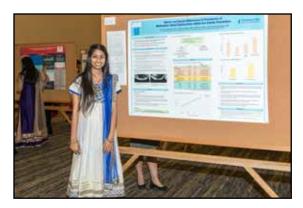


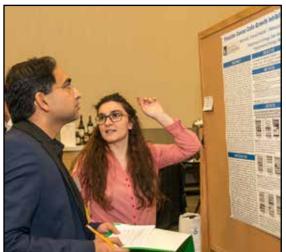




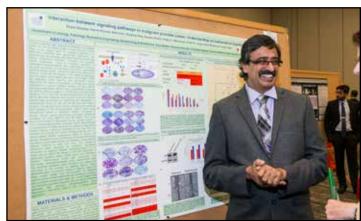




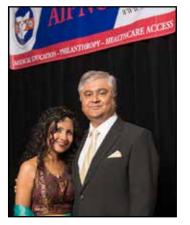














































In recognition of

Association of Indian Physicians of Northern Ohio's 35th Annual Dinner, 6th Research Showcase, and

27th Annual Chiraag

Whereas,

on behalf of the citizens of the City of Cleveland, I am honored to offer this Proclamation in recognition of the Association of Indian Physicians of Northern Ohio's (AIPNO) 35^{th} Annual Dinner and 6^{th} Research Showcase; and,

Whereas,

in 1983, local physicians founded AIPNO to enhance the quality of health care by fostering excellence and professionalism in the practice of medicine and supporting efforts to improve the availability of health care to underserved populations in this community and in India; and,

Whereas,

AIPNO's contributions have enhanced the lives of Clevelanders as well as enriched the work of high school and medical students, residents and researchers committed to medical and non-medical research. The annual Research Showcase allows Indian and non-Indian researchers from all over Ohio to exhibit and publish their work in a public venue; and,

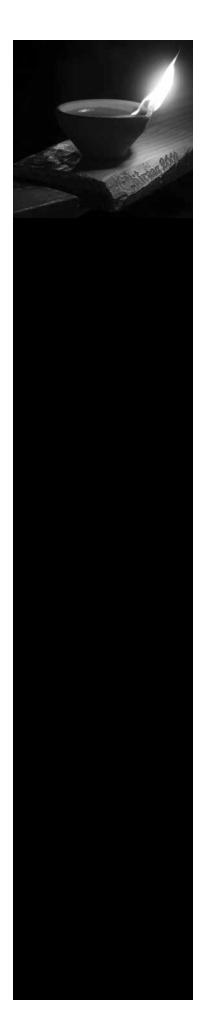
Whereas,

the City of Cleveland recognizes AIPNO's dedication to the local medical community and congratulates those being honored this evening. I would also like to congratulate Mona Gupta ,MD - President and Research Showcase Co- chair, Harbhajan Parmar,MD- President-elect, and Beejadi Mukunda, MD- Board of Trustees Chair and Research Showcase Co-chair on a successful Annual Dinner and Research Show Case and Fundraiser

Now therefore, I, Frank G. Jackson, the 56th Mayor of the City of Cleveland, do hereby offer this Proclamation recognizing the Association of Indian Physicians of Northern Ohio as they host this dinner and research showcase. I urge all citizens to join me in wishing the members of AIPNO the best as they tend to the medical needs of our community and areas beyond our borders.

In witness thereof, I have set my hand and caused the Corporate Seal of the City of Cleveland to be affixed on this 6th day of October in the year 2018.

Mayor Frank G. Jackson



With sincere gratitude to those who made Chiraag, Annual Dinner and the Research Showcase 2018 Fundraising Dinner a Success...

Presenting Sponsors

Centers for Dialysis Care University Hospitals, UH Community Hospitals

Major Sponsors

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MD's
Margaret Wong and Associates































































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, 2017, 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.

Ungris and Maga, Anc.

Shaker Heights, Ohio

April 20, 2018

STATEMENT OF FINANCIAL POSITION December 31, 2017

(With summary financial information for 2016)

		Board	Temporarily	Permanently Restricted	Totals	
	Unrestricted	Designated	Restricted	Endowment	2017	2016
ASSETS Cash Contributions receivable Prepaid expenses	\$ 51,218 3,627 9,750		\$ 183,634		\$ 234,852 3,627 9,750	\$ 154,156 3,820
Investments Due from operating fund Due from board designated Due from endowment fund		\$ 226,246	47,392	\$ 1,190,222 1,566	1,416,468 48,958 - -	1,260,734 13,009 1,071 3,464
TOTAL ASSETS	\$ 64,595	\$ 226,246	\$ 231,026	\$ 1,191,788	\$ 1,713,655	\$ 1,436,254
LIABILITIES AND NET ASSETS						
Accounts payable Accrued payroll	\$ 3,700				\$ 3,700	\$ 4,350 1,000
Accrued and withheld payroll taxes Deferred revenue	1,676 5,000				1,676 5,000	953 -
Accrued contribution Due to operating fund	,			\$ 35,000	35,000	45,000 4,535
Due to temporarily restricted fund Due to endowment	47,392 1,566				47,392 1,566	13,009
TOTAL LIABILITIES	59,334	-	-	35,000	94,334	68,847
NET ASSETS						
Unrestricted Board designated functioning	5,261				5,261	21,095
as an endowment		\$ 226,246			226,246	203,586
Temporarily restricted		, -,	\$ 231,026		231,026	135,113
Permanently restricted				1,156,788	1,156,788	1,007,613
	5,261	226,246	231,026	1,156,788	1,619,321	1,367,407
TOTAL LIABILITIES AND NET ASSETS	\$ 64,595	\$ 226,246	\$ 231,026	\$ 1,191,788	\$ 1,713,655	\$ 1,436,254

STATEMENT OF ACTIVITIES Year Ended December 31, 2017

(With summary financial information for the year ended December $31,\,2016$)

		Board	Temporarily	Permanently Restricted	To	otals
	Unrestricted	Designated	Restricted	Endowment	2017	2016
REVENUE						
Medical Yatra contributions			\$ 68,124		\$ 68,124	\$ 55,614
Chiraag contributions				\$ 6,500	6,500	62,500
Other contributions	\$ 1,051				1,051	-
Membership dues	550	\$ 1,000			1,550	2,375
Educational revenues					-	2,000
Annual dinner			124,550		124,550	59,940
Special events	3,895				3,895	3,915
Investment income	4	34,785	300	181,014	216,103	66,401
Satisfaction of restrictions	148,526	(13,125)	(97,062)	(38,339)	-	-
TOTAL REVENUE	154,026	22,660	95,912	149,175	421,773	252,745
EXPENSES						
Medical Yatra	4,179				4,179	24,637
Chiraag expenses	-				-	43,624
Continuing education costs	-				-	875
Annual dinner	84,448				84,448	87,190
Special events	12,134				12,134	1,939
Scholarships and donations	26,950				26,950	27,950
Wages	18,192				18,192	17,272
Insurance	1,375				1,375	1,375
Professional fees	7,278				7,278	6,916
Taxes	1,737				1,737	1,706
Office expenses	3,666				3,666	2,003
Bank and investment fees	8,754				8,754	7,719
Local travel	541				541	456
Telephone	606				606	785
TOTAL EXPENSES	169,860	-	-		169,860	224,447
Change in net assets	(15,834)	22,660	95,912	149,175	251,913	28,298
NET ASSETS - Beginning	21,095	203,586	135,114	1,007,613	1,367,408	1,339,109
NET ASSETS - Ending	\$ 5,261	\$ 226,246	\$ 231,026	\$ 1,156,788	\$ 1,619,321	\$ 1,367,407

SCHEDULE I - SATISFACTION OF RESTRICTIONS Year Ended December 31, 2017

			Temporarily Restricted		Permanently	
		Board	Research	Medical	Restricted	
	Unrestricted	Designated	Showcase	Yatra	Endowment	
FROM PERMANENTLY RESTRICTED ENDOWMENT						
Investment fees	\$ 5,374				\$ (5,374)	
Donation/scholarships	13,000				(13,000)	
Transfer for operations						
(maximum 2% of average endowment)	19,965				(19,965)	
	38,339				(38,339)	
FROM TEMPORARILY RESTRICTED						
Medical Yatra direct expenses, net of \$5,000						
organization funding	5,917			\$ (5,917)		
Annual meeting direct expenses	91,145		\$ (91,145)			
	97,062		(91,145)	(5,917)		
FROM BOARD DESIGNATED						
Life membership direct expenses	3,029	\$ (3,029)				
Investment income available for operations	10,096	(10,096)				
	13,125	(13,125)				
TOTAL SATISFACTION OF RESTRICTIONS	\$ 148,526	\$ (13,125)	\$ (91,145)	\$ (5,917)	\$ (38,339)	

SCHEDULE II - MANAGEMENT AND GENERAL EXPENSES Years Ended December 31, 2017 and 2016

	Totals			
	2017		2016	
Wages	\$	15,192	\$	15,040
Professional fees		7,278		6,916
Office expenses		3,666		2,003
Scholarships and donations		2,000		2,500
Taxes		1,508		1,706
Insurance		1,375		1,375
Continuing education costs		-		875
Telephone		606		785
Local travel		541		455
Bank and investment fees		96		81
TOTAL	\$	32,262	\$	31,736

HUMANITARIAN SERVICES COMMITTEE REPORT



"Take up one idea. Make that one idea your life - think of it, dream of it, live on that idea. Let the brain, muscles, nerves, every part of your body, be full of that idea, and just leave every other idea alone."
Swami Vivekananda

Jaya & Ramesh Shah



Every year since its inception in 2001, Medical YATRA program is growing in awareness, acceptance, and impact to rural India. For the retiring physicians, it has become a very rewarding activity filled with joy & blessing.

Dr. Murthy & Jyothin Vuppala have chaired YATRA 2018 for mission in Visakhapatnam, AP, their 'karmabhumi'. Both of them (with their families) put in humongous amount of hours/weeks to make it a truly memorable, impactful and enjoyable mission for the Vizag rural community and Yatris. Thru 14 clinics in 10 days with help of 25 physicians & 25 medical volunteers, 9,800 rural folks benefited. With support from Lions Club, Garuda Rao family & local community health centers, referral & follow up program has been best ever. Lot of new hi-tech initiatives have been taken with astounding results.

NEW Initiatives:

- 1. Artificial Limbs-'Jaipur Foot': 200 amputees received the 'Gift of New Foot', crutches or calipers. Most important each one walked away with great Mobility, more self esteem and ability to be more productive. Ratna Nidhi Trust from Mumbai was contracted to do measurement work in Nov. and they made customized legs to be fitted Jan.27-28-29. Lions Club played a major role bringing amputees from long distance and Dr. Nagula arranged the transportation.
- 2. <u>Cataract Surgeries:</u> "Gift of Sight" has been a great success story for marginalized & illiterate rural folks. Mohsin Eye Hospital & Vebart Trust led by Dr.A.V.N. Chetty-Ophthalmic Surgeon- provided eye services with Mobile Van @ each clinic. Dr. Shin from Hillcrest Hospital provided generous donation for Cataract Surgeries, Glaucoma treatment & Cornea harvesting.
- 3. **MRDT Foundation** During this year, we have been honored with recognition from MRDT foundation with \$5,000 grant. Lot of funds were used for 'Jaipur Foot' and other services.
- 4. Women's Health: Dr. Saroj Mahalaha, and Dr. Gidwani teamed up with Dr. Nagula, & Dr. Stvanarayana Ob/ Gyn from Gayatri Hospital & Medical students from Andhra Medical College to provide Pap test & Breast Examination to all women patients. Abnormal cases were referred to local hospital for further evaluation.
- 5. <u>Save Babies:</u> Andhra Medical School –Neo Natal Pediatrics dept. needed help to save 6 babies by administering Surfactant. We did provide funds for it to save the Babies.

Sustainable Solutions... Long term Legacy projects:

So far we have done following projects with support from Rotary Clubs and Rotary International Foundation:

- 1. <u>Mobile Ophthalmic Clinic</u> 'Take Hospital' to Patients; Save Money, Increase accessibility, affordability, convenience, awareness.
- 2. <u>Water Treatment Plants</u> To prevent water borne diseases in schools and communities, Provides Safe Drinking water, Improves Health and Reduces loss of education days in schools.
- 3. <u>Sanitary Pads Mfg. Women Empowerment Project</u>; For Women Health, By Women to manufacture, & market inexpensive sanitary pads to girls/women.
- 4. <u>Mobile Women's Health Clinic</u>: Take Hospital' to patients; Save Money, Increase Accessibility, Affordability, Convenience for examining pap tests, breast examination, etc.

Upcoming Events:

- "Jyot Se Jyot Jalao"- Indian DOSA Breakfast
 - --Oct.14-Sun.@ Highland Hts. comm. Center
- Philanthropia 2018 @ Landerhaven, Dec. 5, Monday
- Yatra-2019 i) Gandevi, Guj.-Jan.11-18, & ii) Bengaluru, K. Jan.19-25

Medical YATRA Report Card 2001-2018

No. of patients served in India: 300,000

No. of countries visited: 10

No. of physicians inspired: 100

No. of Volunteers inspired: 100

Supported by Foundations: 5

Supported by Pharmaceutical cos. 10

States visited in India: 11

(Gujarat, Rajasthan, Madhya Pradesh, Karnataka, Andhra Pradesh

Tamilnadu, Orissa, Uttarkhand, Maharashtra, Kerala)

Awards: FICA person of the Year

Inducted in Cleveland Hall of Fame

Distinguished Physician of the Year

Medical YATRA-2018





Two years ago Sandhya lost her leg. Today she took her first steps with her new prosthetic leg. Saipur foot; "I am happy, I can walk, I can go to work, my family is very happy."

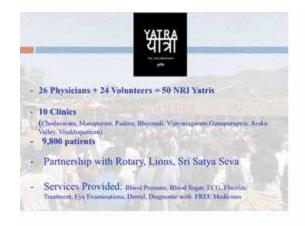




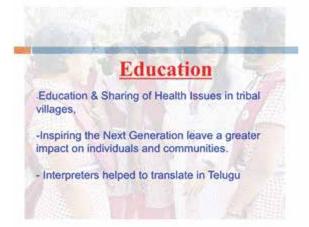




Medical YATRA-2018













June 2016-"Taking Hospital to Rural folks doorsteps"

EYE SCREENING

Mobile Eye clinic has been doing nearly

12 screening camps every month and around

2000 patients get the screening done.

160 to 180 patients undergo FREE cataract surgeries every month.

As of JULY 2018 the figure stands at 28,484.

35

Medical YATRA-2018













Medical YATRA-2018













SPORTS COMMITTEE REPORT

Chair: Arun Gupta, MD

Dr. Arun Gupta, Chair of the AIPNO Sports Committee dedicated the annual Golf outing to Dr. H.P. Sundaresh, who passed away in January of 2018. The H.P. Sundaresh Memorial Golf Outing took place on June 10 at Signature of Solon Country Club in Solon, Ohio. Thirty-eight players golfed on a beautiful sunny day. The golfers enjoyed a catered lunch from Saffron Patch, the driving range and then hitting the links. The sports committee would like to thank the sponsors for this event: Doug Crandall of the BCJC Group, Bedford Hospital, Southwest General, Cleveland Clinic, Ajuha Medical Center, Richmond East Hospital and ID Consultants.

After golfing the players, spouses and other AIPNO members gathered at Saffron Patch Restaurant in Shaker Heights for dinner, awards and camaraderie. Golf teams below:





















SHIVA VISHNU TEMPLE HEALTH FAIR REPORT - 2018

The health fair was held on May 13, 2018, at Shiva Vishnu Temple of greater Cleveland in Patel hall. The event was inaugurated by Chief Guest, Mayor of Parma, Ohio, the Honorable Mr. Timothy DeGeeter. Also Dr. Mona Gupta, president of AIPNO and Dr. Darshan Mahajan, Chairman of the Board of Trustees and Mr. Manhar Shah, President of Shiva Vishnu Temple were in attendance.

Like last year we had no Booth. We had 20 tables and 2 rooms were set up for consultation and Triage. This year about 29 community members received services from Physicians in various specialties and subspecialties: Internal Medicine, ENT, Orthopedics, Neurology, Endocrinology, Pediatrics, Pediatric Neurology, GYN -Women's Health, Dentistry, Cardiology, Nephrology, Pulmonology, Chiropractor, Hematology-oncology, Allergy-Asthma, Family Medicine, General Surgery, Breast Surgery and Geriatric-Medicine.





Also Laboratory services were provided by St. Vincent Charity Hospital. Pharmacologic Consultation provided by North Ohio Academy of Pharmacy. Also we are thankful to Madhu Gupta for providing Audiology Services.

Also I thank Dr. Murty Vuppala for helping us with the Health Fair. Also special thanks to Satishbhai Modi, Dr. Sharma, all board of trustees and Mr. Manhar Shah for making the health fair successful. Also special thanks to Dr. Darshan Mahajan for all the guidance and encouragement.

Also we are thankful to all volunteers and Bharat Patel for Audio-Visual services

Respectfully submitted, Gopal R. Kapoor, MD

Congratulations

TO THE RESEARCH SHOWCASE 2017 WINNERS

CLINICAL RESEARCH

First Place: Parth Parikh

Second Place: Siri Yalamanchili and Aditi Patel

Third Place: Roshini Srinivasan

CASE REPORTS

First Place: Fuat Bicer

Second Place: Sai Krishna Korada

Third Place: Saloni Sheth

QUALITY IMPROVEMENT

First Place: Natasha Kesav and Eswar Shankar

Second Place: Ahmed Khalifa

Third Place: Naveen Dhawan and Michael Glover

Cutaneous presentation of metastatic breast cancer: implications for Northeast Ohio breast cancer burden and awareness among regional Dermatologists

Cassandra Johnson, MS^1 , Naveen Dhawan, MBA^1 , Sofi Rodriguez, BS^1 , Matthew Apicella, MS^1 , Anita Gade, BA^2

¹ Nova Southeastern University, Division of Health Sciences

² Weill Cornell Medical College, Department of Dermatology

Background: In 2009, Ohio had the fourth-highest mortality rate resulting from breast cancer. Since Cuyahoga County is considered a "high risk" area for breast cancer and disparities in breast cancer screening have been reported in Northeast Ohio, special consideration is warranted for the implications in this region. The growing number of Dermatologists in Northeast Ohio further necessitates the need for awareness of cutaneous presentations of breast cancer. Cutaneous metastasis is the spread of malignant cells from an internal neoplasm to the skin and can occur either by contiguous invasion or by distant metastasis through hematogenous or lymphatic routes. Incidence of cutaneous metastasis from breast cancer is 23.9%. Cases of cutaneous metastasis have emerged which led to establishing the diagnosis of a previously unknown breast cancer. Early detection of breast cancer can increase survival and alter disease course, unlike some other internal malignancies. Recognizing these skin manifestations can lead to earlier detection compared to standard screening alone, especially when physical exam and mammography fail to reveal a breast lesion. A systematic review of literature was conducted to better understand the incidence and nature of cutaneous metastasis as the initial presentation (leading to diagnosis) of an underlying breast cancer.

Methods: This study utilized the PRISMA guidelines for systematic reviews. A review of the literature was conducted using the following databases: PubMed, Embase, CINAHL, Cochrane Library, and Medline/EBSCO. Keywords: (cutaneous metastasis) AND (breast cancer). Inclusion criteria: articles published in the last ten years, female. Exclusion criteria: patients with a previous malignant breast cancer diagnosis prior to the appearance of a cutaneous lesion. The initial search yielded a total of 722 papers and 36 papers were included, 27 of which were individual reported cases and 9 of which were retrospective reviews.

Results: The reported cases revealed several notable findings. 14% of the patients presented with a skin lesion before or simultaneous to the diagnosis of breast cancer. 44% reported a painful or tender lesion, 12.5% reported pruritis, and 50% were asymptomatic. Over 40% fall out of the USPSTF age range for breast cancer screening, with 24% of the patients under the age of 50 and 17% over the age of 74. The most common skin lesions were plaques and nodules. These lesions

most commonly presented on the thorax. 79% presented with an erythematous lesion, two cases presented with a black nodule, making these lesions highly suspicious of melanoma. Gross characteristics of skin lesions are not specific indicators of malignancy since cutaneous metastasis can mimic many other skin conditions. Six cases presented with skin lesions that mimicked and were misdiagnosed as herpes zoster, bacterial infections, dermatitis, mastitis, and refractory eczema. The final diagnosis of cutaneous metastasis was confirmed by skin biopsy in five of these cases with one case diagnosed on imaging. Four cases reported negative mammography and ultrasound. In three of these cases, no primary tumor was ever found. Twelve cases specified the role Dermatologists played in identifying cutaneous metastasis of a primary breast cancer.

Discussion: Diagnosis of primary breast cancer in the form of cutaneous metastasis is a rare occurrence, but prompt biopsy and early intervention may significantly affect patient outcome. Dermatologists may have a key role in diagnosing breast cancer; general awareness about such possibilities is warranted among these physicians. Physicians should exercise a high index of suspicion for breast cancer when encountering cutaneous malignant manifestations in a female, particularly when they are found on the chest. Further studies are needed to fully elucidate the role of specialty physicians in diagnosing primary breast cancer when initially encountering skin cancer. Since significant disparities exist across income and race for breast cancer screenings in Northeast Ohio, leading to low rates of breast cancer screenings among low-income women, detection of breast cancer manifesting in diverse presentations is crucial; the role of specialists in detecting breast cancer is even more important. Foreater awareness of unusual presentations of breast cancer among Dermatologists and other specialists is warranted in Northeast Ohio.

Assad Ali

Proposal:

There are no data on survival benefit for lung cancer patient with brain metastasis on Anti-PD1 therapy along with adjuvant therapy. Our study reports the overall survival and outcomes based on the onset of Anti PD 1 therapy.

We retrospectively assessed the patients with lung adenocarcinoma with brain metastasis treated with anti PD-1 therapy i.e. nivolumab and pembrolizumab as a part of their first therapy and second therapy. Demographics, adjuvant treatment, along with anti PD-1 therapy and progression of Brain metastasis was identified using MRI Brain with overall survival status were collected to determine progression free survival after the first therapy and overall survival. A total of 100 patients were identified who had lung adenocarcinoma with brain metastasis and were on anti PD-1 therapy either in first or second therapy trial with a mean follow up of 20.25 months. Out of total patient sample 55% were female and 45% were male in which 13% had EGFR WT mutation and 18% had KRAS mutation. For 58 patients, retrospectively we were able to assess the progression; out of which 43 patients didn't receive adjuvant anti PD-1 therapy treatment and 15 patients did receive the adjuvant therapy. Patients who didn't receive anti PD-1 therapy in first round had higher PFS 13.767 (CI - 9.273, 18.262), compared to the patients that did receive anti PD-1 therapy 5 067 (CL3 309 6 825) p-Value: <0 0001 In terms of overall survival, a total of 88 patients were assessed in which 39 patients received anti PD-1 therapy in first round and 49 patients received PD-1 therapy in second round, overall survival for patient who received PD-1 therapy in second round was higher 14.882 months (CI - 12.112, 17.652), when compared to patients who received anti PD-1 therapy in first round 8.038 months (CI 5.343, 10.732), p-Value - 0.003.

Environmental enrichment improved cognitive performance in mice under normoxia and hypoxia

Sahej Bindra¹, J. C. LaManna², K. Xu²

¹Hathaway Brown High School, Shaker Heights, Ohio ²Department of Physiology and Biophysics, Case Western Reserve University, School of Medicine, Cleveland, Ohio, USA

The mammalian brain modulates its microvascular network to accommodate tissue energy demand in a process referred to as angioplasticity. There is an aging effect on cognitive function and adaptive responses to hypoxia. Hypoxia-induced angiogenesis is delayed in the aging mouse brain. It has been shown that enrichment provides an environment that fosters increased physical activity and sensory stimulation for mice as compared to standard housing; this increases neuronal activity and oxygen demand. We investigated the effect of environmental enrichment on cognitive performance in young mice (2-4 months; n=18) and the effect of hypoxia in both young (2-4 months; n=6) and aged mice (17-21 months; n=5). Mice were placed in a non-enriched or an enriched environment for 4 weeks under normoxia followed by 3 weeks of hypobaric hypoxia (~0.4 atm). Cognitive function was evaluated using Y-maze and novel object recognition tests in the enriched or nonenriched mice under normoxic or hypoxia conditions. The effect of environmental enrichment on capillary density was determined. Microvascular density (N/mm2) was calculated through GLUT-1 immunohistochemistry in young mice following a 3-week placement in a non-enriched or enriched environment. The young mice showed significantly higher alternation rate (%, 63 ± 7 vs. 48 ± 10, n = 6 young; 5 old) in the Y-Maze test as compared to the old mice. Under normoxia, the enriched mice showed an improved alternation rate (%, 63 ± 10, n = 10) in Y-Maze test and a higher novel object exploration rate (%, 68 ± 10 vs. 52 ± 10) in the novel object recognition test compared to the non-enriched controls. Similar results were observed following hypoxic exposure. The young mice that underwent environmental enrichment showed significantly higher (~30%) capillary density in cortical brain opposed to the non-enriched mice. Our data suggests that environmental enrichment improved the cognitive performance in mice under normoxic and hypoxic conditions.

It is because of the distribution of the middle cerebral artery (MCA), that isolated aphasia as a presentation of stroke is uncommon. Causes of such a presentation is assumed to be that of an embolic phenomenon. This case reminds us of the risk of stroke in illicit drug use while highlighting another cause of stroke with isolated aphasia

We present a 50 year old male with no prior medical history, who presented because his wife noted he was unable to speak. According to wife, patient was conversing normally until 8 hours prior to presentation where the mo He subsequently was acting confused and then unable to talk at all. Focal weakness, seizures, facial drooling or unsteady gait was denied. He does not take any medications. He smoked cigars and

drooling or unsteady gait was denied. He does not take any medications. He smoked cigars and marijuana smoking in which wife was unable to quantify.

When seen, his blood pressure was 126/79, puise 54 beats/minute, other vitals were normal. Cardiovascular, respiratory and abdominal exam were normal. Cardio bruits were not appreciated. Aphasia and agraphia was noted. Motor exam showed normal tone, power and reflexes of all extremitles, with equivocal Babinski. Gait was normal. Sensory exam was normal. Cranial nerves were intact. EKG showed sinus bradycardia (rate 54) with no ST changes. CBC and CMP were unremarkable. Urine toxicology was positive for cannabinoids and cocaine. A brain CT showed a large area of loss of gray-white differentiation to the left frontal tobe including the insular cortex with associated sulcal effacement. The patient was assessed as ischemic stroke. As he was out of the window for emergent intervention, patient was managed conservatively with aspirin and statin and admitted. An MRA confirmed subacute ischemic injury involving the left MCA distribution with focal narrowing of an M2 branch within the sylvian fissure. Carolid artery Doppler showed no significant stenosis. Echocardiogram was normal. Lipid profile, homocysteine and anti-cardiolipin antibodies were normal. Thrombophilla workup was negative. Full enurological assessment by neurologist and by speech therapy revealed expressive aphasia without dysarthria or any other focal neurological deficits – the cause of such assumed to be secondary to cocaine abuse. The patient was discharged for outpatient speech and occupational therapy.

Isolated aphasia as a presentation in CVA is an uncommon occurrence – because of the distribution of the MCA, aphasia is usually accompanied by focal weakness, sensory deficit or visual disturbances. When it does present as an isolated event, it is usually secondary an embolic event. As with this patient, illicit drugs are also associated with isochemic stroke. As vasospasm is an accepted proposed mechanism for ischemia, it should be highlighted that illicit drugs can also be a cause of this uncommon presentation of stroke.

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Title: Anesthetic care of a patient with Bernard-Soulier syndrome for posterior spinal fusion

Authors: Sushmitha Boppana¹, Brian Hall², Ashley Beaujon³, Dmitry Tumin^{2,4}, Joseph D.

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 Department of Anesthesiology & Pain Medicine, Nationwide Children's Hospital, 1. 2. Columbus, Ohio
- Otterbein School of Nurse Anesthesia, Columbus, Ohio Department of Pediatrics, Nationwide Children's Hospital and the Ohio State University, Columbus, Ohio
- Department of Anesthesiology & Pain Medicine, The Ohio State University College of Medicine, Columbus, Ohio

Introduction: Bernard-Soulier syndrome (BSS) is characterized by excessive and prolonged bleeding due to thrombocytopenia and platelet dysfunction with increased platelet size and deformability. The primary defect in BSS involves the platelet glycoprotein (GP) Ib-IX-V complex, which is important in initiating platelet aggregation and thrombosis after vascular injury by facilitating the adhesion of platelets to von Willebrand factor. The lack of or defect in the functioning of GPIb-IX-V results in a compromised ability to initiate platelet adhesion and aggregation resulting in a bleeding diathesis. We present a patient with BSS who presented for posterior spinal fusion for idiopathic scoliosis.

Case Report: The patient was a 17-year-old, 70.9 kg girl with macrothrombocytopenia and a baseline platelet count between 50,000-70,000/mm³. Due to previous limited responses to platelet transfusions, it was decided to monitor *in vivo* coagulation function using the rotational thromboelastogram (ROTEM®). The values were normal except for a prolongation of clot formation time (CFT). Anesthetic induction involved propofol (200 mg), indocaine (100 mg), and except (200 Mg), indocaines (100 mg), and formation time (CFT). Anesthetic induction involved propofol (200 mg), lidocaine (100 mg), and sufentanil (20 μg). Maintenance anesthesia included desflurane and a sufentanil infusion, and was supplemented by continuous infusions of lidocaine and esmolol. She received intraoperative recombinant factor VIIa and tranexamic acid. In total, she received 3 units of pheresed platelets, 2 pre-operatively and 1 post-operatively. Up to 10 days postoperatively, c-amino caproic acid (Amicar) was administered. Although she lost 900mL of blood during surgery and her platelet count decreased to a 39,000/mm², there was no clinically concerning bleeding and her ROTEM® values remained stable. Her postoperative course was unremarkable and she discharged home on postoperative day 5.

Discussion: Our case was unique in two respects including our patient's refractory state to the administration of allogeneic platelets with minimal increase in the platelet count. Despite this, work-up did not reveal platelet antibodies or other issues that might be amenable to corticosteroid work-up on not reveal platelet antibodies or other issues that might be amenable to corticosteroic therapy or plasmapheresis. To date, there are a limited number of reports in the literature regarding the perioperative care of pediatric patients with BSS. While the mainstay of therapy includes platelet transfusions, adjunctive therapies have included desmopressin, anti-fibrinolytic agents (transexamic acid or e-aminocaproic acid), or recombinant factor VIIa. Given our patient's inadequate response to platelet transfusions, we chose transexamic acid and recombinant VIIa to augment platelet. Our anecdotal experience adds to the literature suggesting the demonstration of utility of bedside, point-of-care coagulation function monitoring using the ROTEM®. With sucl care, even invasive surgical procedures can be accomplished with minimal sequelae related to the primary bleeding disorder

Conflict of Interest: Authors have no conflict of interest to declare

The Role of Endothelin in Chronic Kidney Disease: A Review

Rupesh Raina MD1, Abigail Chauvin2, Haikoo Shah2, Vinod Krishnappa1

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²Northeast Ohio Medical University, Rootstown, Ohio, USA

Corresponding author Rupesh Raina, MD, FAAP, FACP, FASN, FNKF

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No conflicts of interest to be declared by any of the authors.

Abstract

Endothelins (ET) are a family of peptides that act as potent vasoconstrictors and pro-fibrotic growth factors. ET-1 is integral to renal and cardiovascular pathophysiology and exerts effects via autocrine, paracrine and endocrine signaling pathways tied to regulation of aldosterone, catecholamines, and angiotensin. In the kidney ET-1 is critical to maintaining renal perfusion and controls glomerular arteriole tone and hemodynamics. ET can bind to two different receptors, ET_A and ET_B. is hypothesized that ET-1 influences the progression of chronic kidney disease (CKD), and the objective of this review article is to discuss the pathophysiology and role of ET in the following diseases: diabetic nephropathy, hypertensive nephropathy, focal segmental glomerular sclerosis (FSGS), and autosomal dominant polycystic kidney disease (ADPKD).

Methods

Search terms "chronic kidney disease", "CKD", "endothelin", "ET-1", 'diabetic nephropathy", "hypertensive nephropathy", "focal segmental glomerular sclerosis", and "autosomal polycystic kidney disease", and "AKPKD" were used to search PubMed for relevant articles to consider for review. Research staff hand-selected articles that pertained to the review and they were examined at that time. Additionally, Clinicaltrials.gov was searched for recent/current clinical trials pertaining to endothelin and CKD.

Use of ERAs in hypertensive nephropathy has potential to decrease proteinuria, and in diabetic Ose of EAAs in hyperelistive reprindpantly has potential to decrease proteinuria, and in diabet in reprinding the high proteinuria. FSGS has no specific FDA-approved therapy currently, however ERAs show promise in decreasing proteinuria and tissue damage. ET-1 is suggested to be a biomarker for ADPKD disease progression and so it is thought that ERAs may be of some therapeutic benefit.

Multiple studies have shown utility of ERAs in CKD. These agents have shown to reduce blood pressure, proteinuria, and arterial stiffness. However, more studies in human populations are needed, and the results of active or recently concluded studies are eagerly awaited.

CT Scan Timing and relationship toward length of stay, re-admission, repeat CT scans in acute

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Abstract

Introduction: Acute pancreatitis (AP) is the single most frequent gastrointestinal cause of

hospital admissions in the US and resulting in approx. 275,000 hospitalizations at a direct annual

cost of \$2.6 billion in the United States. CT scan is a part of diagnostic criteria for Acute

Pancreatitis (AP) and primarily used in to determine alternate diagnosis for abdominal pain or to

detect complications. This leads us to ask, "Does the timing of CT scan affect length of stay,

readmission, or number of future CT scans?"

Methods: We conducted a single center retrospective study using data from EHR from 2012-

2017 of all patients admitted with AP as primary diagnosis from 2012-2017 in adults ≥ 18 years.

One-way analysis of variance (ANOVA) tests were used to assess for statistical significance with

Results: A total of 486 patients were included in the study Average length of stay among BISAP

score of 0 in No CT group was 3.12 days, Early CT group 3.75 and Late CT 4.81 days, which

was statistically significant (p=0.009). Recurrences of AP were compared among same groups

1.45 vs 0.93 vs 0.60 (p=0.009) respectively, with similar results were found among BISAP score

Conclusion: This study showed that the No CT group had a decreased length of stay compared to Early CT and Late CT group while recurrence rate was lowest in the Late CT group. Further studies will be required to address the debate regarding timing of CT scans for pancreatitis

Keywords: Pancreatitis, CT Scan, BISAP, Readmissions, Length of Stay

Teaching and Fostering Empathic Touch and Eye Gaze

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Background/Purpose

Though empathy is conveyed both verbally and nonverbally (1), little focus has been placed on teaching nonverbal empathy, which is crucial to proper patient-centered medical care (2). We explored the following question: can a 3-minute video, promoting empathic touch and eye gaze, encourage these behaviors during Standardized Patient interviews, AND increase empathy scores?

Approach/Methods

We conducted a randomized controlled trial of 34 first-year medical students. Participants watched either a handwashing video or one encouraging touch, and eye gaze at exit. Videos of SP encounters were analyzed for touch (excluding handshake), prolonged eye gaze at exit, and handwashing. A true "empathic touch" was defined as a moment of physical interaction by the student associated with an empathic moment in the conversation with the SP. Any "pseudotouches" (a maneuver of reaching out to the SP as a physical reaction to information relayed during the conversation) were noted but not counted. Any sustained eye contact with the SP while the student exited was also noted. Correlations between perceived empathy by SPs, (using the Jefferson Scale of Patient Perception of Empathy-JSPPE) with physical touch and eye gaze were assessed (3,4). Statistical tests used included the Levene's test of median-based homogeneity of variance to assess data distribution and Mann-Whitney U Test to compare differences in A and B groups. Kendall's rank correlation was utilized to detect any correlations in JSPPPE responses.

Results/Outcomes

23.5% (4/17) of the "touch video" (intervention group) students performed at least one act of touch during the SP encounter. 88.2% (15/17) of intervention students demonstrated eye gaze at the exit of the interview. 20 students in total showed eye gaze at exit (including 5 students in control group). Analysis with JSPPPE scores compared all students who performed eye gaze at interview exit vs. those who did not. 70.6% (12/17) of the "control-hand hygiene" students washed hands during encounter. There was greater compliance among this group than the "touch" group. Eye gaze at exit was the only maneuver that showed a statistical correlation with JSPPPE scores. Kendall's Tau (correlation) was 0.479 for eye contact at exit with a 2 tailed significance of 0.001.

Discussion

Historically, within medical education, while a great deal of attention has been paid to optimal word usage in conversations in patients to demonstrate empathy, relatively little focus has been placed on nonverbal communication as part of empathy. A significant positive correlation between sustained eye gaze at the exit of an interview and a patient's perception of empathy was found. We believe this is a new finding. The touch video appeared to result in 23.5% of students touching their patients. This demonstrates the potential of brief instructional videos in teaching empathy.

Conclusions/Significance

Our study has implications in teaching and assessing nonverbal empathic behaviors in historytaking. Instructional videos on physical empathic touch and sustained eye gaze at exit may be useful in promoting empathic nonverbal communication maneuvers. To our knowledge, this is the first study to instruct and encourage touch, as well as eye gaze at exit, using brief videos and correlate with empathy score. Empathic touch can be promoted in medical education, but further studies are needed to explore barriers in empathic touch during medical student/ SP interactions. These findings can be generalized to the greater community of health practitioners.

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Abstract title

Abstract text

Introduction:

Although studies have described the significance of mouse vocalizations from the sender's perspective, fewer have investigated effects of these vocal signals on the receiver. Here, we report playback experiments using natural vocal sequences from two behavioral contexts: mating and restraint. We examined whether these sequences altered the behavior of listening mice and whether male and female mice responded in the same manner.

Method:

Vocalizations and behavior of CBA/CaJ mice (n=12; ages p90-p180) were recorded during the contexts of mating and restraint. We selected five exemplars of natural vocal sequences from restraint and from a higher arousal state of mating (behaviorally defined). Mating sequences included both male and female's vocalizations. These sequences were conditioned for use in playback experiments. Both male and female were used in behavioral tests. Only females in estrous were included in final data analysis. Prior to testing, mice experienced the behaviors of mating and restraint in a counterbalanced order on two consecutive days. On a subsequent test day, animals habituated to the test chamber for 3 hours, then were presented with either the mating or restraint vocalizations for 20 minutes. We video-recorded and analyzed 19 different behaviors before, during, and after stimulus presentation.

Results:

Mating and restraint vocal sequences both increased attending and head orientation toward the speaker (p<0.0005). In response to playback of vocal sequences linked to a high arousal stage of mating, females decreased locomotion, adopted an alert posture and escape behavior from the speaker; Males, however, increased exploratory behaviors (locomotion and rearing) in response to mating sequences and explored the speaker side more than females (p<0.05). In response to restraint vocal sequences, however, both males and females frequently approached the speaker area but not the speaker itself (p<0.05). Exposure to these sequences in both males and females resulted in escape behavior from the speaker (for both sexes, p<0.0005).

Conclusion:

Vocal sequences linked to mating change the behavior of listening male and female mice but do so in different ways consistent with their behaviors during mating: males are more exploratory, while females display reduced locomotion and more escape or alert behavior. Vocalizations linked to restraint context, however, result in an increase in escape behavior from the speaker for both sexes, as well as twitching and lung and sniff that are linked to the negative affect of these vocalizations. Overall, our findings show that the valence of mating but not restraint vocal sequences differs based on the sex of the listening animals.

Please indicate the animal model CBA/CaJ mouse in the abstract

Impact of molecular marker and treatment on overall survival and progression free survival in patients with recurrent GBM: A retrospective single center analysis

Background: GBM is the most common aggressive CNS tumor in adults with poor prognosis. Recurrence of the GBM is inevitable with a median survival of 12-15 months. We have no standard of care treatment for recurrent GBM and lot of clinical trial has been going on to for the recurrent GBM. We report the association of the molecular marker and type of treatment on overall survival and progression free survival in recurrent GBM.

Methods: After IRB approval, we reviewed the chart of 288 recurrent GBM patients from 2012 to till date. Multivariable analysis was used to calculate the overall and progression free survival for the 3 cohort of patients (EGFR, MGMT, IDH mutation).

Results: 43% of the patient had EGFR amplification, 38% harbored MGMT mutation and 7.4% were IDH-1 mutation, only 4 patient had TERT mutation therefore they were not included for analysis. 66 (25.6%) patients had surgery, 29 (11.2%) had radiation, 184(72.4%) had chemotherapy. Out of these patients who had chemotherapy, 34 had Lomustine alone, 81 had Bev alone and 18 had both, 81(31.4%) patients were on clinical trials. Mean duration between first surgical diagnosis to 1st recurrence for all patient is 9.4 months; The median overall survival was 11.7 months; the median PFS from the diagnosis to the first recurrence is 6.49 months; and the median PFS from the first recurrence to the second recurrence is 4.59 months. The median PFS for MGMT methylation and non methylation was 9.05 and 5.51 months, Hazard ratio of 0.59 (0.43, 0.080), p-value (<0.001). There were no association of molecular marker on the overall survival on all 3 cohort of the patient. On further analysis, treatment with bevacizumab is associated with either lower risk of recurrence and PFS in all 3 cohort of patients.

Diagnosis to first recurrence and molecular status

	N	No. Event	Estimated Median	HR (95%CI)	P-value
EGFR					
-non-amplification	126	124	7.44	Reference	
-amplification	95	95	6.72	1.17 (0.89 , 1.54)	0.27
MGMT					
 non methylation 	120	118	5.51	Reference	
-methylation	73	72	9.05	0.59 (0.43 , 0.80)	< 0.001
IDH-1					
-wild	188	185	6.39	Reference	
-mutation	15	15	8.33	1.13 (0.67, 1.92)	0.65

Conclusion: Molecular marker have impact on the progression free survival esp. MGMT methylation but no association with overall survival. Bevicizumab is efficacious in recurrent GBM but we need standard of care for recurrent GBM for increased overall survival benefit.

Bicky Thapa

Clinical outcomes of single agent bevacizumab therapy in recurrent GBM: Cleveland Clinic Experience

Background: Glioblastoma (Grade IV) is the most common malignant brain tumors in adults and is associated with dismal prognosis. Bevacizumab has been used as salvage therapy especially after recurrence and it has shown to have increased progression free survival (PFS) and overall survival (OS) either alone or in combinations. We report survival benefit of bevacizumab in recurrent GBM and its association with molecular markers.

Methods: We reviewed 258 patients with recurrent GBM from 2012- 2017 after IRB approval. A total of 65 patients received single agent therapy with bevacizumab after first recurrence. The median OS, median PFS and its association with molecular marker were analyzed for this cohort of patients who received single agent bevacizumab.

Results: Out of 258 patients, 82 patients received bevacizumab as single agent or combinations but only 65 patients had single agent bevacizumab after first recurrence. 23 patients harbored EGFR mutation, 3 patients had IDH mutation and 14 patients were MGMT methylated. Median overall survival (OS) was 354 days (p value of 0.58) and median progression free survival (PFS) was about 179 days (p value of 0.24). On further analysis using molecular markers, median OS in EGFR amplified and non-amplified were 347 and 384 days with p value of 0.316; IDH mutated and wild type had median OS of 363 and 325 days with p value of 0.425; median OS in MGMT methylated and unmethylated were 462 and 301 days with p value of 0.042.

Conclusion: In our study bevacizumab is found to have efficacious in patients with MGMT methylation as compared to other mutations however there was no statistical significance in median overall survival and progression free survival in whole cohort.

Arshna Qureshias

Title: S-Nitrosylation status and its possible role in mitigating kidney hypoxia following CPB

Background: Impaired kidney function is frequently observed in heart surgery patients following cardio-pulmonary bypass. Previous studies by our group have linked acute reductions in nitric oxide bioactivity, the main regulator of tissue blood flow S-nitrosohemoglobin (SNO-Hb), to reductions in kidney oxygenation, blood flow and subsequent renal impairment. We hypothesized that components of the bypass procedure would reduce circulating SNO-Hb levels, with the magnitude of this reduction correlating with markers of kidney function and patient outcome.

Methods: After obtaining written informed consent, blood samples were obtained before and during bypass and on post-operative day (POD) 1. SNO-Hb levels, change in kidney function (estimated glomerular filtration rate; eGFR), and plasma erythropoietin (EPO) concentration were all measured. Status and outcome data were secured from the patients' medical record.

Results: In the patients studied to date (n=28), a significant decline in SNO-Hb concentration by POD 1, correlated with ICU stay (R=-0.32). In addition, SNO-Hb and eGFR on PODs 1 & 2 directly correlated (R=0.48 and 0.30, respectively), i.e. lower SNO-Hb tracked with reductions in kidney function. Consistent with a presumed reduction in kidney oxygenation, plasma EPO levels were elevated at off pump and POD1. Elevated plasma EPO was inversely correlated with both SNO-Hb (R=-0.53) and eGFR (R=-0.55).

Conclusion: CPB decreases SNO-Hb and is associated with kidney dysfunction and worse patient outcome (increased ICU stay). While the mechanism for this decline remains to be determined, the results suggest that therapies directed at maintaining or increasing NO bioactivity could improve outcome in adult cardiac surgery patients.

PCP: A PIONEER OF PATIENT CARE

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A 53 year old caucasian male with a PMHx of Alcohol Use Disorder and Chronic Back Pain and hydronephrosis with stent placement who was directly admitted to hospital from his PCP to be evaluated for back pain and weight loss. His back pain more then 3 years, located lumbar area, nonradiating, not associated with neurologic deficit. He has been seen for back pain by neurosurgeon multiple time and had many injection with many trial of physical therapy and pain medications without any improvement. He has not seen any primary care physician during that period and in past as well. He has been always getting medical attention from his surgeon. During one of this visit, he had MRI of back for the pain which is incidentally showed horseshoes kidney. Later, he has been finally referred to a PCP for work up. During PCP office visit, he has to be found a change in his bowel habits and a 30 pound weight loss in the last 6 months. He moves his bowels about 5 times a day, the stools are scanty and "thin" with occasional abdominal pain. Additionally he had significant family history of LYNCH syndrome associated with colon cancer in his mother plus brother and ovarian cancer in her aunt. Her PCP decided to order same basic labs that showed severe anemia and abdominal and pelvic CT that showed large necrotic mass involving the distal segment of the sigmoid loop, concerning for neoplasm, hydronephrosis with horseshoes kidney. He also had multiple mets to liver. He had sigmoid colectomy and pathology report showed metastatic adenocarcinoma, Mismatched repair positivity and associated with LYNCH syndrome. He has been diagnosed with Stage IV colon cancer. If this patient at the beginning was followed up by PCP, he would be most likely have more change to be screen much early than 53 year old age. Because, firstly he already has have LYNCH syndrome in his family that would be leading more early screening for cancer. Secondly, he would have been screening of colonoscopy at age of 50 years old even thought if you missed family history. We can not underestimate having been follow up by regular a PCP in health care. PCP is a milestone of healthcare in every standpoint.

<u>Title:</u> "Lowest effective dose of Buprenorphine in stable office based opioid maintenance

treatment"

Authors: Theodore V Parran MD, Chris Adelman MD, Hishita Parikh MD, William Goldman DO,

aurav N Mathur MD

Background:

Research and extensive clinical experience since its release in 2002 have established that bup/NX is a safe and effective treatment for moderate and severe opioid use disorder as part of medication assisted treatment. Bup/NX treatment decreases opioid use, improves treatment adherence and increases sobiriety rates. Much less has been reported regarding the safety and efficacy of changing bup/NX doses in stable patients during long-term opioid maintenance therapy. Very little information is available as to whether or not patients need the same bup/NX dose in long-term stable maintenance that was necessary to initially stabilize them from active addiction.

Bup/NX doses appear to rarely be changed over time, and even strategies to introduce the topic of dose change have not been reported in the literature. This is contrary to many other areas of chronic illness management, where in very stable patients concepts of "lowest effective dose" or "gradual dose adjustment to ensure stability and limit side effects" are commonly encountered. Bup/NX tapering could be done for a number of good clinical reasons: 1) evaluate a long term stable dose to see if it is the most appropriate dose for the patient at this point in time (i.e. sustained full remission), 2) to limits de effects of bup/NX resulting from higher initial induction doses, 3) to keep the over-all pharmacy costs of MAT to the lowest reasonable level, or 4) to maintain the patient on as low a level of physical dependence as is safe in order to facilitate final tapering if or when the patient decides to stop bup/NX entirely. Despite all of these potential clinical indications to discuss the gradual tapering of bup/NX dose during long term MAT, there is little research or even case reports indicating whether or not such discussions take place or the safety and efficacy of such tapers.

In this report we present data from a MAT clinic initiative to introduce the idea of ultra-gradual bup/NX dose taper to patients in sustained full remission from opioid use disorder and fully adherent with a comprehensive sobriety support program. Data includes clinical characteristics of those patients who agreed to taper, how an ultra-slow taper was tolerated including the emergence of withdrawal / craving / relapse data during a taper, and whether an initial dose taper was likely to result in the patient deciding to taper off of bup/nx completely. In addition data about patient satisfaction with their MAT program in those who chose to taper and those who did not are presented.

Methods:

The study is a retrospective case series chart review of patients stable on long-term outpatient MAT and fully adherent with a comprehensive sobriety support program who were receiving bup/NX between the years of 2003 through 2017. All patients met criteria to be considered in sustained full remission from their opioid use disorder. We collected the following demographic data: patient age, sex, race, insurance status, employment, urine toxicology history, bup/NX dosage history, outpatient program adherence, and withdrawal symptoms if tapered. In addition, a validated Satisfaction with Life Scale wellbeing survey was also given to all patients to assess self-wellbeing. Patients were asked to assess their wellbeing satisfaction scores prior to their start of bup/NX treatment, and also after receiving bup/NX MAT. The taper option was presented to patients in sustained full remission from opioid use disorder on long-term bup/NX MAT through the question: "now that you have done so well for so long in sobriety ... how long would you like to be on this medication, and what is your interest in a very slow partial taper of your dose?" The ultra-slow taper involved decreases of 1-2 mg every 3-4 months, and all dose decreases were initiated with the patient's agreement. If at any time the patient chose not to taper, or to reverse a previous dose decrease this was done immediately.

Results:

45 of 101 patients expressed interest in attempting a slow dose taper while 56 declined to taper and remained on their original dose. Of the 45 taper attempting patients, their average length of time on stable MAT was 58.1 months with a range of 6 to 130 months and median length of 47 months. Characteristics of those agreeing to dose adjustment: 35. 7% were female, 64. 3% male, 64. 3% employed, 73. 8% were Caucasian, 19% African American, 7. 1% Hispanic. All patients in the MAT Clinic had already completed an IOP and Aftercare program, ongoing 12 step participation, regular urine toxicology screening and prescription monitoring program checks. The average daily bup/NX dosage of patients prior to taper was 11 mg with a range of 6 mg to 16 mg. The ultra-slowl taper approach produced minimal withdrawal symptoms (some mild increase in self-reported anxiety in the two weeks following a dose decrease), no increase in opioid cravings and no relapse events. The average final bup/NX dose at the time of data gathering for taper patients was 5.4 mg with a range of 0 mg to 12 mg. Of the 45 patients who chose to taper, 5 patients reduced their dose to zero, 4 patients were unable to tolerate the taper at all were returned to their initial bup/NX dose. There was no report of relapse in patients who began tapering, and there were no abnormal UDS results in this group.

Of the 101 patients in long-term stable MAT clinic, 66 patients completed the wellbeing assessment survey. Of these 66 patients, 21 patients participated in dose adjustment while 45 did not. The average pretreatment wellbeing satisfaction scores of patients agreeing to dosage adjustment was 6.76. The average pretreatment wellbeing satisfaction scores of patients who did not participate in dose adjustments was 6.2 (p=.287). The t-value comparing these two groups is 0.5648. The average posttreatment wellbeing satisfaction score of taper patients was 24.05 and of the non-taper patients was 23.38 (p=.253). The t-value comparing these two groups is 0.668.

Conclusions

Patients in sustained full remission, two or more years enrolled in a comprehensive sobriety support program combined with bup/NX MAT, can be safely screened for their willingness to very gradually reduce their bup/NX dosage. In motivated patients, gradual dose reductions in the range of 1-2 mg Q3 months appears to be safe and well tolerated. The act of screening patients on long term stable MAT regarding a possible gradual tapering of dose often results in patient agreement to participate in a taper attempt. The efficacy of dose adjustment in long term stable patients in MAT as measured by patient satisfaction, withdrawal, and cravings is safe and well tolerated. There was no appreciable difference in wellbeing satisfaction in patients who agree to dose adjustments verses those who did not agree. In stable patients on MAT, discussion of dose adjustments and gradual dose tapering can be considered and in our experience was welcomed by almost half of the patients in our clinic.

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Abstract:

Title: Evaluating Patient Perceptions of Physician Extenders

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Cleveland Clinic

Background: Physician extenders have begun to take on responsibilities of physicians. A physician extender is defined as either a nurse practitioner or a physician assistant (PA) that does tasks that a physician commonly does. This change in view has occurred for many reasons including: a decreased number of primary care physicians that are available for routine physical examinations and the extensive amount of charting each patient requires. Previous studies have shown that patient satisfaction is equivalent between the two professions, and that further studies need to be done to determine what profession is preferred by patients. This study was designed to measure patient experience and satisfaction with a physician extender and how certain demographics can affect how a respondent answers. It was hypothesized that patients will be satisfied with their experience with a physician extender, but will prefer to see a physician when given the chance.

Methods: To assess the general public's opinion about the situation, 200 anonymous surveys were passed out that contained 11 demographic questions and 14 survey questions about physician extender experience and comparison of the two professions. The answer choices from the survey included rating components of experience from 1-10, Yes & No Questions, and Sometimes, Never, Always, Usually. These surveys were passed out to patients, patient families, Cleveland Clinic staff, and residents of Cuyahoga County.

Results: When evaluating the experience with a physician extender, the most common response was "Always", meaning that the physician extenders treated patients well. When comparing a physician extender versus a physician, the results showed that 64% of the sample population would not feel comfortable with a physician extender performing surgery on them. It also showed that cost could play somewhat of a role in deciding between going to a physician versus a physician extender. Most commonly, respondents reported that physician extenders were sometimes comparable to physicians when providing medical care.

Conclusions: The first part of the hypothesis was correct in that patients were satisfied with their experience with a physician extender. The second part of the hypothesis will need further research because the data showed that "Sometimes" was a common answer regarding those questions, suggesting that certain circumstances play a role between choosing the two professions. Demographics correlated with every question response, except for questions concerning cost, for which majority of respondents with children responded that cost was not a factor in seeking care from a physician extender. Those without children reported that their decision depends on cost difference. Patients may benefit from greater education in the difference between physicians and physician extenders because few could distinguish between the two providers.

Matthew Hom

Endoplasmic reticulum (ER) stress and neuroinflammation are implicated as significant contributors to neurodegeneration and cognitive dysfunction in a variety of neurodegenerative diseases. Recently, we reported that exposure to deltamethrin, the pyrethroid insecticide, causes hippocampal ER-stress, apoptotic cell death cognitive deficits in adult mice (Hossain et al., 2015). Here, we investigated the mechanistic links between ER-stress and neuroinflammation following exposure to deltamethrin. We found that single oral exposure to very low dose of deltamethrin (1 mg/kg) caused neuroinflammation as mice exhibited with microglial activation and increased protein levels of TNF- α , gp91phox, and iNOS in the hippocampus. These changes were accompanied by induction of ER stress as the protein levels of C/EBP-homologous protein (CHOP) and glucose-regulated protein 78 (GRP-78) were significantly increased in hippocampus following exposure to deltamethrin. To determine whether induction of ER Stress triggers the inflammatory response, mice were treated with two intraperitoneal (i.p.) injections of 1 mg/kg salubrinal (ER stress inhibitor) 24 h and 30 min before the administration of deltamethrin. Inhibition of ER stress with salubrinal prevented deltamethrin-induced TNF- α , gp91phox and iNOS activation. For further confirmation of these results, we performed an additional experiment with BV2 cell lines. We found that inhibition of ER stress with salubrinal significantly attenuated the levels of TNF- α , gp91phox, and iNOS in BV-2 cells. Collectively, these results demonstrate that exposure to deltamethrin leads to ER stress mediated neuroinflammation, which may contribute to neurodegeneration and neuronal dysfunction in mice. Supported in part by 1R01ES027481-01A1.

CONTRAST-INDUCED NEPHROPATHY IN ELDERLY HOSPITALIZED PATIENTS AND IMPACT IN NORTHERN OHIO

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Background: Contrast-induced Nephropathy (CIN) is a major cause of mortality and morbidity among elderly patients. Elderly patients who suffer from impaired renal function are at an increased risk of developing CIN. A systematic review of literature was performed to understand the occurrence, risk factors, and appropriate preventive measures for CIN in the elderly patients. The results were put into perspective for Northern Ohio, a region with a growing elderly population and increased use of hospital services.

Methods: Our study methodology adhered to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Statement for systematic reviews guidelines. The PubMed, EMBASE, and CINHAL databases were utilized. All prospective, cross-sectional or retrospective studies investigating CIN in elderly were evaluated for eligibility. Studies were included if they were: at the level of evidence between I and IV, written in English, published within the last 15 years and included human subjects at the age of 80 and over. Studies that only reported issues other than different contrast media, risk factors, epidemiology, or pathophysiology were excluded. 930 studies were initially considered prior to exclusion criteria. 68 studies were used in our final analysis.

Results: The development of nephrotoxicity in elderly patients following the introduction of contrast media during invasive and diagnostic procedures is a relatively common occurrence in hospitals. Several studies reported the frequent occurrence of contrast induced nephropathy in the elderly over the age of 85. Multiples studies bolster the notion that age by itself is a risk factor for developing contrast-associated nephropathy. Studies have shown a dose-dependent risk of renal dysfunction, lower doses of contrast are relatively safer, but they are not devoid of risk. Prospective randomized trials established significant distinctions between contrast agents based upon their chemical attributes. The use of first generation hyperosmolal ionic contrast agents is associated with a greater risk of nephropathy compared to nonionic low osmolal or isoosmolal agents.

<u>Discussion:</u> Awareness of CIN is particularly important for physicians practicing in Northern Ohio hospitals, due to the region's growing elderly population. By the year 2020, 1 out of every 4 residents in half of all counties in Ohio will be at least 60 years of age. According to a recent projection, by 2030, nearly one-third of residents of Cuyahoga County will be over age 60. Thus,

greater awareness of CIN and its prevention is particularly warranted among Northern Ohio physicians. Based upon the current studies and review, CIN appears to be common among elderly patients, leading to acute renal function impairment. Physicians should recognize key risk factors and take steps to reduce CIN in high risk patients. Low-osmolar and iso-osmolar media should be utilized to prevent CIN in the at-risk patient population.

Case report: A case of ruptured appendicitis presenting as necrotizing soft tissue infection of the flank

James Tamesis, Meyyappan Somasundaram, Keyvan Ravakhah St Vincent Charity Medical Center, Cleveland, Ohio

We present a case of a 69 year old male with a medical history significant for Alzheimer's dementia, Diabetes mellitus type 2, and peripheral artery disease on clopidogrel and cilostazol who presented to his PCP with complaints of right flank swelling with associated pain as noted by his caretaker for the past 24hrs. Due to his dementia, he was not able to give a reliable history regarding his symptoms, though his daughter who serves as his caretaker mentioned that she had only noticed his right flank increasing in size for the past 24 hours, and had noted that he was ambulating less than usual. He was admitted for concerns of right flank abscess vs hematoma. Physical exam was significant for a blood pressure reading of 90/60 mmHg and tachycardia of 110cpm with a large, 20x20cm, fluctuant, warm to touch mass over the right iliac crest with crepitations on palpation with a stethoscope. Significant work up on admission showed significant leukocytosis of 21K/uL and markedly elevated inflammatory markers (ESR: >120mm/hr, CRP: >190mg/L). CT of the abdomen suggestive of ruptured appendicitis and extensive necrotizing soft tissue infection involving the right retroperitoneal fat, right quadratus lumborum, right iliopsoas muscle and right superficial fat and subcutaneous tissue overlying the right flank. Sepsis protocol was initiated, and the patient was started on IV NS at 30mg/kg/hr, clindamycin, vancomycin and meropenem followed by debridement and drainage of necrotic tissue and abscesses. Intraoperative wound cultures grew Actinomyces odontolytica, and 2 different strains of Escherichia coli pointing towards intraabdominal source, with appendix as the likely culprit of the extensive necrotizing infection. Antibiotics were then changed to ampicillin-sulbactam based on cultures and Infectious disease recommendation, with antibiotic coverage for a total of 6 weeks. He was discharged to LTAC where his condition improved and was eventually discharged home. This case presents a rare and life threatening complication of acute appendicitis. This case highlights the importance of considering intraabdominal sources of infection when dealing with soft tissue infections in the abdominal region in patients who are unable to provide a proper history. Early recognition and prompt medical and surgical intervention is key in preventing significant morbidity and mortality in such

Aravind Thavamani

The Safety and Efficacy of Enteral Omega-3 Fatty Acids Supplementation in the Resolution of Parenteral Nutrition Associated Cholestasis: A Case Control Study.

Abstract

Objective: To analyze safety, tolerance and efficacy of enteral omega-3 fatty acids (FAs) in the resolution of Parenteral Nutrition Associated Cholestasis (PNAC) and postnatal growth among preterm neonates.

Study Design: This is a single center retrospective case-control study of all neonates born less than 32 weeks of gestation and developed PNAC (Direct bilirubin>2mg/dl). Infants who received enteral omega-3 FAs supplementation (1g/Kg/d) served as cases and were compared with gestational age, gender and direct bilirubin level matched controls that did not receive enteral omega-3 FAs supplementation.

Results: A total of 48 infants were analyzed, 24 who received enteral omega-3 fatty acids were matched with 24 controls. The omega-3 FAs and control groups were similar in gestational age (weeks) and birth weight (gram). Overall there were no differences between the two groups in infants' demographics or clinical characteristics including risk factors for the development of PNAC. Infants who received enteral omega-3 FAs had significantly fewer days of cholestasis (p=0.025) and a higher average daily weight gain (grams/day) (p=0.011) than their controls. In a linear regression analysis with days of cholestasis as the dependent variable and Ursodeoxycholic acid (UDCA) and Omega-3 FAs as independent variables, enteral omega-3 FAs remained associated with a shorter duration of cholestasis. p<0.001.

Conclusion: Enteral fish oil is inexpensive, safe & well tolerated in preterm neonates with no contraindications to enteral feeding. Enteral omega-3 FAs are easy to administer and help in rapid resolution of PNAC while promoting postnatal weight gain in preterm infants.

A RARE FINDING OF H PYLORI GASTRITIS AND DUODENITIS MIMICKING A GASTRIC DIVERTICULUM IN UPPER GASTROINTESTINAL BLEEDING

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Background:

Gastric diverticulum is extremely rare with a prevalence of 0.04-0.11% (1). Two types occur – congenital and acquired. Acquired diverticula are often located close to the pylorus and are associated with organic gastric diseases (2.3).

Case report:

A previously healthy 13-year old male presented with acute onset, red, painless rectal bleeding. Initially, Meckel scan did not show evidence of Tc99 Pertechnetate uptake. A subsequent CT angiogram revealed an incidental finding of two outpouchings concerning diverticula near the gastric antrum without any source of active bleeding (figure 1). The patient's bleeding progressively became melenic raising a suspicion for an upper GI source of bleeding, possibly from the gastric diverticula. An upper GI endoscopy did not visualize diverticula, however, showed swollen gastric antrum and ulcerated duodenum (figure 2). Biopsies revealed active H. Pylori gastritis and duodenitis with acute mucosal hemorrhage. Since endoscopy did not visualize diverticula, contrast upper GI series was performed to verify location. The contrast study showed prominent swelling of duodenal bulb which was mimicking the 'gastric diverticula' on prior CT angiogram.

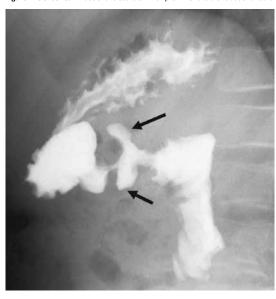
Discussion:

The finding of the 'mistaken' gastric diverticula on CT, which was subsequently determined to be the swollen duodenal bulb in upper GI contrast study, is fascinating. Evidence favoring the latter is based on the appearance of two symmetric outpouchings caused by distension of the bulb versus a gastric diverticulum which would present a single outpouching. Since the definitive treatment of a symptomatic gastric diverticulum is surgical resection, this case illustrates the importance of maintaining a cautious approach in the diagnoses of this rare entity.

Figure 1: CTA Abdomen - Two small diverticula at the gastric antrum with surrounding thickening and mesenteric wall edema.



Figure 2: UGI series - Duodenal distension with prominent fold of duodenal bulb.



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Conflict of Interest: None

Distribution and projection of VIP expressing cells in the Inferior Colliculus in mice.

Ryan M. Edelbrock¹, Nichole L. Beebe¹, David Goyer², Marina A. Silveira², Michael T.

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Objective: To identify the distribution and projection of vasoactive intestinal peptide expressing (VIP+) cells in the inferior colliculus (IC).

Background: The IC is the main hub in the central auditory system, serving a critical role in the ascending and descending auditory pathways. The IC contains three major subdivisions with different functions. The lateral cortex helps localize sounds in space. The dorsal cortex serves auditory attention and vigilance. The central nucleus is involved in the main pathway for sound perception! VIP is a neuropeptide that serves as a co-transmitter. We hypothesized that VIP+ cells may represent a functional subtype of IC neurons.

Methods: We used 7 mice that were genetically engineered to express cre-recombinase and a red fluorescent protein in VIP+ cells. Three mice were used to identify the distribution of VIP+ cells. Five mice were stereotaxically injected with an adeno-associated virus into the left IC for viewing VIP+ cell projection patterns. Mice brains were fixed and sliced horizontally, coronally, or sagittally. Brain sections were viewed on a fluorescence microscope. A computerized system was used to analyze the distribution of VIP+ cells in the IC and to track their projections to IC targets in other brain regions.

Results: We found that VIP+ cells are expressed in all three subdivisions of the IC with a majority of the cells being in the dorsal cortex of the IC (>70%) specifically in the caudal parts. We also found that VIP+ cells project to most major outputs of the IC, contributing to both ascending and descending auditory pathways.

Conclusions: VIP+ neurons could contribute to perception, vigilance, and attention. They could be the reason why we assign priorities to sounds and the reason why we wake up to our crying child and not a loud truck.

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Cytotoxicity of Microwaves on Probiotic Bacteria

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PURPOSE: Microwaves, gas-stoves, and convection-ovens are used daily to warm up food. We sought to determine the toxic effects of these heating methods on the growth of probiotic heateria.

METHODS: Probiotic bacteria growth was determined by using the effectiveness of bacteria to turn milk into yogurt. Eighteen culture cups were prepared, each with one tablespoon of yogurt and four ounces of milk. For each heating method, six random cups were heated to the determined time it took to heat one culture to 115°F. For the control, no bacteria were exposed to direct heating, as one tablespoon of yogurt was added to four ounces of milk after heating the milk to 115°F (via gas-stove). All cultures were placed at room temperature. The conversion of milk into yogurt was measured, after 32 hours, by the amount of liquid left and the pH of the culture.

RESULTS: The time to heat one culture to 115°F was 27, 117, and 350 seconds for the microwave, gas-stove, and convection-oven. Each of the cultures had different amounts of liquid left (microwave=46±2.3mL, gas-stove=54±2.2mL, convection-oven=37±2.0mL; p<0.05 ANOVA), suggesting different toxic effects of heating methods. The control had the greatest amount of liquid (58±1.1mL). The pH of all cultures was 6.0.

CONCLUSIONS: There was less growth of probiotic bacteria when heated in the microwave than the convection-oven. Gas-stove heating led to minimal growth, but sudden heating in the control group led to the least growth. In conclusion, slow heating (convection-oven) appears to be the safest to probiotic bacteria, while microwaves and rapid heating have toxic effects.

Title: Missed Opportunities for Literacy-Related Anticipatory Guidance

Zaeem Lone, BA Ryan Chae, BS Robert Needlman, MD

Purpose: Literacy Promotion (LP) is recognized as an essential component of pediatric primary care. However, the actual behavior of pediatricians delivering LP has not been described in detail. This information could highlight missed opportunities for more effective LP.

Method: 7 attendings and 7 residents participating in an established Reach Out and Read (ROR) program agreed to deliver "optimal" LP given real-world time constraints. Parents of children 6 months through 6 years attending an urban primary care clinic were enrolled. With parents' consent, a research assistant videotaped well-child visits and made follow-up phone calls to assess parents' recall of the visits. Transcripts of the visits were analyzed quantitively and qualitatively.

Results: Of 73 parents approached, 64 agreed to be taped. LP occurred in 46/64 encounters. LP averaged 74.5±7.4 seconds (7% of total visit time), and included questions (75% of visits), advice on the value of reading aloud (45%), advice on how to read aloud (65%), observation of parent-child book use (18%), and modeling by the doctor (32%). On average, during an LP event, doctors made 3.2 statements to parents (range 0 to 10) and asked 2.3 questions (range 0 to 8; of these 7% were open-ended); parents made 3.6 statements to doctors (0 to 11) but only 4 parents asked a question. Follow-up calls were completed with 24/46 parents, on average 9 days later. Asked to report what helpful advice they had received in the visit, without any prior mention of reading by the caller, only 1 parent mentioned reading aloud; asked about specific LP components, parents correctly recalled having received advice on the value of reading aloud 83% of the time, and on how to read aloud, 53% of the time; having been observed 25% of the time; and modeling by the doctor 46% of the time.

Conclusion: In a real-world setting, conversations about reading aloud occurred in 72% of visits. LP consisted mainly of advice and questions by the doctor, with relatively little observation or modeling, and only rare questions from parents. Training in specific components of LP, utilizing video recordings of actual visits, could improve the quality and efficacy of LP.

Title: Development of latrogenic Cushing's syndrome in a patient on Anti-Retroviral Therapy

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Introduction

Glucocorticoids (GC) are used for variety of indications in human immune deficiency virus (HIV) infected population, including chronic respiratory diseases and musculoskeletal conditions. A majority of prescribed and endogenous GC are metabolized by cytochrome-P450. Antiretroviral therapy (ART) used for the treatment of HIV infection can have significant interaction with other drugs. ART combinations include pharmacologic boosting agents that inhibit cytochrome-P450, thus increasing the plasma levels of these drugs. Subsequent increase in plasma concentrations of the prescribed GC can induce iatrogenic Cushing's syndrome (ICS) and through the hypothalamic pituitary adrenal (HPA) axis feedback mechanism, ICS leads to secondary adrenal suppression and low endogenous cortisol levels. There are multiple reports in HIV patients developing ICS and adrenal insufficiency as a result of drug-drug-interactions with inhaled or intranasal GC therapy. But repor ts related to intra-articular triamcinolone injections causing ICS are relatively uncommon.

Case report

We describe a 55-year-old white female with acquired HIV infection on a single tablet regimen Genvoya™ (Elvitegravir, Cobicistat, Emtricitabine, and Tenofovir-Alafenamide) who was hospitalized following a road traffic accident requiring knee surgery. Post-operative course was complicated by joint infection requiring intravenous ertapenem for three months. Due to persistent knee pain, she received 40 mg triamcinolone-acetate intra-articular injection every 3 months for a total of three injections. She presented seven months later with symptoms including new onset diabetes, hypertension, fatigue, easy bruising and poor wound healing. On physical examination, she appeared obese with moon facies, buffalo hump, supraclavicular fullness, facial flushing and multiple ecchymosis over extremities. On laboratory evaluation, HIV viral load remained undetectable since onset of ART and CD4 count was within normal range. Endocrine workup showed suppressed endogenous HPA axis [low cortisol (1.1 u g/dL) with low ACTH levels (1.1pg/mL)], thus confirming ICS. Due to concern for drug-drug-interaction between the Cobicistat component of her ART regimen and intra-articular GC, Genvoya™ was switched to Dolutegravir and Emtricitabine/Tenofovir-alafenamide and intraarticular GC administration was discontinued. Upon re-evaluation six months later, her symptoms improved significantly and she did not require hydrocortisone replacement. In conclusion, she developed ICS followed by secondary adrenal suppression due to systemic absorption of triamcinolone-acetate and decreased CYP3A metabolism by cobicistat.

Conclusion

Cobicistat and ritonavir are pharmacokinetic boosters that prolong the action of other ART drugs via CYP3A inhibition that also enhances GC affect. The effect of cobicistat is not widely known compared to ritonavir. The potential for interaction with GC can occur with any non-systemic routes of administration (intra-nasal, inhaled or intra-articular) and when used together, patients should be monitored for ICS and secondary adrenal insufficiency. We emphasize the importance of awareness of serious drug-drug-interactions before introducing new medications in patients on ART

Snehi Shah

2018 AIPNO Abstract

Our hypothesis was that there will be a difference between the two types of cervical cancer, squamous cell carcinoma and adenocarcinoma, when assessing the positivity of PET scans that look for left over disease after treatment and the concordance between positive post-treatment PET scans and pathology specimen. This study was a retrospective chart review, using the Epic database, of all patients treated at Cleveland Clinic Main Campus between January 1st, 2008 and January 1st, 2018 and had their diagnosis of locally advanced cervical cancer (stage IB to stage IVA) treated with primary chemoradiation. They completed a post-treatment positron emission tomography (PET) scan 2-6 months after completing their treatment to see if there was disease left, and had a biopsy or surgery after they completed treatment. We excluded patients that were not treated with primary chemoradiation, did not complete a post-treatment PET scan, and presented with early disease or distant metastases. Some data we collected included age, dates of treatment, dose of cancer treatment given, dates of PET imaging, dates of surgery if it was ordered, and results of pathology specimen to see if they had cancer. We concluded that when post-treatment PET scans looking for left over disease had a negative result, they were accurate for both squamous cell carcinoma and adenocarcinoma and concurred with the pathology specimen. We also concluded that squamous cell carcinoma and adenocarcinoma presented similarly in terms of PET results assessing if the disease was completely gone or not. Lastly we concluded that the positive predictive value was low for both squamous cell carcinoma and adenocarcinoma which means that patients with PET scans that detected disease after treatment had negative pathology.

T-cell-rich B-cell Lymphoma with Secondary Hemophagocytic Lymphohistiocytosis Presenting as Acute Liver Failure – Chung Ki Wong

Abstract:

Malignancy-associated hemophagocytic lymphohistiocytosis (M-HLH) is mostly associated with T/NK cell lymphomas and Hodgkin's lymphoma, but it is relatively uncommon in patients with B-cell lymphomas. This is a case of a patient with acute liver failure caused by malignant infiltration by T-cell rich B-cell lymphoma and secondary HLH.

Introduction:

Hematological malignancies such as Hodgkin's lymphoma, non-Hodgkin's lymphomas, and leukemias can cause malignant infiltration of the liver. Malignant infiltration and malignancy-associated hemophagocytic lymphohistiocytosis (M-HLH) can simultaneously present as acute liver failure (ALF) and carry a poor prognosis with > 60% mortality rate.

Case Report:

A 62-year-old man presented as a direct admit from PCP office with elevated LFT's and a 3-month history of generalized weakness, fatigue, daily fevers of 101-102 degrees. His past medical history was significant for Castleman's disease s/p splenectomy, portal vein thrombosis, asthma, and recently diagnosed sarcoidosis without biopsy. He was a never smoker and consumed alcohol occasionally. Labs on presentation revealed anemia, thrombocytopenia, and transaminitis

After hospitalization, patient continued to have low-grade fevers with hemoglobin 9.3 g/dL, platelet 77,000/mm³, alanine aminotransferase 268 U/L, aspartate aminotransferase 199 U/L, serum ferritin > 70,000 ng/mL, and serum triglycerides of 348 mg/dL. CT scan of the abdomen and pelvis was significant for multiple nonspecific hepatic lesions with numerous periportal, retroperitoneal, and right iliac lymphadenopathy. Liver biopsy showed patchy areas of lymphohistiocytic infiltrate, while subsequent bone marrow biopsy revealed atypical lymphohistiocytic infiltrate with additional findings suggestive of T-cell-rich B-cell lymphoma. He also met criteria for HLH with fever, anemia, thrombocytopenia, hypertriglyceridemia, and elevated ferritin level. Upon further investigation, he was noted to have markedly elevated soluble IL-2 receptor alpha, which is specific for the diagnosis of HLH. Patient was started on R-CHOP for lymphoma along with etoposide and dexamethasone for HLH. Unfortunately, by his third cycle of chemotherapy, patient developed worsening metabolic acidosis and septic shock secondary to bacteremia and fungemia. Despite aggressive treatment, patient continued to deteriorate rapidly. With full capacity to make his own decision, he opted for supportive care only approach and was discharged to hospice care facility.

Discussion

In addition to T-cell-rich B-cell lymphoma, this patient also presented with secondary HLH. HLH is not a malignancy; it is a syndrome of excessive inflammation and tissue damage caused by a lack of down-regulation of activated macrophages and lymphocytes. While primary HLH refers to HLH caused by a genetic mutation, secondary HLH can be a manifestation secondary to any infection, malignancy, or rheumatologic condition. 27% of secondary HLH is related to

malignancy with the majority being hematologic malignancies. According to one retrospective population-based analysis, the estimated annual incidence of M-HLH in adulthood was 0.36/100,000 individuals/year. If left untreated, patients with HLH survive for only a few months secondary to progressive multi-organ failure.

The diagnosis of HLH is difficult because of its rare occurrence, variable clinical presentation, and the non-specific laboratory findings. Nonetheless, the diagnosis is often made by identifying a mutation in an FLH gene, or by fulfilling 5 out of 8 diagnostic criteria. H score is a diagnostic scoring system consisting of 12 variables designed to estimate the probability of HLH; for instance, fever, immunosuppression, hemoglobin level, leukocyte level, and triglyceride level. An H score ≥ 250 confers a 99% probability of HLH, whereas a score of ≤ 90 confers a < 1% probability of HLH. Our patient met 6 out of 8 criteria and had an H score of 254, making the probability of HLH 99%. Based on the HLH-94 protocol, which is the mainstay of HLH treatment, he was initiated on weekly treatment with etoposide and dexamethasone. The goal of therapy is to suppress systemic inflammation by destroying immune cells.

Besides malignant hepatic infiltration by concurrent T-cell-rich B-cell lymphoma, our patient also suffers from M-HLH induced liver failure. Liver involvement in HLH is common and results in marked elevation of liver enzymes. The probable mechanism of liver injury is considered secondary to infiltration of hemophagocytic histiocytes or due to overproduction of cytokines.

Hematologic malignancies and M-HLH can present simultaneously as acute liver failure and are associated with a poor prognosis. Once a high likelihood of HLH is established, evaluation for multi-organ involvement including bone marrow biopsy, liver biopsy, lymph node biopsy, and immunologic profiling should be initiated as soon as possible. Prompt induction of immunosuppressive treatment and chemotherapy are crucial for the survival of affected patients but HLH still carries a high mortality.

Conclusion:

In conclusion, hematologic malignancies and secondary HLH can present simultaneously as acute liver failure and are associated with a high mortality. In patients presenting with B symptoms such as fever, chills, weight loss, as well as hepatosplenomegaly, malignancy workup should be initiated as soon as possible. While starting chemotherapy and immunosuppressive therapy can be lifesaving, HLH is associated with high mortality rate with an average survival of 2-12 months.

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Androgen Deprivation Therapy Enhances Cancer Stem Cell Population in Prostate Cancer

Amrita Mukunda, Che Jarvis, Eswar Shankar, Gregory T MacLennan, Sanjay Gupta

Background:

Prostate cancer is the second most common cancer in the United States and the second leading cause of death in men. Androgen-Deprivation Therapy (ADT) is a current treatment modality for advance-stage prostate cancer, but it remains controversial. More than 30% of patients who have undergone ADT show signs of cancer recurrence and/or androgen-independent disease. Some adverse effects of ADT includes hot flashes, metabolic disorders, alteration in bone mineral density, cardiovascular problems, and sexual dysfunction. Cancer stem cells (CSCs) are a small percentage of cells in a tumor that reinitiates tumor growth. The androgen-independent and therapy resistance characteristics of CSCs suggest their potential role in prostate cancer and in the progression to castrate-resistant prostate cancer. We determined whether androgen-deprivation therapy results in enrichment of CSCs using ALDH1 as a stem-cell marker.

Hypothesis and Methods:

ALDH1 expression was determined in subset of patients with and without ADT by immunohistochemistry. Additional experiments utilized androgen-responsive human prostate cancer LNCaP and 22Rv1 cells subjected to mock ADT conditions in culture system to assess ALDH1 levels by Western Blotting assay.

Results

Immunohistochemistry method exhibited that in many of the non-ADT specimens stained for ALDH1 expression, either had a weak expression that was diffuse or a moderate expression in some focused regions. Meanwhile, ADT specimens stained for ALDH1 expression, a moderate or stronger expression of ALDH1 was noted throughout the sample. ALDH1 expression was scored in a scale from 0-3. The average score for non-ADT specimens was 1.571 while the average score for the ADT specimens was 2.263, which was comparatively higher than non-ADT specimens. Similarly, prostate cancer cells subjected to ADT conditions using charcoal stripped serum exhibited higher ALDH1 expression compared to the cells grown in complete cell culture medium. A progressive increase was observed in the ALDH1 levels in time dependent manner in cells undergone ADT.

Conclusion:

Taken together, our results suggest that androgen deprivation therapy leads to greater ALDH1 expression supporting CSC enrichment. Further studies are required to determine the involvement of CSCs in CRPC acquisition as well as the pathways and factors contributing to its expansion in response to ADT.

Ishani Majmudar

Purpose: Serious eye infections have been reported in up to 25.4% of contact lens wearers¹ due to improper hygiene habits. The purpose of this study is to analyze contact lens wearing habits of high school students and assess the risk factors and incidence of eye infection in this population.

Methods: An electronic survey was administered to 1,122 students in grades 9-12 at Barrington High School in Illinois to evaluate students' contact-lens wearing habits and risk factors for complications. Information regarding Basic Demographics, Contact Lens Hygiene Protocol, Contact Lens Replacement Compliance, and Reported Infection was collected.

Results: Of the 1,122 students surveyed, 323 (28.8%) wore contact lenses. Of these 323, 94.7% (306 individuals) wore soft lenses, while the remaining 5.3% used gas permeable lenses. 59.5% (192 students) of the CL wearers stated that they wear their contacts every day. 164 students (50.9%) of students wash their hands thoroughly each time they replace their lenses, 102 (31.5%) sometimes do, and the remaining 17.6% never wash their hands. 137 individuals (42.3%) shower in their contacts, 44.7% (144 students) always swim in their contacts, and 7.7% regularly sleep in their CLs. Although most students were aware that contacts should be replaced at least one a month, 58 students (17.6%) reported that they replaced their contacts at less frequent intervals. 21 individuals (6.5%) were unaware of their doctor's recommended contact lens replacement schedule. , 11% (36 students) admitted to experiencing an eye infection while wearing contacts.

Conclusions: While only 11% of students had actually experienced an eye infection, the risk factors among students for developing severe infections in this population is significantly higher. The results of this survey indicate a need for educational intervention, after which the survey should be re-administered to test for improvements in CL wearing behaviors.

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Effect of Chromium Picolinate on Atherosclerotic Lesion Regression in Metabolic Syndrome

Metabolic syndrome (MetS) refers to a cluster of risk factors that include insulin resistance, abdominal obesity, hyperglycemia, and dyslipidemia. Atherosclerotic disease, a major player in the development of several cardiovascular complications, is the leading cause of increased morbidity and mortality in MetS. Prevalence of atherosclerotic complications increases two- to-four-fold in individuals with MetS. Therapeutic management of vascular disease substantially burdens the national health care expenditure. Consequently, there remains an unmet need for cost-effective alternative approaches. Trivalent chromium (Cr3+) is a mineral nutrient with long-standing glycemic and cardiovascular benefits. However, lack of a mechanistic understanding of Cr3+ action has stalled its advancement in clinical medicine. Notably, it is currently unknown whether Cr3+ can regress lesions once formed, a highly clinically relevant goal affecting vascular health of individuals with MetS. The overarching aim of this proposal was to interrogate whether chromium picolinate, an over-the-counter bioavailable form of Cr3+, can regress atherosclerotic lesions in MetS. This was tested

in a pre-clinical mouse model of combined MetS and atherosclerosis (KKAy */-/ApoE -/-) using histochemical microscopic studies and biochemical assays. The results point to a possible trend in the regression of atherosclerotic lesion formation. However, further investigation will be necessary to confirm the results.

Aakaash D. Patel M.D. Candidate, Class of 2021 Northeast Ohio Medical University (NEOMED) Pathological changes to the visual system in Alzheimer's Disease

Sohi Mistry¹, Gabrielle Frame², Matthew A. Smith¹, Li Lin¹, & Christine M. Dengler-Crish¹

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Understanding the mechanisms, timing, and progression of Alzheimer's pathology in the visual system can help inform new, early interventions that may slow, stop, or reverse neurodegeneration.

Research shows that visual deficits and accumulation of retinal amyloid beta and phosphorylated tau (ptau) pathologies may precede onset of cognitive decline in Alzheimer's disease (AD). To elucidate the relationship between AD pathology and visual deficits, we examined two transgenic AD mouse models (Htau and 3xtg) and their respective controls (tau null and C57BLK6J) for visual deficits and pathological changes to brain regions that receive visual information. We assessed these variables across ages representing pre-pathological, emerging pathology, and progressing pathology disease states. Visual behavior tests were conducted using a fully-automated system to measure optomotor response in order to provide estimates of visual acuity. At pre-pathological ages, 3xtg mice had lower visual acuity than controls. With increasing age, both htau and 3xtg had reduced visual acuity compared to controls. There were no statistical differences between males and females of any strain in visual acuity at the ages tested; therefore, data are averaged across both sexes for each strain.

To assess brain pathology, immunofluorescent histological labeling techniques were used to identify amyloid beta, ptau, and inflammation in retinorecipient brain structures. Both htau and 3xTg mice show increased presence of $A\beta$, ptau and microglia inflammation in the SC at a prepathological age of 3 months compared to C57 and tau null mice. This supports literature that states retinal AD pathology precedes development of pathology in brain areas responsible for cognition—making visual disturbances and detection of retinal pathology potential early biomarkers for AD. Future work will characterize the progression of AD pathology in these mouse strains (and other AD models) throughout the central visual pathway in the brain.

Charvi Malholtra

Flow cytometry analysis of inflammatory cells isolated from the sciatic nerve and DRG after chronic constriction injury in mice

This project focused on the effect of stem mesenchymal cells(MSCs) on morphine tolerance and opioid-induced hyperalgesia, an over-sensitivity to pain stimuli as a result of opioid usage. The hypothesis of the project was that the use of MSCs would reduce both opioid tolerance and the corresponding hyperalgesia in rats and mice, due to the known anti-inflammatory effects of MSCs. Neural inflammation in the spinal cord is associated with chronic pain and opioid tolerance, due to which we predicted the efficacy of MSCs to diminish opioid tolerance and resolve chronic pain.

We were able to conclude that the MSC transplantation had a powerful reversal effect on both opioid tolerance and opioid-induced hyperalgesia in rats and mice. The transplanted cells demonstrated long-term viability and stability in their effects, with no observable side effects. As hypothesized, the MSCs' inhibitory impact on microglia and astrocytes was related to the anti-inflammatory properties, leading to anti-hyperalgesia and anti-tolerance in the rats and mice.

The effectivity of the MSC transplantation as a viable, safe, and low-cost treatment for opioid tolerance and hyperalgesia presents the possibility of pursuing this method to target related neuro-inflammatory conditions. Additionally, the tested therapy has the potential for clinical treatment of chronic pain conditions, effectively treating patients while eliminating the impact of opioid tolerance as well as opioid-related side effects in the body.

 Title, Authors and Institution: your presentation title must be descriptive and attract attendee interest. Abstract should include email address of the first author.

Closed Total Talar Dislocation: A Case Report, Amir Mansour BS 1, Brandon Lucas

MD 2, T. Ty Fowler MD 2

- 1 Northeast Ohio Medical University, Rootstown Ohio
- 2 Mount Carmel Health System, Columbus Ohio
- 2. Objectives: Clearly stated objectives increase rating of your session.

This case report serves to describe an extremely rare orthopedic injury and our experience with initial diagnosis and treatment in the acute setting.

Abstract: your original research/systematic review/case study. It must be 300-words maximum that describe the content and be of publishable quality.

A closed total talar dislocation is a rare injury. One without associated fracture of

the talus is exceedingly rare. This case report describes the diagnosis & treatment of

- a 31-year-old male who presented to the emergency department after an MVC with
- a closed, complete talar dislocation without associated fracture.
- Conflict of Interest: all primary authors and co-authors are required to disclose potential conflicts of interest prior to submitting the abstract.

There are no conflicts of interest to disclose.

Mitochondrial Dysfunction Induces MMP-13 Expression via Production of ROS in Primary Human Chondrocytes

 $\textbf{Sriharsha Voleti1}, \, Mohammad \, Y. \, Ansari1, \, Tariq \, M. \, Haqqi1$

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Introduction: Osteoarthritis (OA) is the most common chronic joint disease and is characterized by joint articular cartilage degradation. Chondrocytes are the only cell type in cartilage and are responsible for its regulation and repair. An upregulation of catabolic processes, such as Matrix Metallopeptidase 13 (MMP-13) secretion, degrades cartilage collagen fibers resulting in cartilage degeneration. Mitochondrial dysfunction has been associated with reactive oxygen species (ROS), however, its effect on OA is unclear. Our objective was to determine the effect of mitochondrial dysfunction on MMP-13 expression. We hypothesized that mitochondrial dysfunction induces MMP-13 expression through ROS production in primary human OA chondrocytes.

Methods: Primary human OA chondrocytes and cartilage explants were prepared from unaffected areas of knee OA cartilage (n=3) and treated with Carbonyl cyanide m-chlorophenyl hydrazone (CCCP) (30 μ M) to mimic mitochondrial dysfunction. Mitochondrial membrane depolarization and ROS levels were determined by staining with JC-1 and MitoSOX Red dyes respectively, followed by flow cytometry. MMP-13 expression was detected via Western blotting, ELISA, and immunohistochemistry.

Results: CCCP treatment of primary human OA chondrocytes induced mitochondrial dysfunction as determined by mitochondrial membrane potential loss. Induction of mitochondrial dysfunction via CCCP significantly upregulated mitochondrial ROS levels. Induction of oxidative stress by CCCP or H₂O₂ in chondrocytes induced MMP-13 expression. Upregulation of MMP-13 expression was dependent on time and dose of CCCP treatment. To rule out the possibility of chondrocyte dedifferentiation, we prepared human OA cartilage explants and treated with CCCP. Interestingly, in human OA cartilage explants, CCCP treatment upregulated MMP-13 expression. To confirm that mitochondrial dysfunction upregulated MMP-13 expression through ROS production, we treated primary human OA chondrocytes with MitoTempo antioxidant, followed by CCCP. Interestingly, mitochondrial ROS inhibition suppressed CCCP induced MMP-13 expression.

Conclusion: Our data demonstrates that mitochondrial dysfunction upregulated MMP-13 expression through the production of mitochondrial ROS in primary human OA chondrocytes.

Clinical Study- Case Report

Extramedullary Hematopoiesis: An Unusual Finding in Angiolymphoid Hyperplasia with Eosinophilia

Raj J. Thomas, B.S.(1), Nathan M. Johnson, M.D. (2), Douglas J. Grider, M.D. (2;3)

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(2)Department of Internal Medicine, Dermatology Division, Carilion Clinic & Virginia Tech Carilion School of
Medicine, Roanoke, VA
(2;3)Department of Basic Science Education, Virginia Tech Carilion School of Medicine, Roanoke, VA

(2;3)Department of Basic Science Education, Virginia Tech Carilion School of Medicine, Roanoke, V. rajthomas001@gmail.com

Objective: To report that extramedullary hematopoiesis occurs in benign vascular lesions, like ALHE, and should not detract from making a diagnosis of ALHE. Further, extramedullary hematopoiesis in such settings is not associated with systemic disease, including hematologic processes.

ABSTRACT

Extramedullary hematopoiesis (EH) is the process of erythrocyte synthesis occurring outside the medulla of the bone marrow. During fetal development, EH is a normal physiological phenomenon, but it is considered pathological when present outside the neonatal period. A 13-year-old male from Sierra Leone presented with an isolated $1.5 \times 1.0 \times 1.0$ cm nodule of the left preauricular cheek. The nodule had been present for several years and was slowly enlarging in a background of cystic acne for which he had received antibiotic therapy. The patient's only laboratory abnormality was an absolute elevated eosinophil count. Excision revealed a tan-pink soft tissue vascular proliferation surfaced by a 1.2×0.4 cm red-brown finely granular, hair bearing skin ellipse. Histopathology showed a dermal and subcutaneous well circumscribed proliferation of blood vessels in a mucoid stroma with stellate or spindled cells and inflammatory cells that include eosinophils, lymphocytes, and plasma cells, confirming the diagnosis of angiolymphoid hyperplasia with eosinophilia (ALHE). Additionally, scattered small islands of hematopoiesis throughout the lesion were noted. To the authors' knowledge, this is the first case of EH in the setting of ALHE to be reported.

Key words: extramedullary hematopoiesis, angiolymphoid hyperplasia with eosinophilia, epithelioid hemangioma

Reha Rabbani

Dr. Ravichandran Ramasamy

Dr. Henry Ruiz

Abstract

RAGE is a multi-ligand receptor that binds to AGE (advanced glycation end product) and leads to a series of cellular immune responses. These immune responses are exacerbated in an obese condition and can in turn lead to replicative cellular senescence. Replicative senescence occurs when telomeres become shortened and DNA damage occurs, therefore arresting the cell cycle. It has been shown through previous research that RAGE expression increases with obesity. It is hypothesized that obesity leads to cellular senescence, and that RAGE may accelerate this process in oxidative tissue like heart. To investigate our hypothesis, hearts were isolated from mice that were categorized into 4 groups based off of their diet: Standard Chow, High Fat Diet Wild Type, Standard Chow High Sucrose, and High Fat Diet High Sucrose. The mice with high fat diets consumed 60% calories from fat. RNA extraction was performed, and RT PCR (reverse transcriptase polymerase chain reaction) was performed to probe for senescence markers cyclin-dependent kinase inhibitor 2a (Cdkn2a) and cyclin-dependent kinase inhibitor 2b (Cdkn2b). Initial studies demonstrated feasibility for the proposed hypothesis.

After analysis of the data graphically, there was seen to be a doubling of the presence of Cdkn2b in mice that were fed a high fat, standard chow high sucrose, and high fat high sucrose diet compared to the control standard chow group. There was no clear increase in Cdkn2a. However, when standard paired t-tests and Mann Whitney tests were performed comparing all the subgroups amongst each other, there was seen to be no significant difference between the presence of Cdkn2a or Cdkn2b in the mice with different diets. Some factors contributing to these results could be the small sample size or pipetting errors in the final RT PCR process. There is further research needed in order to display a definitive link between aging and the accumulation of Cdkn2b and Cdkn2b senescence markers, along with the interaction of RAGE. With future research, we will investigate this same hypothesis with a larger sample size, and with RKO and Wild Type mice.

AIPNO 2018

Combining quantitative histomorphometry with NF-κB/p65 nuclear localization- A better predictor of biochemical recurrence in prostate cancer patients

Eswar Shankar, Patrick Leo, Robin Elliott, Andrew Janowczyk, Anant Madabhushi, Sanjay Gupta

Though the approach of risk determination possess major uncertainty, it is the major basis of clinical management decisions in prostate cancer. Only limited tools are available to understand the risk of disease recurrence and guide the treatment decision process. Computer-aided quantitative histomorphometric analysis has emerged as a powerful computing tool to identify, characterize, and quantitate histologic features of tissues beyond human visual capabilities. Several quantitative features can be assessed, such as precise numeric measurements pertaining to the spatial arrangement and architecture of nuclei, shapes of nests and nuclei, and nuclear texture. This technology has proven to be useful for the detection of cancer in tissue sections and also for predicting tumor biology and clinical outcome in cancer patients. Utilizing a combination of synergistic strategy of quantitative histomorphometry and biomarker expression of NF-κB/p65 from prostate tissue specimens, we sought to fuse structural and functional information from morphological and molecular markers to better characterize disease progression improving prediction of biochemical recurrence (BCR). We utilized radical prostatectomy specimens (n=23) for feature extraction from 15 patients without BCR and 8 patients who experienced BCR (PSA > 0.2 ng/ml) within two years of surgery. Digitized H&E slides were annotated for a representative cancerous region, glands were automatically segmented, and 216 features of gland architecture, shape, and orientation disorder were extracted. Nuclei were automatically segmented from NF-kB/p65 stained slides. Based on digitally calculated stain optical density, every nuclei pixel was classified as either negative or weakly, moderately, or strongly positive for NF-kB/p65 staining. H&E features alone in leave-one-out cross validation with a naive Bayes classifier was applied, using the top two features by t-test in every fold, to obtain a recurrence probability and repeated for NF-kB/p65 features. Analysis demonstrate that the three most predictive H&E features were all gland orientation disorder features. The top NF-kB/p65 feature was percentage of nuclei pixels positive for staining. Accuracy predicted was 78% with H&E features alone, 74% with NF-κB/p65 features alone, and 87% in the aggregate model. Taken together, our results demonstrate that fusing nuclei NF-kB/p65 and gland morphology information allows for functional and morphologic characterization of prostate cancer, potentially allowing for improved risk characterization and prognosis prediction in prostate cancer patients.

Adam Lauko

Efficacy of Immune Checkpoint Inhibitors for Brain Metastasis from NSCLC, RCC, and

Background: There is limited data evaluating benefit of Immune Checkpoint Blockade in Brain Metastasis. The only prospective study was of 18 NSCLCBM patients treated with pembrolizumab. We report overall survival (OS) and progression free survival (PFS) in Non-Small-Cell Lung Cancer (NSCLC), Renal Cell Carcinoma (RCC), and Melanoma treated either Nivolumab, Pembrolizumab and/or Ipilimumab.

Method: After IRB approval, patients with brain metastases treated with immune checkpoint blockade and whole-brain radiation therapy, surgery, or stereotactic radio-surgery at our tertiary care institution from 2014-2017 were reviewed. Univariate was used to assess OS and

Results: 45% of the patients were male, median age at the diagnosis of the lung cancer was 61 years. Most patients had good performance status (>80% with ECOG score of 0&1) at the time of the brain metastasis. 62% had supratentorial brain metastasis, 10% had infratentorial and 28% had both, 55 patients were started on the Nivolumab at the time of diagnosis of BM and 39 patients had Nivolumab after first progression of BM. The OS was 27.4 months when Nivolumab was given at the time of diagnosis of BM compared to 24.6 months when nivolumab was given after the first progression of NSCLCBM. PFS was similar at 3.7 months when nivolumab was given at the time of the diagnosis of NSCLCBM compared to PFS of 3.8 months when nivolumab was given after the first progression of NSCLCBM.

AIPNO 2018

Green tea polyphenols reverses TIMP-3 expression in prostate cancer by inhibiting histone modifying enzymes

Gauri Deb, Eswar Shankar, Vijay S. Thakur, Lee E Ponsky, Donald R Bodner, Pingfu Fu,

Green tea polyphenols (GTP) and its major constituent, epigallocatechin-3-gallate (EGCG) have been reported to demonstrate many interesting biological activities, including induction of epigenetic changes and cancer prevention. Recent studies in prostate cancer provide strong evidence that epigenetic mechanisms are major players in the regulation of the MMP-2 and MMP-9 and their binding partners Tissue Inhibitor of Matrix metalloproteinases viz. TIMP-2 and TIMP-3 involved in prostate cancer progression. In the present study, we demonstrate that GTP and EGCG mediate epigenetic reactivation of TIMP-3 levels and play a key role in suppressing invasiveness and gelatinolytic activity of MMP-2 and MMP-9 in prostate cancer cells. Treatment of human prostate cancer DU-Pro and LNCaP cells with 20 µM EGCG and 10 µg/mL GTP for 72 h significantly induces TIMP-3 mRNA and protein levels. Interestingly, investigations into the molecular mechanism revealed that TIMP-3 repression in prostate cancer cells is mediated by epigenetic silencing mechanism(s) involving increased activity of the enhancer of zeste homolog 2 (EZH2) and class I histone deacetylases (HDACs), independent of promoter DNA hypermethylation. Treatment of cancer cells with GTP and EGCG significantly reduced EZH2 and class I HDAC protein levels. Furthermore, transcriptional activation of TiMP-3 was found to be associated with decreased EZH2 localization and H3K27 trimethylation enrichment at the TIMP-3 promoter with a concomitant increase in histone H3K9/18 acetylation. Furthermore, clinical trial performed at the University Hospitals on patients undergoing radical surgery consuming 800 mg EGCG (Polyphenon E) up to 8 weeks and the grade-matched controls demonstrate increase in plasma TIMP3 levels, compared to controls. A marked decrease in HDAC activity; decrease in the protein expression of class I HDACs and EZH2; trimethylation of H3K27 were noted in the prostate tissue from GTP supplemented group. Our findings highlight TIMP-3 induction as a key epigenetic event modulated by green tea in restoring the MMP: TIMP balance to suppress prostate cancer progression.

Response and toxicity with immune checkpoint inhibition in older patients with non-

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 Department of Oncology, Sidney Kimmel Comprehensive Cancer Center at Johns

- Hopkins University
- Bloomberg-Kimmel Institute for Cancer Immunotherapy

Background: Immune checkpoint inhibition (ICI) has rapidly become standard of care in advanced or metastatic non-small-cell lung cancer (NSCLC) treatment. Initial phase III clinical trials suggest ICI may have decreased efficacy in NSCLC patients ≥ 75 years old. The relationship between age-related immune system changes and ICI treatment is poorly understood

Methods: The Johns Hopkins Upper Aerodigestive Diseases Immunotherapy Database was gueried for all patients ≥ 75 years old treated with anti-PD-1/PD-L1 agents as part of a clinical trial or standard of care, from 2007 to 2018.

Results: Thirty-one patients ≥ 75 years old receiving anti-PD-1/PD-L1 agents for locally advanced or metastatic NSCLC were identified. Eleven patients were female, median age was 80.8 years (range: 75.1-90.6) with median ECOG PS=1 (range: 0-3). Twenty-seven patients received PD-1/PD-L1 monotherapy (nivolumab=16, pembrolizumab=10, atezolizumab=1) and 4 received combination (+chemotherapy=1, +ipilimumab=2, +additional ICI=1). Ten patients received ICI in the first-line setting (1L); 21 patients in the second-line or beyond (2L+). In 1L ICI monotherapy (n=8), median doses received was 5.5 (range: 2-19), median progression-free survival (mPFS) was 7.3m, and median overall survival (mOS) was 11.3m. In 2L+ patients, median dose administration was 4 (range: 1-24), mPFS was 7m and mOS was 7.6m. Across 1L and 2L+ ICI monotherapy patients, a rate of 81.5% all-grade toxicity was seen, of which 30% were high-grade (3+). All 1L and 2L+ ICI combination patients (n=4) experienced a toxicity, with 3 patients experiencing high-grade events. Across all patients, the most common low-grade toxicities were fatigue (n=8) and dyspnea (n=8). High-grade pneumonitis was seen in two 1L ICI monotherapy patients; 2L+ ICI monotherapy high-grade toxicities included dyspnea (n=4), hypoxia (n=1; Grade 5), pneumonitis (n=1), chest pain (n=1), delirium (n=1), aspiration (n=1), heart failure (n=1), lymphadenopathy (n=1) and pleural infection (n=1). Combination ICI high grade toxicities included pneumonitis (1L=1; 2L+=1) and rash (2L+=1). Across patients, reasons for treatment discontinuation included progressive disease (31%), with double the patients stopping for toxicity (62%) and treatment ongoing for 2 patients.

Conclusions: Our results indicate increased frequency and severity of toxicity in anti-PD1/PD-L1 treated older NSCLC patients, with decreased time to off treatment compared to landmark phase III studies. Survival data comparisons are limited in the setting of the current small sample size, but show interesting trends of decreased time on therapy and decreased overall survival. Further translational evaluation of senescent remodeling's role in outcome and toxicity with ICI in older NSCLC patients is needed.

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.

- 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)

- 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) GPA, SAT, MCAT, USMLE-I Publications, research

Extra curricular achievements - (25 points) Sports, music, drama, other hobbies and talents

Community service - (25 points)



PAST PRESIDENTS

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

PAST DISTINGUISHED PHYSICIANS OF THE YEAR

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

PAST MEDICAL STUDENT SCHOLARSHIP RECIPIENTS

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

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

- F. cont'd: 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.

<u>2010</u>

President: Geeta Gupta, MD

19th Annual Endowment fundraiser dinner "Chiraag"

Chairperson: Dr.Sandhia Varyani

Beneficiary: The Diabetes Association of Greater Cleveland

Chief Guest: Dr. Monte Ahuja

Donation: \$20,000.00

• Health Fairs:

BAPS Temple on May 2, 2010

Shiva Vishnu Temple on September 19, 2010

- Medical Camp supported by our AIPNO physicians in India to provide free medical services in conjunction with the local communities and hospitals.
- Fundraising and donation to "American Red Cross Haiti Fund" for victims of the Haiti Earthquake disaster.
- Continue to pledge to support "Project Seva" in conjunction with FICA.

Programs & Events:

- Karaoke Night March 12, 2010 at Executive Caterers of Landerhaven, sponsored by Baird, "The Crandall, Jarzabek & Cox Group"
- 2. Annual Golf Outing August 22, 2010 at Avon Oaks Country Club, sponsored by Baird, "The Crandall, Jarzabek & Cox Group".
- 3. Raas Garba Celebration and Speaker Program at Bamboo Gardens in North Olmsted on September 24, 2010. Speaker, Dr. Patrick Sweeney.

CME Seminars

- 1. AIPNO Physician Seminar at University Hospital in the morning of "Chiraag"
- 2. Annual Dinner Seminar at South Pointe Hospital in conjunction with Metro Health Systems.
- 3. Several educational speakers programs throughout the year.

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

<u>2012</u>

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 Fundraiser, 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.
- InSpin AIPNO has embarked on a multi- generational longitudinal observational study of the Indian subpopulation called InSpin (Asian Indian Sub Population in North America Longitudinal Registry)

MILESTONES

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

MILESTONES

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

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)

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* Ambekar, Anjali MD	* † Bhaiji, Khushal C. MD Cardiology
525 Eastown Road Office: 419-998-4467 Lima, OH 45805 Radiation Oncology	*Bhavani, Sekar MD 9500 Euclid Ave Office: 216-444-8782
* Appachi, Elumalai MD Pediatrics	Cleveland, OH 44195 Anesthesiology
* Appachi, Mala MD Pediatrics	*Bhakta, Shyam MD 323 Marion Ave. NW, #200 Office: 330-837-1111 Massillon, OH 44646-3639 Interventional Cardiology
* Apte, Manohar MD Family Practice	* Bhalla, Anita MD
* Apte, Susan MD Surgery, Cardiothoracic	* Bhalla, Rakesh MD 18101 Lorain Ave Office: 216-476-0189
* Arora, P. Lal MD Geriatrics - Retired	Cleveland, OH 44111 Internal Medicine
* Arora, Urmila MD 1736 Belle Ave Office: 330-264-2844 Wooster, OH 44691 <i>OB/GYN</i>	* Bhatt, Mukesh MD 9708 Washington Street# 203 Office: 330-722-5422 Medina, OH 44256 Hematology/Oncology
Augustin, Toms MD 1730 W. 25th, Suite 1E Office: 216-363-2311 Cleveland, OH 44113 General Surgery	*Bhavnani, Sanjeev MD 12301 Snow Rd Office: 440-740-0457 Parma, OH 44130 Geriatrics
* Bafna, Mohan MD	

Internal Medicine - Retired

Charland Ale Charlest Charl	* Bhimani, Jayantilal MD	*† Cupala, Jitendra MD
Alogo Detroit AVE #140	Cleveland, OH 44113 Internal Medicine	125 East Broad Street #119 Office: 440-329-7397 Elyria, OH 44035
**Bolla, Ravisankar MD	14601 Detroit AVE #140 Office: 216-529-5300 Lakewood, OH 44107	* Dahodwala, Ty DC 1730 W. 25th Str Ste 1000 Office: 216-685-9975
**Brahmanadam, Maddikunta MD	25200 Center Ridge Rd. #1100 Office: 440-895-5044 Westlake, OH 44145	* Dalal, Bankim MD 1430 Lindwood St Office: 559-732-1660
**Brahmbhatt, Ramesh MD 21851 Center Ridge Rd Office: 440-333-0060 Rocky River, OH 44116 Cardiology ** **Chandar, Krishan MBBS, MRCP (London)		Gastroenterology
Rocky River, OH 44116	* Brahmbhatt, Ramesh MD	
Deodhas, Sharad MD Pathology Patholo	Rocky River, OH 44116 Cardiology	25200 Center Ridge Rd. #2300 Office: 440-333-3904 Westlake, OH 44145
**Chari, Vedantum Ramanuja MD 11201 Shaker Blvd. #140	Solon, OH 44139	
Cleveland, OH 44104 Surgery, General	* Chari, Vedantum Ramanuja MD 11201 Shaker Blyd. #140 Office: 216-761-3565	
S347 Midway Mall Office: 440-324-9779 Hyria, OH 44035 Mansfield, OH 44906 Family Medicine	Cleveland, OH 44104	
24700 Center Ridge Rd #110 . Office: 440-871-1721	3547 Midway Mall Office: 440-324-9779 Elyria, OH 44035	600 W. 3rd Street Office: 419-522-6191 Mansfield, OH 44906
10229 Wellington Boulevard. Office: 614-599-0677 Powell, Ohio 43065 Interventional Cardiologist * Dhillon, Harmohinder MD 125 East Broad #202	24700 Center Ridge Rd #110 Office: 440-871-1721 Westlake, OH 44145	A-100 Euclid Ave Office: 216-445-1185 Cleveland, OH 44195
* Cherukuri, Subbarao MD 4654 Oberlin Avenue Office: 440-960-2885 Lorain, OH 44053 Urology	10229 Wellington Boulevard Office: 614-599-0677	Surgery, General
Chhibber, Aditya, DDS 137 Benedict Ave	* Cherukuri, Subbarao MD 4654 Oberlin Avenue Office: 440-960-2885	125 East Broad #202 Office: 440-329-7306 Elyria, OH 44035
* Dhingra, Rahul MD 125 East Broad Street #202. Office: 440-329-7305 Elyria, OH 44035 Cardiology * Dipali, Aravind MD 29099 Health Campus Dr #325 Office: 440-835-6165 Westlake, OH 44145 Pediatrics Canton, OH 44710 Hospitalist * Diwan, Renuka MD 2500 MetroHealth Drive. Office: 216-778-1381 Cleveland, OH 44109 Allergy & Immunology * Cupala, Homai MD 26900 George Zeiger Drive, #302-4 . Office: 216-316-0883 Beachwood, Ohio 44122 Psychiatry * Dhingra, Rahul MD 125 East Broad Street #202. Office: 440-329-7305 Elyria, OH 44035 Cardiology * Dipali, Aravind MD 29099 Health Campus Dr #325 . Office: 440-835-6165 Westlake, OH 44145 Pediatrics * Diwan, Renuka MD 29101 Health Campus Dr. Office: 440-871-9832 Westlake, OH 44145 Dermatology * Dravid, Sheela MD Family Practice * Durve, Mohan MD 6681 Ridge Road #305 . Office: 440-845-7272 Parma, OH 44129	Urology Chhibber, Aditya, DDS 137 Benedict Ave Office: 419-668-1686	6100 Rockside Woods Blvd. #105 Office: 216-674-1217 Independence, OH 44131
Bay Village, OH 44140 Pediatric Dentist Chimalakonda, Ravi, MD 2600 Sixth Street. Office: 330-633-2180 Canton, OH 44710 Hospitalist *Chouksey, Akhilesh MD 2500 MetroHealth Drive. Office: 216-778-1381 Cleveland, OH 44109 Allergy & Immunology *Cupala, Homai MD 26900 George Zeiger Drive, #302-4 Office: 216-316-0883 Beachwood, Ohio 44122 Psychiatry *Dipali, Aravind MD 29099 Health Campus Dr #325 Office: 440-835-6165 Westlake, OH 44145 Pediatrics *Diwan, Renuka MD 29101 Health Campus Dr Office: 440-871-9832 Westlake, OH 44145 Dermatology *Dravid, Sheela MD Family Practice *Durve, Mohan MD 6681 Ridge Road #305 Office: 440-845-7272 Parma, OH 44129	Orthodontist Chhibber, Surabhi, DDS	125 East Broad Street #202 Office: 440-329-7305 Elyria, OH 44035
Chimalakonda, Ravi, MD 2600 Sixth Street	Bay Village, OH 44140	* Dipali, Aravind MD
*Chouksey, Akhilesh MD 2500 MetroHealth Drive Office: 216-778-1381 Cleveland, OH 44109 Allergy & Immunology * Cupala, Homai MD 26900 George Zeiger Drive, #302-4 . Office: 216-316-0883 Beachwood, Ohio 44122 Psychiatry 29101 Health Campus Dr Office: 440-871-9832 Westlake, OH 44145 Dermatology * Dravid, Sheela MD Family Practice * Durve, Mohan MD 6681 Ridge Road #305 Office: 440-845-7272 Parma, OH 44129	2600 Sixth Street Office: 330-633-2180 Canton, OH 44710	Westlake, OH 441Å5 Pediatrics
* Cupala, Homai MD 26900 George Zeiger Drive, #302-4 Office: 216-316-0883 Beachwood, Ohio 44122 Psychiatry * Dravid, Sheela MD Family Practice * Durve, Mohan MD 6681 Ridge Road #305 Office: 440-845-7272 Parma, OH 44129	*Chouksey, Akhilesh MD 2500 MetroHealth Drive Office: 216-778-1381	29101 Health Campus Dr Office: 440-871-9832 Westlake, OH 44145 Dermatology
26900 George Zeiger Drive, #302-4 Office: 216-316-0883 Beachwood, Ohio 44122 Psychiatry * Durve, Mohan MD 6681 Ridge Road #305 Office: 440-845-7272 Parma, OH 44129		
	26900 George Zeiger Drive, #302-4 Office: 216-316-0883 Beachwood,Ohio 44122	6681 Ridge Road #305 Office: 440-845-7272 Parma, OH 44129

* Ebrahim, Lilian MD 9500 Euclid Ave Office: 216-444-2197 Cleveland, OH 44195 Psychiatry	* Gupta, Parshotam MD 5319 Hoag Drive #100 Office: 440-930-6015 Elyria, OH 44035 Pain Management
* Ebrahim, Zeyd MD 9500 Euclid Ave Office: 216-444-6550 Cleveland, OH 44106 Anesthesia	* Hampole, Vagesh MD 125 East Broad St.215 Office: 440-329-7360 Elyria, OH 44035 Rheumatology
* Gatha, Harilal MD Family Practice - Retired	* Haria, Chandra MD 7215 Old Oak Blvd. A-414 Office: 440-816-2782
* Ghasia, Fatema, MD 9500 Euclid Ave Office: 216-444-0999 Cleveland, OH 44106	Middleburg Hts, OH 44130 ENT *Hegde, Shura MD
Ophthalmology * †Ghose, Manesh K. MD	6133 Rockside Rd., Suite 207 Office: 440-320 5169 Rockside Square Bldg. II Independence, OH 44131
Nephrology	Psychiatry
* Gidwani, Gita MD OB/GYN - Retired *Gill, Inderjit MD	Holla, Ira, MD 11100 Euclid Ave Office: 517-303-7448 Cleveland, OH 44120
2500 Metro Health Drive Office: 216-778-4304 Cleveland, OH 44109 Cardiothoracic Surgery	Neonatology *Iyer, Inderisha, MD Office: 440-585-7006 Cardiac Electrophysiology
Ginwalla, Mahazarin, MD	* Iyer, Sridhar K.
11100 Euclid Ave	Texas Pulmonology
* Godbole, Medha S. MD 6733 Winston Lane Office: 440-241-3167 Solon, OH 44139 Pathology	* Jagetia, Anil MD 2500 MetroHealth Drive Office: 216-778-7800 Cleveland, OH 44109 Anesthesia
* Gogate, Prema MD 10701 East Blvd Office: 216-791-3800, ext5141 Cleveland, OH 44106 Pathology	*Jain, Rajneesh MD 300 Locust # Suite 200 Office: 330-253-7753 Akron, OH 44302 Pediatrics
* Gopalakrishna, K.V. MD 18101 Lorain Rd Office: 216-476-7106 Cleveland, OH 44111 Infectious Disease	* Jawa, Prem S. MD 6801 Mayfield Rd Office: 440-449-5668 Mayfield Hts, OH 44124 <i>Urology</i>
*Gosain, Sudhir MD 25101 Detroit Rd #450 Office: 440-899-7641 Westlake, OH 44145 Pulmonary Medicine	* Jayaswal, Bijay MD 3647 Medina Rd Office: 330-722-6143 Medina, OH 44256 Cardiology
*Goswami, Atul MD 1037 N Main Street Ste A Office: 330-923-1400 Akron, OH 44310 Internal Medicine	* Jethva, Natwar MD 18660 Bagley Rd #102 A Office: 440-239-1972 Middleburg Hts, OH 44130 Internal Medicine/Geriatrics
*Gudla, Jyothi MD 733 Market Ave S Office: 330-622-0208	* Jhala, Varsha MD Anesthesia - Retired
Canton, OH 44702 Internal Medicine & Geriatrics	* Jhaveri, Nalini MD <i>OB/GYN - Retired</i>
* Gupta, Arun MD 12000 McCracken Rd, Ste 104 Office: 216-475-0440 Garfield Hts, OH 44125 Internal Medicine	*John, Kuruvilla MD S-3 Neurological Inst Office: 216-445-1384 9500 Euclid Ave Cleveland, OH 44195 Neurology
* Gupta, Geeta MD 4200 Warrensville Ctr Rd #353 Office: 216-283-0750 Warrensville Hts, OH 44122	* Joshi, Vinod MD Anesthesia
* Mona Gupta, MD	* Julka, Neeraj MD Family Practice - Retired
9500 Euclid Ave Office: 216-445-3978 Cleveland, OH 44195 Supportive Oncology and Geriatrics	*Kalepu, Anand Rao, MD 429 Medway Rd Office: 440-785-2574 Highland Heights, OH 44143 General Surgery
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*Kalepu, Sudheera, MD L.S. V.A. Med. Center Office: 216-791-3800 10701 East Blvd. Cleveland, OH 44143 Internal Medicine	* Kedia, Kalish MD 19250 Bagley Rd. #201 Office: 440-891-6500 Middleburg Hts, OH 44130 <i>Urology</i>
* Kalhan, Santosh MD 9500 Euclid Ave Office: 216-444-3482 Cleveland, OH 44106 Anesthesia	* Khadilkar, Vidula MD 6363 York Road Suite 103 Office: 440-888-1500 Parma Heights, OH 44130 Pediatrics
* Kalhan, Satish MD 2074 Abington Rd Office: 216-778-8643 Cleveland, OH 44106 Pediatrics	* Khambatta, Parvez MD 5035 Mayfield Rd. #201 Office: 216-382-0092 Lyndhurst, OH 44124 Gastroenterology
* Kampani, Shanta MD 33649 Fairmount Blvd Office: 440-449-2146 Cleveland, OH 44124	* Khandekar, Prakash MD 6803 Mayfield Rd Office: 440-442-3334 Mayfield Rd, OH 44124 Dermatology
* Kansal, Sunil MD 18820 East Bagley Rd #106 Office: 440-243-1616 Middleburg Hts, OH 44130	* Khandelwal, Anand MD 970 E.Washington #302 Office: 330-723-7999 Medina, OH 44256 Pulmonary Medicine
Internal Medicine * Kantharaj, Belagodu MD Hematology Oncology Center, Ind. Mercy Cancer Center	Khanna, Ashish, MD 9500 Euclid Ave Office: 216-444-7988 Cleveland, OH 44195 Anesthesiology, Critical Care Medicine
41201 Schaden Rd. Unit #2 Office: 440-324-0401 Elyria, OH 44035 Fax: 440-324-0405 Hematology/Oncology	* Khatri, Saloni MD 5172 Leavitt Rd Office: 440-282-7420 Lorain, OH 44052 Internal Medicine
10 Severance Circle Office: 216-297-2432 Cleveland Hts, OH 44118 Radiology	* Kherani, Kausar MD 805 Columbia Rd #115 Office: 440-899-0200 Westlake, OH 44145
* † Kapadia, Gautam MD Anesthesia	Pediatrics
* Kapadia, Jyotika MD 19250 E. Bagley Rd Office: 440-826-3240 Middleburg Hts, OH 44130 <i>Anesthesia</i>	*Kotak, Sandeep MD 36100 Euclid Ave Office: 440-953-6294 Willoughby, OH 44094 Internal Medicine
* Kapadia, Mansavee MD U.H. Eye Institute Office: 216-844-1132 11100 Euclid Avenue	* Kothari, Ajeet MD 23524 Wingedfoot Dr Office: 440-289-1000 Westlake, OH 44145 OB/GYN
Cleveland, OH 44106 Ophthalmology * Kapadia, Samir MD 9500 Euclid Ave F25 Office: 216-444-6735	* Kothari, Purnima MD 23524 Wingedfoot Dr Office: 440-822-8300 Westlake, OH 44145 OB/GYN
Cleveland, OH 44195 Cardiology * Kapoor, Gopal MD	* Kothari, Samir MD 27069 Oakwood Circle #105 Office: 440-377-0263 Olmsted Falls, OH 44138
16111 Lorain Ave Office: 216-252-8444 Cleveland, OH 44111 Internal Medicine	Internal Medicine * Krishnamurthi, K.C. MD 1941 S. Baney Rd Office: 419-289-3355
* Karimpil, Joseph MD 763 E. 200th Street Office: 216-481-0073 Euclid, OH 44119	Ashland, OH 44805 Urology * Krishnamurthi, Smitha
Internal Medicine	* Krishnamurthi, Venkatesh MD
Kashyap, Sangeeta MD 9500 Euclid Ave. F20 Office: 216-444-2679 Cleveland, OH 44195 Endocrinology	9500 Euclid Ave Office: 216-444-0393 Cleveland, OH 44195 Transplantation Surgery
Kashyap, Vikram MD	* Krishnan, Nagureddi MD Ophthalmology
11100 Ēuclid Ave Office: 216-844-3013 Cleveland, OH 44106 Vascular Surgery	* Krishnan, Ravi MD 6559 A Wilson Mills Rd #106 Office: 440-449-1540 Mayfield Village, OH 44143 Internal Medicine

*Kumar, Namrata MD 210 E. Broad St Office: 440-322-0872 Elyria, OH 44025 Gastroenterology	* Mahajan, Subhash MD 7215 Old Oak Blvd Office: 440-816-2733 Middleburg Hts, OH 44130 Gastroenterology
* Kumar, Praveer MD 11100 Euclid Avenue Office: 216-291-4886 Cleveland, OH 44106 Internal Medicine	Mahajan-Khanna, Niyati, MD 9318 State Rte.14 Office: 330-626-4080 Streetsboro, OH 44241 Pediatrics, Primary Care
*Kumar Sanjay, DO 5319 Hoag Drive Suite 115 Elyria, OH 44035 Physical Medicine & Rehabilitation * Kumar, Suresh MD 7225 Old Oak Blvd. C302 Office: 216-398-5314	* Mahalaha, Saroj MD OB/GYN - Retired * Maheshwer, C. MD 24723 Detroit Rd Office: 440-892-1440 Westlake, OH 44145 Outlood dis Surgania
Middleburgh Hts, OH 44130 Neurology * Kumar, Unni P.K. MD 6707 Powers Blvd #102 Office: 440-886-5558	Orthopedic Surgery * Mahna, Satish MD 7750 Reynolds Rd #100 Office: 216-577-0224 Mentor, OH 44060 Occupational Medicine
Parma, OH 44129 Gastroenterology *Kumar, Vikram MD 24055 Lorain Road, #303 Fairview Park, OH 44126	* Majmudar, Himanshu MD 18599 Lakeshore Blvd Office: 216-383-6021 Euclid, OH 44119 Internal Medicine
Endocrinology Kundu, Sunanda MD 18101 Lorain Rd Office: 216-476-7000 Cleveland, OH 44111	* Makadia, Ashok P. MD 3600 Kolbe Rd. #109 Office: 440-960-5688 Lorain, OH 44053 Pulmonary *Makkar, Ritu, MD (see Malhotra)
*Lachwani, Deepak MD PO Box 112412 Office: +917 2 501 9000, ext. 41054 Abu Dhabi UAE Epilepsy	*Makkar, Vinit, MD 6780 Mayfield Road Office: 440-312-4569 Mayfield Heights, OH 44124 Hematology/Oncology
Lalwani, Vidya MD Internal Medicine - Retired * Lele, Anju S. MD	*Malhotra, Ritu, MD 8565 Mentor Ave Office: 440-554-6335 Mentor, OH 44060 ENT/facial plastic surgery
9000 Mentor Avenue Office: 440-974-4484 Mentor, OH 44060 Internal Medicine	* Mallik, Gagan MD ENT - Retired * Maniar, Smita MD
* Lele, Shreeniwas MD 9000 Mentor Avenue Office: 440-974-4484 Mentor, OH 44060 Internal Medicine	Lake County East Hospital Office: 440-350-0832 Painesville, OH 44004 <i>Anesthesia</i>
*Madan Mohan, Gayatri MD 1000 E. Washington St Office: 330-225-8555 Medina, OH 44256 Pathology	* † Mankad, Devi MD OB/GYN * † Mankad, Vinoo MD Internal Medicine
*Madan Mohan, Sri MD 11100 Euclid Ave. Lakeside 5038 Office: 216-844-0332 Cleveland, OH 44106 Cardiology, Internal Medicine	* Maroo, Praful V. MD 18099 Lorain Rd Office: 216-252-2770 Cleveland, OH 44111 Cardiology
* Mahajan, Darshan MD 673 East River Street Office: 440-323-6422 Elyria, OH 44035 Neurology	*Marshall, Brian, DO 9700 Garfield Blvd # 1090 Office: 216-441-3223 Cleveland, OH 44125 Orthopedics
* Mahajan, Neeraj, MD 6525 Powers BlvdOffice: 440-743-4748 Parma, OH 44129 Hematology, Oncology	*Marshall, Cyril MD Orthopedics - Retired *Mathur, Monica DPM
*Mahajan, Nitika, MD 8787 Brookpark Rd Office: 216-739-7000 Parma, OH 44129	Podiatrist Office: 616-706-5347 * Mehta, Adi MD

* Mehta, Atul MD 9500 Euclid Avenue A90 Office: 216-444-2911 Cleveland, OH 44195 Pulmonary Medicine	* Mude, Jagdish L. MD 1799 Kendal Dr Office: 440-740-1430 Broadview Hts, OH 44147 Psychiatry
*Mehta, Dharmesh MD 36100 Euclid Ave. Suite 350 Office: 440-960-8300 Willoughby, OH 44094 Internal Medicine	* Mukunda, Beejadi N. MD 6559 A Wilson Mills Rd #106 Office: 440-449-1540 Mayfield Village, OH 44143 Internal Medicine
* Mehta, Gita MD 29001 Cedar Rd #300 Office: 440-461-8844 Lyndhurst, OH 44124 <i>OB/GYN</i>	* Mulgaokar, Girish MD 11100 Euclid Ave Office: 440-205-4505 Cleveland, OH 44106 Anesthesia
* Mehta, Govind MD 125 E.Broad St. #322 Office: 440-329-7345 Elyria, OH 44035	* Murthy, Prabha MD Pathology - Retired
ENT *Mehta, Hetal RPh	* Murthy, P.S.S. MD 400 Austin Avenue NW Office: 330-837-9299 Massillon, OH 44646
* Mehta, Madhu MD	Forensic Pathology
* Mehta, Neil MD 9500 Euclid Avenue A91 Office: 216-445-6512	Muthusamy, Preetha, MD 2420 Lake Ave Office: 440-994-7544 Ashtabula, OH 44004 Neurology
Cleveland, OH 44195 Internal Medicine	* † Nair, Daksha MD
* Mehta, Rajendra MD 5109 Broadway Ave. #410 Office: 216-441-5665 Cleveland, OH 44127 Internal Medicine	*Nair, Ravi, MD 9500 Euclid Ave. Desk J2-3 Office: 216-444-6160 Cleveland, OH 44195 Cardiovascular Med./Intervention
* Mehta Patel, Sangita MD 850 Brainard Road Office: 440-442-8329	* Nair, Siva S. MD Gastroenterology - Retired
Highland Hts, OH 44143 Ophthalmology	* Nanavati, Shailesh MD Pediatrics - Retired
*Mehta, Sudhir Ken, MD	1 CONTROL 1 CONTROL
	* Narichania, Dilin MD
Pediatric Cardiology - Retired *Mehta, Usha MD 13810 Spring Street #405 Office: 440-834-4455	* Narichania, Dilip MD 7225 Old Oak Blvd. A-311 Office: 440-816-5483 Middleburg Hts, OH 44130 Surgery, General
*Mehta, Usha MD 13810 Spring Street #405 Office: 440-834-4455 Burton, OH 44021 Internal Medicine *Mendpara, Suresh MD	7225 Old Oak Blvd. A-311 Office: 440-816-5483 Middleburg Hts, OH 44130 Surgery, General * Natesan, Arumugam MD 5109 Broadway #405 Office: 216-251-1070 Cleveland, OH 44127
*Mehta, Usha MD 13810 Spring Street #405 Office: 440-834-4455 Burton, OH 44021 Internal Medicine *Mendpara, Suresh MD 970 E. Washington St. Ste 4D Office: 330-722-5422	7225 Old Oak Blvd. A-311 Office: 440-816-5483 Middleburg Hts, OH 44130 Surgery, General * Natesan, Arumugam MD 5109 Broadway #405 Office: 216-251-1070 Cleveland, OH 44127 Gastroenterology
*Mehta, Usha MD 13810 Spring Street #405 Office: 440-834-4455 Burton, OH 44021 Internal Medicine *Mendpara, Suresh MD 970 E. Washington St. Ste 4D Office: 330-722-5422 Medina, OH 44256 Hematology/Oncology *Meyyazhagan, Swarnalatha MD	7225 Old Oak Blvd. A-311 Office: 440-816-5483 Middleburg Hts, OH 44130 Surgery, General * Natesan, Arumugam MD 5109 Broadway #405 Office: 216-251-1070 Cleveland, OH 44127 Gastroenterology *Natesan, Corattur, MD 464 Richmond Rd Office: 216-486-3233 Richmond Hts. Medical Center, 44143
*Mehta, Usha MD 13810 Spring Street #405 Office: 440-834-4455 Burton, OH 44021 Internal Medicine *Mendpara, Suresh MD 970 E. Washington St. Ste 4D Office: 330-722-5422 Medina, OH 44256 Hematology/Oncology *Meyyazhagan, Swarnalatha MD 12200 Fairhill Rd Office: 216-844-6370 Cleveland, OH 44120	7225 Old Oak Blvd. A-311 Office: 440-816-5483 Middleburg Hts, OH 44130 Surgery, General * Natesan, Arumugam MD 5109 Broadway #405 Office: 216-251-1070 Cleveland, OH 44127 Gastroenterology *Natesan, Corattur, MD 464 Richmond Rd Office: 216-486-3233 Richmond Hts. Medical Center, 44143 Internal Medicine
*Mehta, Usha MD 13810 Spring Street #405 Office: 440-834-4455 Burton, OH 44021 Internal Medicine *Mendpara, Suresh MD 970 E. Washington St. Ste 4D Office: 330-722-5422 Medina, OH 44256 Hematology/Oncology *Meyyazhagan, Swarnalatha MD 12200 Fairhill Rd Office: 216-844-6370 Cleveland, OH 44120 Geriatrics * Mistry, Darshan MD	7225 Old Oak Blvd. A-311 Office: 440-816-5483 Middleburg Hts, OH 44130 Surgery, General * Natesan, Arumugam MD 5109 Broadway #405 Office: 216-251-1070 Cleveland, OH 44127 Gastroenterology *Natesan, Corattur, MD 464 Richmond Rd Office: 216-486-3233 Richmond Hts. Medical Center, 44143
*Mehta, Usha MD 13810 Spring Street #405 Office: 440-834-4455 Burton, OH 44021 Internal Medicine *Mendpara, Suresh MD 970 E. Washington St. Ste 4D Office: 330-722-5422 Medina, OH 44256 Hematology/Oncology *Meyyazhagan, Swarnalatha MD 12200 Fairhill Rd Office: 216-844-6370 Cleveland, OH 44120 Geriatrics	7225 Old Oak Blvd. A-311 Office: 440-816-5483 Middleburg Hts, OH 44130 Surgery, General * Natesan, Arumugam MD 5109 Broadway #405 Office: 216-251-1070 Cleveland, OH 44127 Gastroenterology *Natesan, Corattur, MD 464 Richmond Rd Office: 216-486-3233 Richmond Hts. Medical Center, 44143 Internal Medicine * Nayak, Hemanta MD 12301 Snow Road Office: 216-362-2421 Parma, OH 44130 Internal Medicine * Nayak, Sagarika MD
*Mehta, Usha MD 13810 Spring Street #405 Office: 440-834-4455 Burton, OH 44021 Internal Medicine *Mendpara, Suresh MD 970 E. Washington St. Ste 4D Office: 330-722-5422 Medina, OH 44256 Hematology/Oncology *Meyyazhagan, Swarnalatha MD 12200 Fairhill Rd Office: 216-844-6370 Cleveland, OH 44120 Geriatrics * Mistry, Darshan MD 18181 Pearl Rd. #A206 Office: 440-816-5220 Strongsville, OH 44136 Internal Medicine * Mistry, Niraj MD 125 E. Broad Str #202 Office: 440-329-7305	7225 Old Oak Blvd. A-311 Office: 440-816-5483 Middleburg Hts, OH 44130 Surgery, General * Natesan, Arumugam MD 5109 Broadway #405 Office: 216-251-1070 Cleveland, OH 44127 Gastroenterology *Natesan, Corattur, MD 464 Richmond Rd Office: 216-486-3233 Richmond Hts. Medical Center, 44143 Internal Medicine * Nayak, Hemanta MD 12301 Snow Road Office: 216-362-2421 Parma, OH 44130 Internal Medicine
*Mehta, Usha MD 13810 Spring Street #405 Office: 440-834-4455 Burton, OH 44021 Internal Medicine *Mendpara, Suresh MD 970 E. Washington St. Ste 4D Office: 330-722-5422 Medina, OH 44256 Hematology/Oncology *Meyyazhagan, Swarnalatha MD 12200 Fairhill Rd Office: 216-844-6370 Cleveland, OH 44120 Geriatrics * Mistry, Darshan MD 18181 Pearl Rd. #A206 Office: 440-816-5220 Strongsville, OH 44136 Internal Medicine * Mistry, Niraj MD	7225 Old Oak Blvd. A-311 Office: 440-816-5483 Middleburg Hts, OH 44130 Surgery, General * Natesan, Arumugam MD 5109 Broadway #405 Office: 216-251-1070 Cleveland, OH 44127 Gastroenterology *Natesan, Corattur, MD 464 Richmond Rd Office: 216-486-3233 Richmond Hts. Medical Center, 44143 Internal Medicine * Nayak, Hemanta MD 12301 Snow Road Office: 216-362-2421 Parma, OH 44130 Internal Medicine * Nayak, Sagarika MD 29099 Health Campus Dr #390 Office: 440-250-0325 Westlake, OH 44145 Neurology *Osman, Mohammed Najeeb MD 11000 Euclid Ave Office: 440-993-1144
*Mehta, Usha MD 13810 Spring Street #405 Office: 440-834-4455 Burton, OH 44021 Internal Medicine *Mendpara, Suresh MD 970 E. Washington St. Ste 4D Office: 330-722-5422 Medina, OH 44256 Hematology/Oncology *Meyyazhagan, Swarnalatha MD 12200 Fairhill Rd Office: 216-844-6370 Cleveland, OH 44120 Geriatrics * Mistry, Darshan MD 18181 Pearl Rd. #A206 Office: 440-816-5220 Strongsville, OH 44136 Internal Medicine * Mistry, Niraj MD 125 E. Broad Str #202 Office: 440-329-7305 Elyria, OH 44035 Internal Medicine * Mistry, Vijay MD 6770 Mayfield Rd Office: 440-442-2040	7225 Old Oak Blvd. A-311 Office: 440-816-5483 Middleburg Hts, OH 44130 Surgery, General * Natesan, Arumugam MD 5109 Broadway #405 Office: 216-251-1070 Cleveland, OH 44127 Gastroenterology *Natesan, Corattur, MD 464 Richmond Rd Office: 216-486-3233 Richmond Hts. Medical Center, 44143 Internal Medicine * Nayak, Hemanta MD 12301 Snow Road Office: 216-362-2421 Parma, OH 44130 Internal Medicine * Nayak, Sagarika MD 29099 Health Campus Dr #390 Office: 440-250-0325 Westlake, OH 44145 Neurology *Osman, Mohammed Najeeb MD 11000 Euclid Ave Office: 440-993-1144 Cleveland, OH 44106 Cardiology
*Mehta, Usha MD 13810 Spring Street #405 Office: 440-834-4455 Burton, OH 44021 Internal Medicine *Mendpara, Suresh MD 970 E. Washington St. Ste 4D Office: 330-722-5422 Medina, OH 44256 Hematology/Oncology *Meyyazhagan, Swarnalatha MD 12200 Fairhill Rd Office: 216-844-6370 Cleveland, OH 44120 Geriatrics * Mistry, Darshan MD 18181 Pearl Rd. #A206 Office: 440-816-5220 Strongsville, OH 44136 Internal Medicine * Mistry, Niraj MD 125 E. Broad Str #202 Office: 440-329-7305 Elyria, OH 44035 Internal Medicine * Mistry, Vijay MD 6770 Mayfield Rd Office: 440-442-2040 Mayfield Hts, OH 44124 Cardiology * Mitra, Kunal MD	7225 Old Oak Blvd. A-311 Office: 440-816-5483 Middleburg Hts, OH 44130 Surgery, General * Natesan, Arumugam MD 5109 Broadway #405 Office: 216-251-1070 Cleveland, OH 44127 Gastroenterology *Natesan, Corattur, MD 464 Richmond Rd Office: 216-486-3233 Richmond Hts. Medical Center, 44143 Internal Medicine * Nayak, Hemanta MD 12301 Snow Road Office: 216-362-2421 Parma, OH 44130 Internal Medicine * Nayak, Sagarika MD 29099 Health Campus Dr #390 Office: 440-250-0325 Westlake, OH 44145 Neurology *Osman, Mohammed Najeeb MD 11000 Euclid Ave Office: 440-993-1144 Cleveland, OH 44106
*Mehta, Usha MD 13810 Spring Street #405 Office: 440-834-4455 Burton, OH 44021 Internal Medicine *Mendpara, Suresh MD 970 E. Washington St. Ste 4D Office: 330-722-5422 Medina, OH 44256 Hematology/Oncology *Meyyazhagan, Swarnalatha MD 12200 Fairhill Rd Office: 216-844-6370 Cleveland, OH 44120 Geriatrics * Mistry, Darshan MD 18181 Pearl Rd. #A206 Office: 440-816-5220 Strongsville, OH 44136 Internal Medicine * Mistry, Niraj MD 125 E. Broad Str #202 Office: 440-329-7305 Elyria, OH 44035 Internal Medicine * Mistry, Vijay MD 6770 Mayfield Rd Office: 440-442-2040 Mayfield Hts, OH 44124 Cardiology * Mitra, Kunal MD 750 E. Washington #A2 Office: 330-725-7100	7225 Old Oak Blvd. A-311 Office: 440-816-5483 Middleburg Hts, OH 44130 Surgery, General * Natesan, Arumugam MD 5109 Broadway #405 Office: 216-251-1070 Cleveland, OH 44127 Gastroenterology *Natesan, Corattur, MD 464 Richmond Rd Office: 216-486-3233 Richmond Hts. Medical Center, 44143 Internal Medicine * Nayak, Hemanta MD 12301 Snow Road Office: 216-362-2421 Parma, OH 44130 Internal Medicine * Nayak, Sagarika MD 29099 Health Campus Dr #390 Office: 440-250-0325 Westlake, OH 44145 Neurology *Osman, Mohammed Najeeb MD 11000 Euclid Ave Office: 440-993-1144 Cleveland, OH 44106 Cardiology * Oza, Sudhir MD 16111 Lorain Rd Office: 216-252-8444
*Mehta, Usha MD 13810 Spring Street #405 Office: 440-834-4455 Burton, OH 44021 Internal Medicine *Mendpara, Suresh MD 970 E. Washington St. Ste 4D Office: 330-722-5422 Medina, OH 44256 Hematology/Oncology *Meyyazhagan, Swarnalatha MD 12200 Fairhill Rd Office: 216-844-6370 Cleveland, OH 44120 Geriatrics * Mistry, Darshan MD 18181 Pearl Rd. #A206 Office: 440-816-5220 Strongsville, OH 44136 Internal Medicine * Mistry, Niraj MD 125 E. Broad Str #202 Office: 440-329-7305 Elyria, OH 44035 Internal Medicine * Mistry, Vijay MD 6770 Mayfield Rd Office: 440-442-2040 Mayfield Hts, OH 44124 Cardiology * Mitra, Kunal MD	7225 Old Oak Blvd. A-311 Office: 440-816-5483 Middleburg Hts, OH 44130 Surgery, General * Natesan, Arumugam MD 5109 Broadway #405 Office: 216-251-1070 Cleveland, OH 44127 Gastroenterology *Natesan, Corattur, MD 464 Richmond Rd Office: 216-486-3233 Richmond Hts. Medical Center, 44143 Internal Medicine * Nayak, Hemanta MD 12301 Snow Road Office: 216-362-2421 Parma, OH 44130 Internal Medicine * Nayak, Sagarika MD 29099 Health Campus Dr #390 Office: 440-250-0325 Westlake, OH 44145 Neurology *Osman, Mohammed Najeeb MD 11000 Euclid Ave Office: 440-993-1144 Cleveland, OH 44106 Cardiology * Oza, Sudhir MD 16111 Lorain Rd Office: 216-252-8444 Cleveland, OH 44111

* Pagedar, Saroj MD Pediatrics - Retired	*Patel, Chetan MD 7879 Auburn Rd. Suite 1A Concord, OH 44077
* Palekar, Sanjay MD Surgery, Orthopedic - Retired	Cardiology/Internal Medicine
* Pallaki, Muralidhar MD 10701 East Blvd Office: 216-791-3800 x5260	* Patel, Deodutt MD <i>Radiology</i>
Cleveland, OH 44106 Geriatrics	* Patel, Dhruv MD 673 East River Street Office: 440-323-6422
* Panchagnula, Sastry MD Pulmonary Medicine - Retired	Elyria, OH 44035 Neurology
* Pandit, Mukul MD 14208 Kinsman Road Office: 216-295-9802 Cleveland, OH 44120 Internal Medicine	* Patel, Dineshchandra MD 436 East River Street Office: 440-323-8515 Elyria, OH 44035 Anesthesia
* Pandit, Vidya MD 32730 Walker Rd Bldg H Office: 440-930-4959	* † Patel, Dinubhai MD Gastroenterology
Avon Lake, OH 44012 Internal Medicine	* Patel, Kirit MD Radiology
* Pandrangi, Vasu MD 7225 Old Oak Blvd. #C212 Office: 440-816-2725	* Patel, Mahendra MD Surgery, Orthopedic - Retired
Middleburg Hts, OH 44130 Surgery, Plastic	*† Patel, Maheshkumar MD Occupational Medicine
* Pania, Vimla D. MD Internal Medicine - Retired	* Patel, Minal MD EMH, 630 E. River St Office: 440-329-7620
* Pannu, Kulbir S. MD 8523 Ridge Road Office: 440-237-7112	Elyria, OH 44035 Pathology
N. Royalton, OH 44133 Nephrology	* Patel, Mohan MD Internal Medicine - Retired
* Parikh, Kamal MD <i>OB/GYN</i>	* Patel, Narendra MD Anesthesia
* Parikh, Keyur MD 8877 Mentor Ave Office: 440-205-1225 Mentor, OH 44060 Gastroenterology	* Patel, Tarulata MD 1419 W. 9th St. 1st Floor Office: 216-685-1653 Cleveland, OH 44113 Occupational Medicine
* Parikh, Sanjay MD 673 East River Street Office: 440-323-6422 Elyria, OH 44035	* Patel, Urmila MD OB/GYN
Neurology, Pediatric	* Patel, Vasant Surgery, General
* Parikh, Vibha MD OB/GYN - Retired	* Patel, Vijaykant MD
*Parmar, Harbhajan MD 6559 Wilson Mills Rd #106 Office: 440-449-1540 Mayfield, OH 44143	Emergency Medicine - Retired * † Patil, Ashok MD Occupational Medicine
Internal Medicine	Occupational Medicine * Paul, Bobby MD
*Patel, Amit, MD 6275 Old Oak Blvd. Suite C-11 Office: 440-403-9990 Middleburg Hts, OH 44130 Nephrology	3985 Warrensville Center Rd Office: 216-283-4494 Cleveland, OH 44122 Internal Medicine
* Patel, Ashwin MD Radiation Oncology - Retired	* Paul, Randhir MD Office: 440-960-3050 Emergency Medicine
* Patel, Bhupendra MD	*† Perumbeti, Prasad MD Anesthesia
2420 Lake Avenue Office: 440-997-6691 Ashtabula, OH 44004 <i>Radiology</i>	* Pillai, Latha MD 22750 Rockside Rd, Ste 100 Office: 440-735-2832 Bedford, OH 44146
* Patel, Chandrakant MD One Perkins Square Office: 330-543-8048	Internal Medicine
Akron, OH 44308 Pediatric Cardiology	* Pola, Laxshimaiya MD Gastroenterology - Retired
*Patel, Chandralekha MD 205 West 20th Street Office: 440-233-1044 Lorain, Ohio 44052 Radiation Oncology	* † Pradhan, Minal MD Anesthesia
ω -	70

* Prithviraj, Panju MD 615 Fulton Road Office: 419-732-4028 Port Clinton, OH 43452 Hematology/Oncology * Punjabi, Eshwar B. MD 9000 Mentor Ave Office: 440-974-4100 Mentor, OH 44060 Internal Medicine * † Purohit, Umkant MD	*Rao, Pratibha, MD Endocrinology, Diabetes * Rao, Shakuntala MD 6803 Mayfield Rd Office: 440-460-2838 Mayfield Hts, OH 44124 Pediatrics *Rao, Sheela M. MD 10701 East Blvd. (Palms W113) Office: 330-733-5454 Cleveland, OH 44106
Orthopedic Ragagopalan, Sudha MD 9500 Euclid Ave P21 Office: 216-444-6620 Cleveland, OH 44195 Anesthesiology	* Ravishankar, K.C. MD 7215 Old Oak Blvd #A410 Office: 440-826-9221 Middleburg Hts, OH 44130 Neurologist
Raina, Rupesh, MD 224 W. Exchange St. Suite 330 Office: 330-436-3150 Akron, OH 44302 Nephrology	* Reddy, Kalva S. MD 436 E. River Street #2 Office: 440-323-8515 Elyria, OH 44035 Anesthesia
* Raj, Chandra MD Anesthesia * Raj, Prasanta Kumar MD	* Reddy, Madhu MD 5229 Fleet Ave Office: 216-524-6767 Cleveland, OH 44105 Internal Medicine
Surgery, General - Retired * Rajan, Semur MD	* Reddy, S. Sethu MD Internal Medicine
*Raju, Rajeeva MD 10701 East Blvd Cleveland, OH 44106	* Rohira, Lalsingh MD 347 Midway Blvd. #306 Office: 440-324-5430 Elyria, OH 44035 <i>Psychiatry</i>
Pathology * Rakhit, Ashis K. MD 10850 Pearl Rd #D2Office: 440-572-5578 Strongsville, OH 44136 Cardiology	Roy, Aparna, MD 11100 Euclid Ave Office: 440-879-3235 Cleveland, OH 44106 Pediatric/ICU
Ram, Dasarathi MD Office: 440-526-8525 Radiology	* Roy, Somnath D. MD 125 E. Broad St. #122 Office: 440-329-7350 Elyria, OH 44035 Internal Medicine
Ramachandran, Mangalakaralpudur, MD 9500 Euclid Ave	* Sandhu, Satnam S. MD 4200 Warrensville Ctr Rd #320 Office: 216-491-7205 Warrensville Hts, OH 44122 Nephrology
* Ramachandran, Saraswati MD Ashtabula County Medical Ct Office: 440-964-5551 Ashtabula, OH 44004 Anesthesia	* Saraiya, Jayshree MD 6225 Lochmoor Court Office: 330-348-9558 Solon, OH 44139
*Ramana, C.V. MD Radiology *Rakesh Ranjan, MD 801 E. Washington STE 150 Medina, OH 44256	* Saraiya, Rajesh MD 6225 Lochmoor Court Office: 440-263-8439 Solon, OH 44139 Internal Medicine - Hospitalist
Psychiatry Ramachandran, Mangalakaralpudur, MD 9500 Euclid Ave Office: 216-444-5581 Cleveland, OH 44195 Anesthesiology	* Sawhny, Bhupinder MD 7255 Old Oak Blvd #C408 Office: 440-891-8880 Middleburg Hts, OH 44130 Neurosurgery
* Rao, Kancherla S. MD 6140 South Broadway Office: 440-233-7232 Lorain, OH 44053	* Sehgal, Ashwini MD 2500 Metro Health Drive Office: 216-778-7728 Cleveland, OH 44109 Nephrology
* Rao, L.C. MD L. C. Rao M.D. Consultants, Inc Office: 330-225-6458 2088 Oxford Circle Hinckley, Ohio 44233 Pulmonary Medicine	* Sehgal, Bindu MD 25200 Center Ridge Rd. Suite 2450 Westlake, OH 44145 Family Practice

* Sekhon, Baldev MD 29099 Health Campus Dr. #380 Office: 440-827-5390 Westlake, OH 44145 Cardiothoracic Surgery	* Shinde, Sharad MD 130 Jefferson St. #3A Port Clinton, OH 43452 OB/GYN
* Sequeira, Thomas Mark MD 11201 Shaker Blvd Office: 216-368-7065 Cleveland, OH 44104 Cardiology	*Shivadas, Anita MD 9500 Euclid Ave Office: 216-444-1084 Cleveland, OH 44195 Internal Medicine
* Shaikh, Aasef, MD 11100 Euclid Avenue Office: 313-850-8604 Cleveland, OH 44110 Neurology, Neurotology, Movement Disorders	*Sidhu, Kanwaljit, MD 2500 Metrohealth Drive Office: 216-778-4801 Cleveland, OH 44109 Anesthesia
* Shah, Ajit C. MD 7215 Old Oak Blvd #A414 Office: 440-816-2782 Middleburg Hts, OH 44130 <i>ENT</i>	* Sidhu, Tejbir MD Metrohealth Drive Office: 216-778-4809 Cleveland, OH 44109 Anesthesiology
* Shah, Arunika N. MD Physical Medicine/Rehabilitation * Shah, Chirag MD	*Singh, Annapurna 11100 Euclid Ave BHC3200 Office: 216-844-8503 Cleveland, OH 44106 Ophthalmology
UH Parma Medical Center Office: 440-743-3000 Anesthesia * Shah, Jaya MD Pediatrics - Retired	*Singh, Arun D. MD 9500 Euclid Ave I30 Office: 216-445-9479 Cleveland, OH 44195 Ophthalmology
* Shah, Kalyani MD 9500 Euclid Avenue C21 Cleveland, OH 44195 <i>Physical Medicine & Rehabilitation</i>	* Singh, Chandra V. MD 125 E. Broad Street Ste 119 Office: 440-329-7397 Elyria, OH 44035 Internal Medicine
* Shah, Pankaj MD 14519 Detroit Ave Office: 216-529-7145 Lakewood, OH 44107 Anesthesia	* Singh, Kuldeep MD Emergency Medicine - Retired * Sitabkhan, Rayeka MD
* Shah, Shashin MD	Pediatrics - Retired
9700 Garfield Blvd #103 Office: 216-641-0600 Garfield Hts, OH 44125 <i>Pediatrics</i>	Sivaraman, Indu, MD 35040 Chardon Rd Office: 440-946-1200 Willoughby Hills, OH 44094 Pediatric Neurology
* Shah, Surekha 2500 Metro Health Drive Office: 216-778-1016 Cleveland, OH 44109 Physical Therapy	* Sivashankaran, Subhalakshmi MD 11100 Euclid Ave Office: 216-844-3506 Cleveland, OH 44106
* Shah, Tushar MD Emergency Medicine *Shaikh, Aasef, MD, PhD	Anesthesia * Sogal, Ramesh MD Pain Management
11100 Euclid Avenue Office: 216-381-6736 Cleveland, OH 44110 Neurology, Neurotology, Movement Disorders	*Somasundaram, Mey, MD 6701 Rockside Rd. # 100 Office: 216-382-0418 Independence, OH 44139 Internal Medicine
* Sharan, Vishwa MD Office: 800-646-9000 Radiation Oncology	*Sreshta, Michael, RPh, MS. CDE
*Sharma, Rajesh MD 2709 Franklin Blvd. Suite 2E Office: 216-363-5720 Cleveland, OH 44113	8300 Hough Ave Office: 216-231-7700 ext1121 Cleveland, Ohio 44103 Director of Pharmacy/ Certified Diabetes Educator
* Sharma, Trilok C. MD 7255 Old Oak Blvd #C208 Office: 440-816-2708 Middleburg Hts, OH 44130	* Subramanian, Thyagarajan MD 9500 Euclid Avenue, S90 Office: 216-444-4270 Cleveland, OH 44195 Neurology
Cardiology	†Sundaresh, H.P. MD Pediatrics
* Shekar, Raja MD 3609 Park East Dr #207 Office: 216-360-0456 Beachwood, OH 44122	*Sundaresh, Shailaja MD OB/GYN - Retired
Infectious Disease	* Suresh, Keelapandal R. MD 21851 Center Ridge Rd #3309 Office: 440-333-8322 Rocky River, OH 44116 Nephrology

Suri, Anu, MD 33100 Cleveland Clinic Blvd. AVW3-2 Office: 440-695-4330	*Varma, Kalpana MD 12300 McCracken Rd Office: 216-587-8200
Avon, OH 44011 Pulmonology and Critical Care Medicine	Garfield Heights, OH 44125 Anesthesia
* Swamy, Kumar MD Allergy - Retired	* † Varyani, Nand MD Anesthesia
*Swarup, Namita MD 2500 Metrohealth Drive Office: 216-778-2687 Cleveland, OH 44109 Pediatrics	* Varyani, Sandhia MD UH Ahuja Medical Center 1000 Auburn Drive, Suite 34 Office: 216-285-4130 Beachwood, OH 44122 OB/GYN
*Tamaskar, Ila R., MD 6525 Powers Blvd Office: 440-743-4747 Parma, OH 44129	*† Vasavada, Prasan MD Internal Medicine
Oncology * Tamaskar, Mandakini Anesthesia	* Vasavada, Sandip MD 9500 Euclid Avenue A100 Office: 216-445-0296 Cleveland, OH 44195 Urology
*Tamaskar, Ranjit B. MD 36100 Euclid Ave. Suite 270 Office: 440-946-8300 Willoughby, OH 44094 Internal Medicine	*Venkat, Vasuki, MD 27600 Chagrin Blvd. Suite 300 Office: 216-347-5795 Woodmere, OH 44122 Nephrology
* Tamasker, Shobha MD OB/GYN - Retired *Tandra, Brahmaiah MD 8577 E. Market St Office: 330-856-6663	*Venna, Prabhakar MD Cleveland VAMC 11A(W) Office: 440-562-0762 10701 East Blvd Cleveland, OH 44109-1709
Howland, OH 44484 Pediatric Psychiatry *Tandar Ushana: MD	Anesthesiology * Vibhakar, Nilla MD
*Tandra, Usharani MD 18697 Bagley Rd Office: 440-816-8678 Middleburgh Hts, OH 44130 Physical Medicine & Rehabilitation	Pediatrics * Vibhakar, Shardul MD Radiology, Diagnostic
	Tatition g, Britishic
* Thaker, Niranjana Shah MD OB/GYN - Retired	* Vuppala, Murty MD 6363 York Pearl Rd #103 Office: 440-888-1500
* Thaker, Niranjana Shah MD	* Vuppala, Murty MD
* Thaker, Niranjana Shah MD OB/GYN - Retired * Thakore, Nimish MD * Thakore, Yuan MD Tirounilacandin, Pazhaniaandi, MD 234 N. Chestnut St Office: 440-576-8933 Jefferson, OH 44047	* Vuppala, Murty MD 6363 York Pearl Rd #103 Office: 440-888-1500 Cleveland, OH 44130
* Thaker, Niranjana Shah MD OB/GYN - Retired * Thakore, Nimish MD * Thakore, Yuan MD Tirounilacandin, Pazhaniaandi, MD 234 N. Chestnut St Office: 440-576-8933 Jefferson, OH 44047 ACMC, Family Medicine * Turakhia, Ashwin MD 12301 Snow Road Office: 216-362-2000 Parma, OH 44130	* 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
* Thaker, Niranjana Shah MD OB/GYN - Retired * Thakore, Nimish MD * Thakore, Yuan MD Tirounilacandin, Pazhaniaandi, MD 234 N. Chestnut St Office: 440-576-8933 Jefferson, OH 44047 ACMC, Family Medicine * Turakhia, Ashwin MD 12301 Snow Road Office: 216-362-2000	* 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
* Thaker, Niranjana Shah MD OB/GYN - Retired * Thakore, Nimish MD * Thakore, Yuan MD Tirounilacandin, Pazhaniaandi, MD 234 N. Chestnut St. Office: 440-576-8933 Jefferson, OH 44047 ACMC, Family Medicine * Turakhia, Ashwin MD 12301 Snow Road Office: 216-362-2000 Parma, OH 44130 Internal Medicine * Udayashankar, S.V. MD	* 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
* Thaker, Niranjana Shah MD OB/GYN - Retired * Thakore, Nimish MD * Thakore, Yuan MD Tirounilacandin, Pazhaniaandi, MD 234 N. Chestnut St Office: 440-576-8933 Jefferson, OH 44047 ACMC, Family Medicine * Turakhia, Ashwin MD 12301 Snow Road Office: 216-362-2000 Parma, OH 44130 Internal Medicine * Udayashankar, S.V. MD Anesthesia - Retired * Ujla, Dilip MD Family Practice * Ujla, Rekha 1468 E. 55th Street Office: 216-881-2000 Cleveland, OH 44103	* 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
* Thaker, Niranjana Shah MD OB/GYN - Retired * Thakore, Nimish MD * Thakore, Yuan MD Tirounilacandin, Pazhaniaandi, MD 234 N. Chestnut St Office: 440-576-8933 Jefferson, OH 44047 ACMC, Family Medicine * Turakhia, Ashwin MD 12301 Snow Road Office: 216-362-2000 Parma, OH 44130 Internal Medicine * Udayashankar, S.V. MD Anesthesia - Retired * Ujla, Dilip MD Family Practice * Ujla, Rekha 1468 E. 55th Street Office: 216-881-2000	* 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
* Thaker, Niranjana Shah MD OB/GYN - Retired * Thakore, Nimish MD * Thakore, Yuan MD Tirounilacandin, Pazhaniaandi, MD 234 N. Chestnut St Office: 440-576-8933 Jefferson, OH 44047 ACMC, Family Medicine * Turakhia, Ashwin MD 12301 Snow Road Office: 216-362-2000 Parma, OH 44130 Internal Medicine * Udayashankar, S.V. MD Anesthesia - Retired * Ujla, Dilip MD Family Practice * Ujla, Rekha 1468 E. 55th Street Office: 216-881-2000 Cleveland, OH 44103 Nurse Practitioner * Umapathy, Kandasamy MD 25 Tarbell Avenue Office: 440-439-7766 Bedford, OH 44146	* 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

^{*} Denotes Life Member † Deceased

Listing of Physicians by Specialty

Allergy

Durve, Mohan MD Swamy, Kumar MD

Anesthesia

Adur, Anjali MD Bhavani, Sekar MD Deogaonkar, Anupa,MD Ebrahim, Zeyd MD Gupta, Parshotam C. MD Jagetia, Anil MD Jhala, Varsha MD Joshi, Vinod MD Kalhan, Santosh MD Kapadia, Jyotika MD Maheshwari, Kamal MD Maniar Smita MD Mulgaokar, Girish MD Patel, Dineshchandra MD Patel, Narendra S. MD Perumbeti, Prasad P. MD Pradhan, Minal MD Raj, Chandra MD Rajagopalan, Sudha MD Ramachandran, Mangalakaralpudur, MD Ramachandran, Saraswati MD Reddy, Kalva MD Shah, Chirag MD Shah, Pankaj MD Sidhu, Kanwaljit MD Sidhu, Teibir MD Siyasankaran, S MD Tamaskar, Mandakini MD Tamasker, Raghavendra MD Udayashankar, S. V. MD Varma, Kalpana MD Venna, Prabhakar MD

Cardiology

Ahluwalia, Charanjit MD Bhaiji, Khushal C. MD Bolla, Ravisankar MD Brahmanandam, Maddikunta MD Brahmbhatt, Ramesh MD Chawla, Rakesh MD Dhingra, Rahul MD Ginwalla, Mahazarin, MD Jayaswal, Bijay MD Kapadia, Samir MD Maroo, Praful MD Mistry, Vijay MD Mitra, Kunal MD Mohan, Sri Madan MD Nair, Ravi MD Osman, Najeeb, MD Patel, Chetan MD Rajan, Semur MD Rakhit, Ashish MD Sequeira, Thomas Mark MD Sharma, Trilok C. MD Vallavhaneni, Raj MD

Cardiology, Electrophysiology Iyer, Inderesha, MD Rao, Pratibha, MD

Cardiology Pediatric Mehta, Sudhir MD Patel, Chandrakant MD

Cardiothoracic Surgery

Chiropractic

Ty Dahodwala D.C.

Dentistry

Chhibber, Surabhi, MD (Pediatric) Chhibber, Aditya, MD (Orthodontistry)

Dermatology

Diwan Renuka MD Khandekar, Prakash MD

Emergency Medicine Dhillon, Jagprit MD Patel, Vijaykant MD Paul, Randhir MD Shah, Tushar MD

Endocrinology

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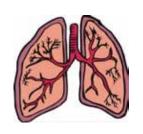
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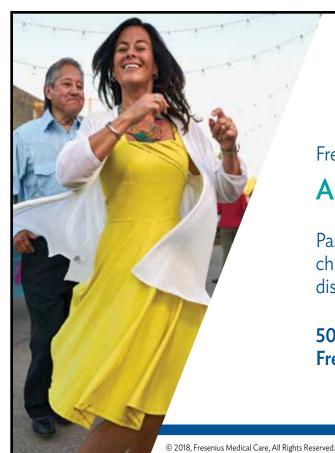
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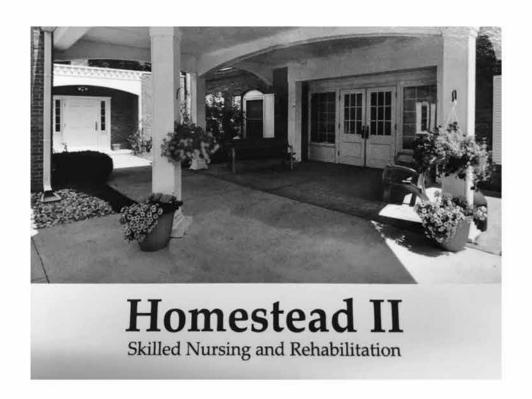
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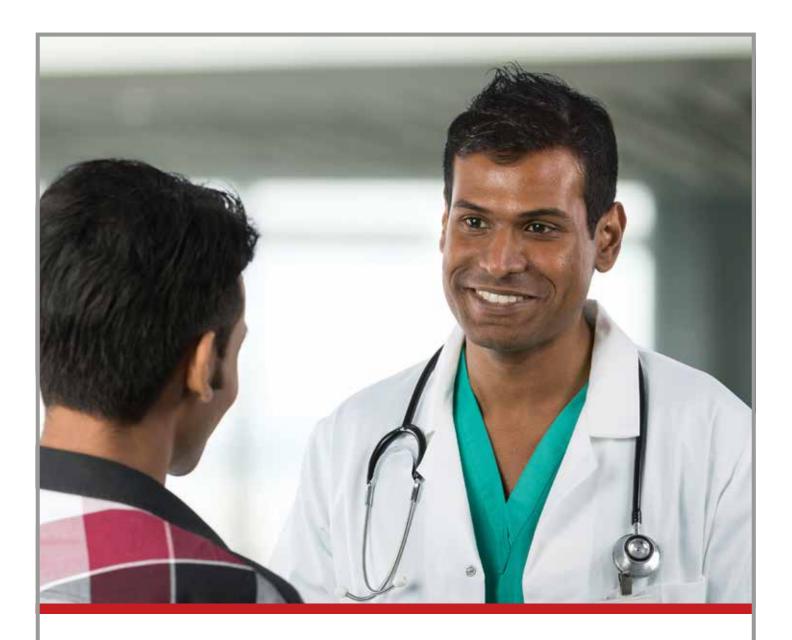
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