

## Q8

**Title: The Best Treatment Options for Nutcracker Syndrome**

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

**Goals:**

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

**Methods:**

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

**Results:**

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

**Conclusion:**

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