

## Prostate Artery Embolization at UHealth

Prostate artery embolization (PAE) is a relatively new procedure which offers an attractive treatment option for benign prostatic hyperplasia, a condition affecting over 50 percent of men over the age of 50. This procedure is quickly gaining traction around the world with an increasing research focus. Gradually, PAE is becoming accepted as a potential effective treatment alternative. UHealth operates an extensive PAE program led by Shivank Bhatia, MD.

"We are based in south Florida so there are definitely many more 60 or 65 plus people here," says Bhatia. This kind of population is the perfect fit for this new procedure. However, Bhatia reminds us that the procedure is still awaiting FDA clearance and therefore is offered only within the scope of a clinical trial. "There is evidence from across the globe. Yet, when it comes to the United States, it is still in the early stages. We participated in a multicenter prospective clinical trial to compare prostate embolization with transurethral resection of the prostate (TURP) to treat benign prostatic hyperplasia (BPH). We also looked into patients with recurrent or refractory hematuria." Developing on this experience, the team has proceeded to study the role of embolization in patients with prostate cancer, as well.

Bhatia identifies the strong partnership with the urology department as key to their successful activities in this field. "Our entire practice model was built on doing things with urology involved and I think that helped us a lot. We get most of our referrals from urologists, many of these are non-surgical candidates and it definitely helps to build the practice. We work in a multidisciplinary fashion with the urologists to provide all the possible options to the patients and enable them to make an informed decision."

In a position statement from the Society of Interventional Radiology, published back in 2014, PAE was identified as a "novel and promising therapy that appears safe and efficacious based on short-term follow-up." However, the procedure is technically challenging and could lead to complications if not performed meticulously.

Imaging plays a key role in accurate PAE with particular support from *syngo* DynaCT. Understanding the 3D anatomy in this procedure is very important for safe treatment. *syngo* DynaCT is used in this procedure to provide updated views of the exact vessel anatomy and also as a safety check before embolization.

The team at UHealth uses *syngo* DynaCT to overcome challenges in this procedure: "We receive excellent imaging which supports guidance into the vessel," explains Bhatia, "and once we get into the artery, we do a *syngo* DynaCT run to identify the risk for non-target embolization, and check if any other organ is being supplied by the vessel feeding the prostate. This is very important in terms of patient safety."

While patient safety is, of course, paramount in PAE, patient comfort is also a key consideration. Bhatia and his team currently use a radial artery approach (via the wrist) to enable quicker recovery for the patient. Patients are able to go home within two hours after the procedure.

The PAE program at UHealth is an example of how research, team work, cutting-edge technology, and great passion for improving patients' lives come together.



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Shivank Bhatia, MD  
UHealth – the University of Miami Health System