With flip of wrist, interventional radiologists treat uterine fibroids

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Interventional radiologists have devised a new way to access a woman's fibroids—by flipping her wrist and treating via an arm not groin artery—to nonsurgically shrink noncancerous growths in the muscular wall of the uterus. Researchers found this to be less painful and traumatic for women, allowing them to immediately sit up and move after uterine fibroid embolization (UFE)—with no overnight stay, according to a March article in the Society of Interventional Radiology's flagship publication, the *Journal of Vascular and Interventional Radiology*.

"Improving patient care and providing advanced treatment options are always on the minds of interventional radiologists. And this could be a game changer for image-guided minimally invasive treatments," said Aaron M. Fischman, M.D., an interventional radiologist and assistant professor of radiology and surgery at Mount Sinai Medical Center in New York. Mount Sinai researchers studied the access treatment favored by cardiologists for coronary interventions—and applied it to a minimally invasive treatment for women's uterine fibroids. By flipping access for treatment from the artery in the groin to the artery in the wrist, the researchers said that the women experienced less pain and trauma than the traditional groin technique—opening the door to potential savings in health care costs. Complications related to bleeding at the puncture site are also significantly reduced using this novel approach. Patients are able to walk immediately after treatment, which dramatically improves their experience. "This is just the beginning," he added, indicating that this technique may also pave the way toward

improving other interventional radiology treatments—including those for cancer patients.

Fischman said that his team wanted to explore options that were more comfortable and beneficial for patients undergoing UFE, a nonsurgical interventional radiology treatment for women that cuts off blood flow to painful fibroids to kill the noncancerous tumors. "Few reports in the literature have explored this application to interventional radiology treatments. This is the first reported use of transradial access for UFE," Fischman added.

Uterine fibroids, which affect up to 40 percent of all women 35 and older, can cause prolonged, heavy menstrual bleeding that can be severe enough to cause anemia or require transfusion; disabling pelvic pain and pressure; urinary frequency; pain during intercourse; and miscarriage. Typically, interventional radiologists have delivered treatment directly to the fibroid—by threading a catheter through a woman's femoral artery in her thigh. In this new approach, the interventional radiologists threaded a catheter through one of two arteries in a woman's left wrist. They then made a tiny nick in the skin, less than one-fourth of an inch, and inserted a catheter into the artery. Using real-time imaging, the doctor guided the catheter through the artery and then released tiny particles, the size of grains of sand, into the uterine arteries that supply blood to the fibroid tumor. This blocked the blood flow to the fibroid tumor and caused it to shrink and symptoms to subside.

Women seeking UFE at Mount Sinai were presented both access options, said Fischman. His team treated 29 women (ages 23–56, some with benign tumors the size of a grapefruit) from March through October 2013. Fischman said that their findings suggest that wrist (transradial) UFE offers a safe and effective alternative to groin (transfemoral) UFE. He indicated that a much larger prospective, randomized trial is needed to validate conclusions about specific benefits

of this novel approach. He noted that interventional radiologists will need to be trained in this new access. In addition to presenting this study, Fischman will be leading workshops on this new technology at the Society of Interventional Radiology's Annual Scientific Meeting March 22–27 in San Diego.

Provided by Society of Interventional Radiology