

MRI locates prostate cancer recurrence at extremely low PSA levels

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A pelvic MRI scan with IV contrast and rectal balloon is highly effective in identifying local recurrence even at low PSA values in prostate cancer patients with a rising or persistently elevated PSA after prostatectomy, according to a study presented April 29, 2011, at the Cancer Imaging and Radiation Therapy Symposium in Atlanta. The symposium is co-sponsored by the American Society for Radiation Oncology (ASTRO) and the Radiological Society of North America (RSNA).

Researchers at MD Anderson Cancer Center in Houston evaluated 389 postprostatectomy patients treated between January 2004 and October 2010, with 143 receiving a pelvic MRI to determine if cancer cells were still present in the area of the surgical bed. Thirty-five of those patients had suspicious MRI findings suggesting local recurrence. Twenty-six patients were then biopsied, with 23 showing cancer.

The study showed that about one-third of patients with a biopsy-proven recurrence after suspicious MRI finding had a PSA of less than 1, with several having a PSA as low as 0.3.

A scan of the surgical bed is typically performed after a [prostatectomy](#) and before salvage radiation therapy treatment in [prostate cancer](#) patients with a rising PSA to determine a potential recurrence and location of recurrence. An MRI is able to differentiate between soft tissues better than a traditional CT scan, so the high rates of [cancer recurrence](#) picked up by the MRI were not surprising to researchers. What was surprising was the low PSA levels at which the MRI could determine recurrent

disease.

"Being able to identify such patients is beneficial, as it would be predictive of response to salvage radiation therapy," Seungtaek Choi, MD, lead author of the study and an assistant professor of [radiation oncology](#) at MD Anderson Cancer Center in Houston, said. "It also may allow a radiation oncologist to treat the area of recurrent cancer to a higher [radiation dose](#) with or without hormone ablation therapy to increase the chance of cure."

More information: The abstract, "The Use of Dynamic Contrast Enhanced (DCE) Endorectal Magnetic Resonance Imaging (MRI) in the Evaluation of Patients with Rising or Persistently Elevated PSA after Radical Prostatectomy," will be presented at 4:30 p.m. Eastern time on April 29, 2011.

Provided by American Society for Radiation Oncology

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