



Ashish Nimgaonkar, MD

Young Clinician Award 2008

Investigator Profile

Education

- MBBS, Osmania Medical College, Hyderabad, India
- MTech, Indian Institute of Technology, Mumbai, India
- MSc, Harvard-MIT Division of Health Sciences and Technology, Cambridge, MA

Clinical /Professional Appointment

- Resident, Department of Medicine, Beth Israel Deaconess Medical Center, Harvard Medical School
- 2009 Clinical Fellow Gastroenterology

Recent Honors and Awards

- Young Scientist Award & Hansraj Nayyar Memorial Award for the best paper, National Conference of Critical Care Medicine, Bangalore, India
- Dean's Honor List, (Top 1% at AP University of Health Sciences among 1500 medical students)



Abstract

I am currently investigating the role of endoluminal magnetic resonance imaging coil for enhancing signal detection in the pancreas. Endoluminal magnetic resonance imaging can address some of the unmet needs of body MR by improving the signal to noise ratio (SNR) and result in better detection and characterization of pancreatic lesions, including earlier and better characterization of pancreatic malignancies. The goal is to improve disease detection and characterization of pancreatic lesions, ultimately leading to improved diagnostic and therapeutic decisions. We have been able to custom design an endoluminal coil to image the pancreas from inside the duodenum and stomach and have shown that endoluminal imaging of pancreas achieves increased SNR in comparison to surface coil imaging.

Our goal is to develop a new one-stop procedure that 1) improves the characterization of the pancreatic and peripancreatic lesions and 2) allows for optimal image guided pancreatic procedures. The technique we propose is for a 1.5 Tesla MR system using a phased array surface coil, a custom designed endoluminal receiver coil (to be positioned in the duodenum and stomach) and a device for coil positioning.

Impact on Care

- Potential improved distinction between benign and malignant pancreas lesions will avoid unnecessary and potentially morbid surgeries.
- Better detection and characterization of pancreatic abnormalities, ultimately leading to improved diagnostic and therapeutic decisions.
- Possibly earlier detection of pancreatic malignancies at an earlier stage when they can be treated definitively.
- Endoluminal MRI may possibly be used to probe the physiology of pancreas and direct image-guided pancreatic procedures.