Multiparametric Prostate MRI

- Time consuming to learn, interpret and clinically implement
- Requires high quality image acquisition, experienced **Radiologist**, **MRI** knowledgeable **Urologist** and **Pathologist** to prove the presence of cancer (concordance with the MR images)
- For clinical and scientific accuracy MRI reports need to be standardized and clinically useful
- Risk assessment **selects** men for MRI, MRI **triages** men for biopsy
- Perform baseline MRI before biopsy artefact
- The volume, location and definition of a MRI nodule is becoming as important as the number of biopsy cores and % of a core with cancer in predicting the aggressiveness of a cancer
- 5 alpha reductases inhibitors makes cancers much more difficult to MR image
- MRI provides local-regional staging below the aorta bifurcation - capsule, adjacent, nodes and bones

**Prostate MRI Creates**
Further understanding of prostate cancer’s natural history

New avenues for cancer research

Lead-time bias

References
4. PI-RADS v2, American College of Radiology, pub. online (2015).

**PSA to Prostate MRI**

for patients and curious doctors

Samuel Aronson, M.D.
Prostate MRI
Rediscovering Prostate Cancer
Natural History, Diagnosis, Treatment and Monitoring

This new valuable technology detail images prostate anatomy, physiology and microvasculature is transforming our understanding and management of prostate cancer.

Some truths will be redefined
Some old assumptions changed
New frontiers discovered

Updating with Prostate MRI
Clinical / Pathologic Staging
• Epstein’s Criteria
  Insignificant, Significant cancer
• D’Amico’s Classification
  Low Risk, Moderate Risk, High Risk
• TNM Staging of Prostate Cancer
• Predictor Tables (MSKCC, Partin, Sunnybrooke, etc.)

Image Based Prostate Cancer Management
Prostate MRI Key Roles
• Screens Men at Risk
• A imaging biomarker
• Characterizes the aggressive significant cancer nodules
• Local-regional staging
• Selects/limits the number of men requiring biopsy
  • Fusion targeted biopsy
• Active Surveillance criteria and monitoring
• Decreases overdiagnosis and overtreatment
• More accurate treatment selection and planning
  • Focal Therapy, Surgery and Radiation
• Post-treatment evaluation for residual or recurrent cancer

Prostate MRI
Biomarker, Screening Tool, Reference Study
Diagnostic, Monitoring Instrument

new technology, new discoveries
new questions to answer, new problems to solve