ROLE of MRI in PROSTATE CANCER MANAGEMENT
ROLE of MRI in PROSTATE CANCER DETECTION

Evaluating risk for prostate cancer

MRI targeted biopsy
ROLE of MRI in PROSTATE CANCER MANAGEMENT

MRI for confirmation of low risk disease and surveillance for progression
MRI staging for intermediate and high risk disease
ROLE of MRI in PROSTATE CANCER MANAGEMENT

MRI for evaluating and locating recurrent disease
MRI for guiding focal therapy
ROLE of MRI in PROSTATE CANCER

DEFINING MRI

Multiparametric
Water molecule behavior/DWI
Blood flow/DCE
ROLE of MRI in PROSTATE CANCER

LIMITATIONS

Dependent on reader experience
Variable reporting
Underestimates tumor volume
ROLE of MRI in PROSTATE CANCER

DIAGNOSTIC ACCURACY

Reduced risk of detecting indolent disease

Improved probability of detecting clinically important disease

Targeted biopsy
ROLE of MRI in PROSTATE CANCER

MANAGEMENT DECISIONS

Prostate cancer is a highly variable disease that grows slowly

Estimate risk of progression

Interpret it in the context of life expectancy
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MANAGEMENT DECISIONS

Assign category of risk based on Gleason Score and PSA

Very

low/low/intermediate/high risk

Manage each category with appropriate strategy
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Management Strategies
Active Surveillance
Surgery
Radiation
Multimodal therapy
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VERY LOW and LOW RISK

Active Surveillance
MRI for confirmation and surveillance for progression of disease and targeted biopsy
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INTERMEDIATE and HIGH RISK

Surgery /Radiation/Multimodal therapy

MRI for staging
Extra prostatic disease and lymph node status
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BIOCHEMICAL RECURRENCE

Variable definitions
Rising PSA after Radiation
Detectable PSA after surgery
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BIOCHEMICAL RECURRENCE

- Distinguish tumor from residual benign disease
- Locate recurrent tumor to guide salvage therapy
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FOCAL THERAPY

MRI targeted ablation
Cryo/HIFU/Laser
GOAL: Preserve continence and potency
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FOCAL THERAPY

World Congress of Endourology Dec. 2015
Cryo vs. HIFU
149 men, 90% low risk
Follow up of 22 months
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FOCAL THERAPY

Annual surveillance biopsy
Cryo: 47% positive biopsy
HIFU: 31% positive biopsy
Bilateral positive biopsy: 16.5%
ROLE of MRI in PROSTATE CANCER FOCAL THERAPY

Journal of Urology, July 2016
UCLA, Phase 1 trial, FLA
8 men, intermediate risk Pca.
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FOCAL THERAPY

Treatment time: 4.9 hours

6 month follow up

Potency and continence preserved

7 of 8 with a positive biopsy
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FOCAL THERAPY: An Alternative

ACTIVE SURVEILLANCE
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SUMMARY

Risk assessment
Diagnostic accuracy
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SUMMARY

Confirmation of low risk disease
Surveillance for progression of disease
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SUMMARY

Staging for intermediate and high risk disease
Evaluating and locating recurrent disease
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SUMMARY

Focal therapy is investigational
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SUMMARY

Don’t treat low risk disease. Treat significant risk disease with appropriate whole gland therapy.