

LDR Prostate Brachytherapy as a salvage after EBRT

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EBRT failure – clinical features

- 25-50% develop biochemical failure
 - 25% become clinical failures in 7 yrs
- Biopsy studies show many have local disease
- CaPSURE data – treatment of failures
 - 75% - ADT
 - 25% - Surveillance
 - 5% - Salvage Tx

Salvage LDR Bxt after EBRT

- Patient selection
 - 10 Yr life expectancy
 - > 3 yrs from EBRT
 - Low PSA nadir
 - PSA < 5 (<2) – not castrate resistant
 - PSADT > 9/12
 - PET/MRI staging clear
 - Template Biopsy
 - viable tumour with little RT effect

Toxicity

A Prospective Phase 2 Trial of Transperineal
Ultrasound-Guided Brachytherapy for Locally
Recurrent Prostate Cancer after External Beam
Radiation Therapy (NRG/ RTOG0526): Initial
Report of Late Toxicity Outcome

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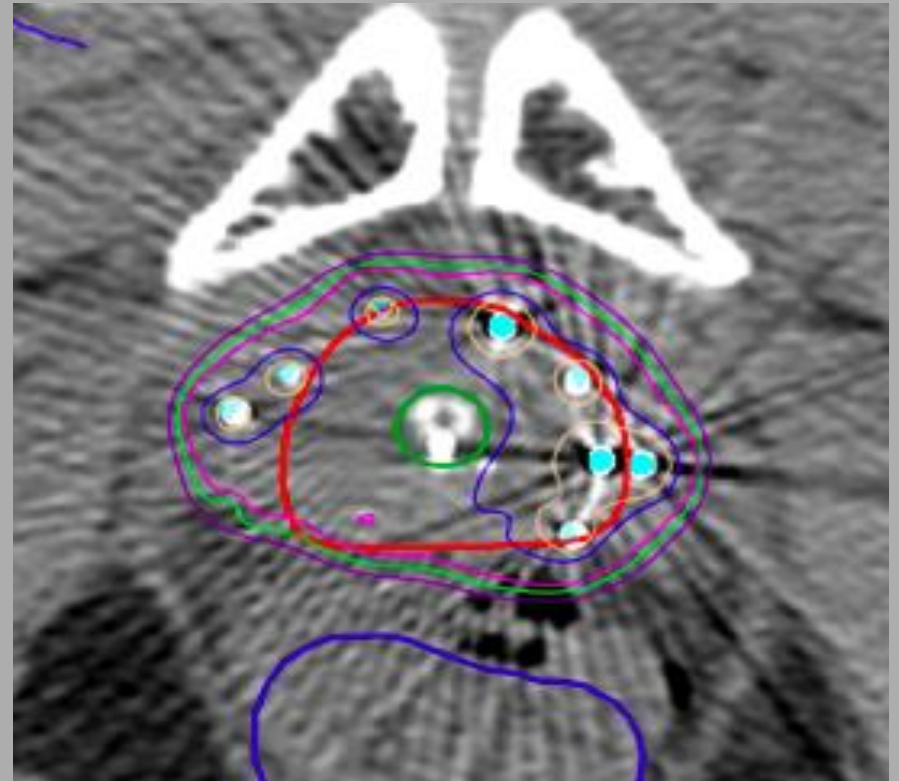
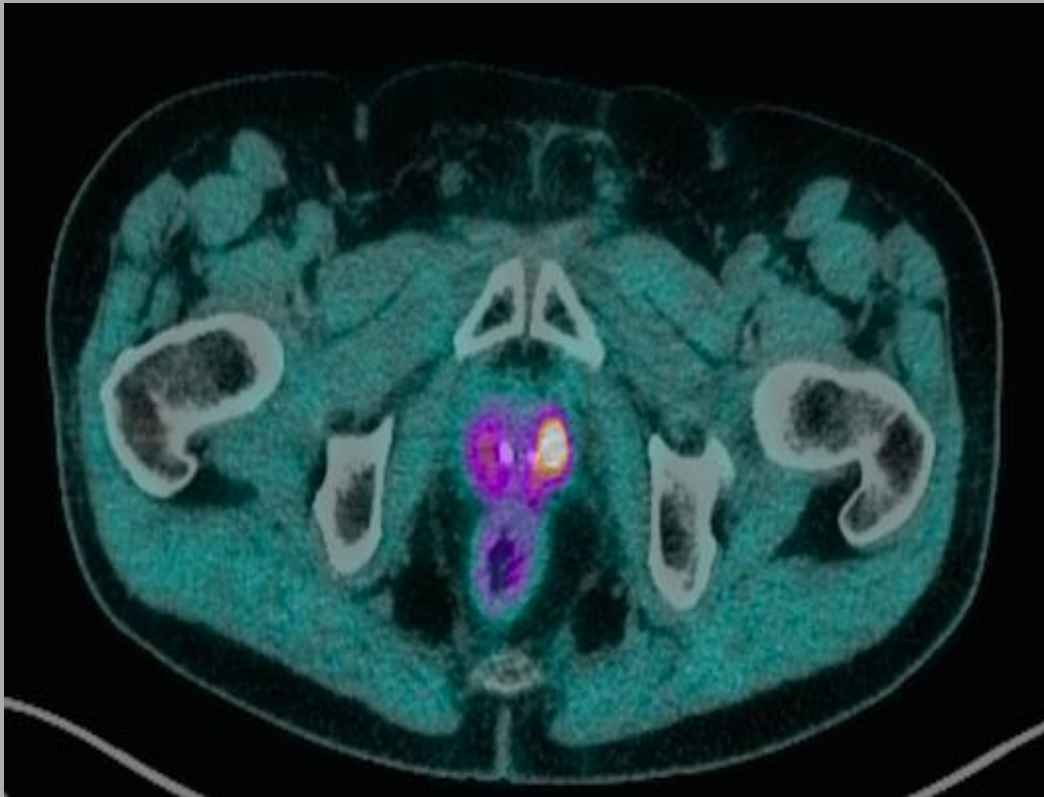
- 100 patients prospectively recruited – 87 evaluable
- Dose 144 Gy V150 median 50% (18 – 90%!)
- 14% Gd 3 events (1 fistula, 1 stricture - various urinary symptoms)
- No Gd 4 events
- Dose only factor to predict toxicity
- No survival results yet.

Whole gland or boost?

- Hsu et al
 - 15 focal tx – to tumour on MRI Spect and high risk areas
 - No Gd 3 tox
 - 75% Bfs
- Peters et al
 - 144Gy to tumour only
 - 65% Bfs
 - No Gd 3 toxicity

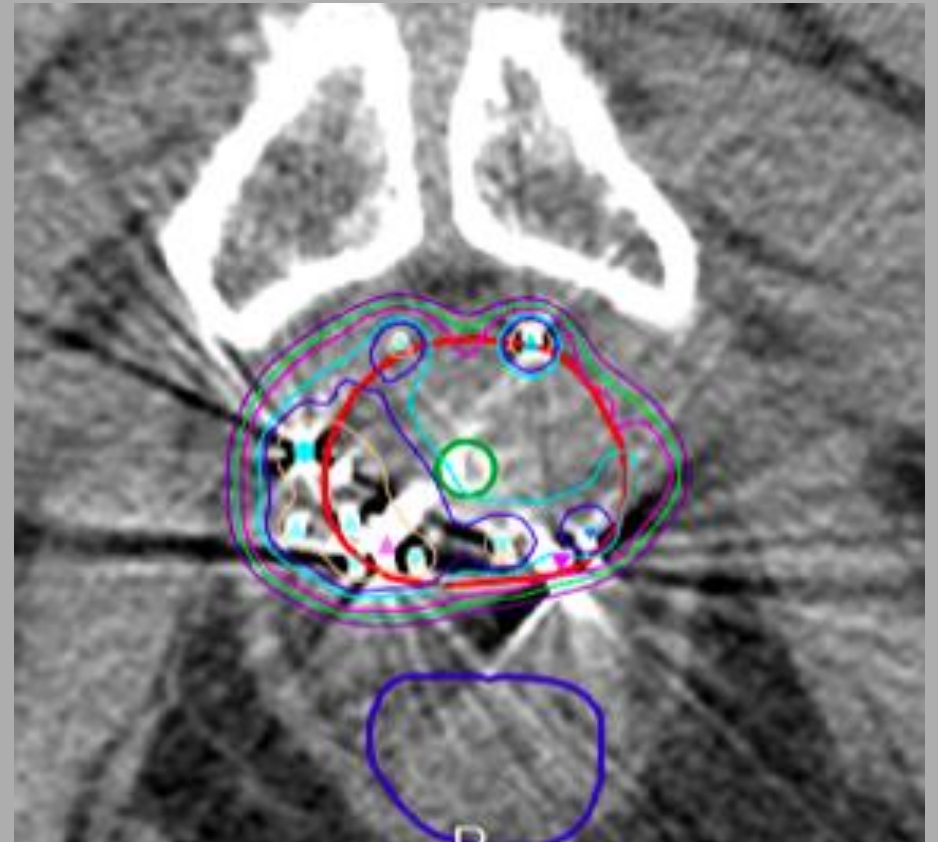
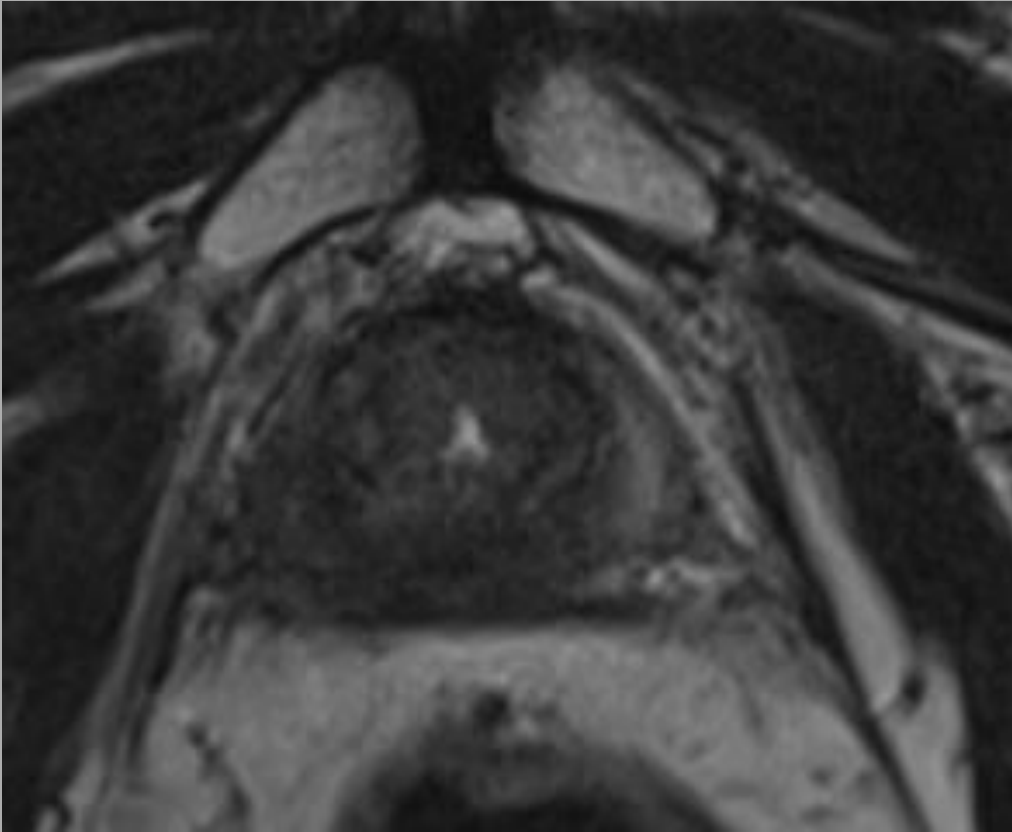
Salvage Bxt – focused Tx (Hydrogel)

1 Yr Fu Gd 1 toxicity only



Salvage Bxt – focused Tx (Hydrogel)

1 Yr Fu Gd 1 toxicity only



Results

Table 2 Salvage Brachytherapy Series

Studies	Patients	Brachytherapy Type	Median Follow-Up (Mo)	BCR-Free Survival (Interval)	CSS (Y)
Aaronson et al ⁷³	24	LDR	30	86% (2.5 y)	96% (2.5 y)
Burri et al ⁶¹	37	LDR	86	65% (5 y) 54% (10 y)	96% (10 y)
Grado et al ⁶³	49	LDR	64	34% (5 y)	79% (5 y)
Hsu et al ⁷⁹	15	LDR (MRI-planned partial salvage)	24	71.4% (3 y)	
Lee 2008 ⁶⁵	21	LDR	36	38% (5 y)	
Moman et al ⁷⁴	31	LDR	108	20% (5 y)	65% (6 y)
Nguyen et al ⁷⁰	25	LDR (MRI-guided BT)	47	70% (4 y)	
Peters et al ¹¹¹	20	LDR (focal salvage)	36	6 Events	
Rose et al ⁶⁹	18	LDR (3 focal salvage)	31.5	78% (3 y)	
Vargas et al ⁶⁶	69	LDR	60	73.8% non-CRPC, 22% CRPR (5 y)	95.6% (5 y)
Henriquez et al ⁶⁴	56	37 LDR/19 HDR	48	77% (5 y)	
Chen et al ⁶² /Lee et al ⁸⁰	52	HDR	60	51% (5 y)	
Jo et al ⁸¹	11	HDR	29	64% (2 y)	
Tharp et al ⁸²	7	HDR	58	71%	71%
Yamada et al ⁶⁷	42	HDR	36	68.5% (5 y)	90.3% (5 y)

Summary Salvage Bxt

- Patient selection most important
- Careful dose planning with focused delivery
- Acceptable toxicity