

## Comparative Morbidity Between Salvage High Intensity Focused Ultrasound and Cryotherapy for Radiorecurrent Prostate Cancer

**Introduction and Objectives:** High intensity focused ultrasound (HIFU) utilizes focused ultrasound waves to destroy tissues. Whether as primary or salvage modality, HIFU is increasingly being promoted in the management of prostate cancer (PCa). Our primary objective is to assess the adverse events rate after salvage HIFU in patients with radiorecurrent PCa. We compared the results with salvage Cryotherapy (CRYO) adverse events which is another minimal invasive modality.

**Materials and Methods:** We retrospectively reviewed the adverse events of all patients who underwent salvage HIFU for recurrent PCa after Radiotherapy (2006-2010). The first equal cohort of patients who underwent salvage CRYO was selected for comparison (1995-1998).

**Results:** Salvage HIFU had lower incontinence (4.6% vs 53%) and urinary retention rate (6.2% vs 28%). Perineal pain rate was lower in the HIFU group (5% vs 24%). There was no bladder contracture in the HIFU group. The rate of postoperative hematuria was similar between both modalities. Recto-Urethral fistula rate and urethral sloughing were low in both modalities (3.1% and 1.5%, 1.5% and 3.1% respectively).

**Conclusions:** HIFU is a feasible salvage procedure in patients with radio-recurrent PCa. Salvage HIFU has lower adverse events in comparison to salvage CRYO in this group of patients.

Variables	Salvage HIFU 2006-2010 (n=64)	Salvage Cryotherapy 1995-1998 (n=64)	P Value
Age	67	66	NS
Pre Salvage PSA	3.1	9.2	<0.05*
Incontinence (mild/moderate)	3 (4.6%)	34 (53%)	<0.05**
Incontinence requiring surgery	1 (1.5%)	2 (3.1%)	NS
Perineal pain	3 (5%)	14 (24%)	NS
Recto-urethral Fistula	2 (3.1%)	1 (1.5%)	NS
Urinary Retention	4 (6.2%)	18 (28%)	<0.05**
Gross Hematuria	7 (11%)	7 (11%)	NS
Urethral Sloughing	1 (1.5%)	2 (3.1%)	NS
Bladder Neck Contracture	0	6 (9.3%)	<0.05**
Urinary Tract Infection	6 (9.3%)	8 (12.5%)	NS

Table 1: Postoperative morbidity between salvage High intensity focused ultrasonography (HIFU) and salvage Cryotherapy. \* Mann Whitney test. \*\* Fisher Exact test.