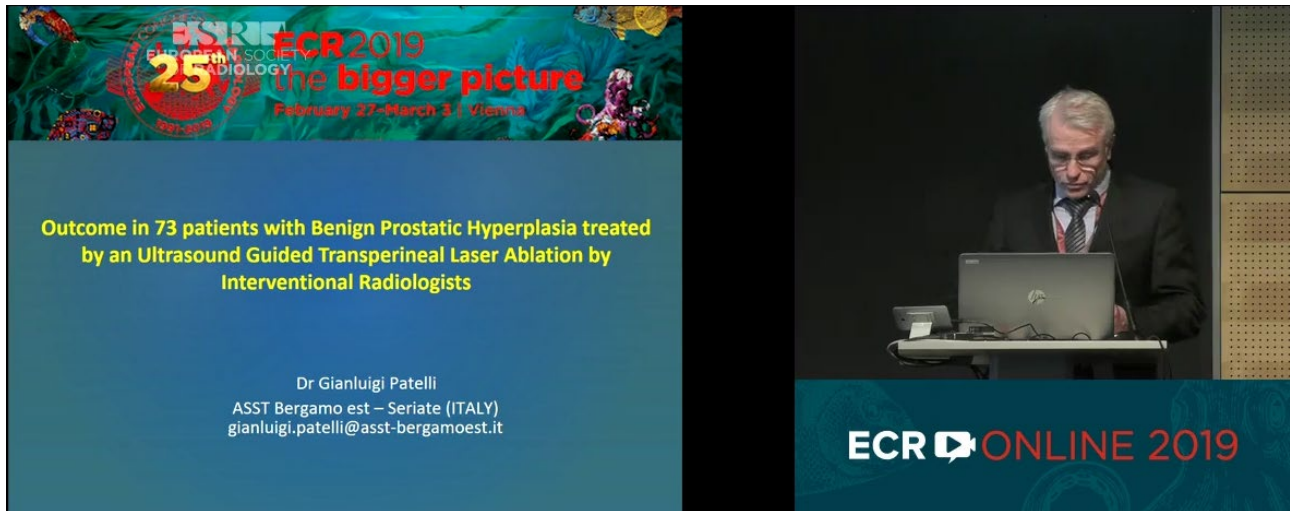


## Outcome in 73 patients with benign prostatic hyperplasia treated by an ultrasound guided transperineal laser ablation by interventional radiologists

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### Abstract

**Purpose:** To report results of ultrasound-guided (US-g) Transperineal Laser Ablation (TPLA) in patients with Benign Prostatic Hyperplasia (BPH).

**Methods and Materials:** seventy-three patients (mean age  $72.6 \pm 10.4$  years, range 58-93) with obstructive syndrome secondary to BPH, were treated by TPLA using continuous wave (CW) diode laser source at 1064nm (Echolaser SoracteLite, Elesta s.r.l., Calenzano (FI), Italy). Under transrectal US-g, one or two 21G introducer needles for each lobe, according to the prostate volume, were inserted with transperineal approach. Each ablation was performed at 3W power for 1800J energy. A pull back was done case by case according to the prostate volume. Major and minor complications were recorded. The efficacy was evaluated on the changes of means of International Prostate Symptoms Score (IPSS), Quality of Life(QoL), post-void residual (PVR), prostate volume and the ejaculatory function. The mean hospital stay was measured.

**Results:** At a mean follow-up time of 16 months (range 3-45), IPSS improved from 22.9 to 9.6 ( $P < 0.001$ ), QoL from 4.5 to 1.2 ( $P < 0.001$ ), PVR from 162.3 ml to 64 ml ( $P < 0.001$ ) and prostate volume from 73.47 ml to 50.8 ml ( $P < 0.001$ ). Of 34 patient evaluated for ejaculatory function, 32 (94%) maintained a satisfactory ejaculation. No major complications occurred. The mean operation time was  $42.3 \pm 8.7$  min, ablation time  $15.6 \pm 3.4$  min, energy deployed  $11,540.0 \pm 3,680.5$  J, hospital stay  $1.7 \pm 0.4$  days.

**Conclusion:** TPLA is a mini invasive treatment for BPH. This therapeutic approach was safe, efficacious and with a satisfactory outcome.