



# READ IT BEFORE YOUR PATIENTS

## Prostate

### Prostate-Only Versus Whole-Pelvic Radiation Therapy in High-Risk and Very High-Risk Prostate Cancer (POP-RT): Outcomes From Phase III Randomised Controlled Trial

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#### PURPOSE:

We report the clinical outcomes of a randomised trial comparing prophylactic whole-pelvic nodal radiotherapy to prostate-only radiotherapy (PORT) in high-risk prostate cancer.

#### METHODS:

This phase III, single center, randomised controlled trial enrolled eligible patients undergoing radical radiotherapy for node-negative prostate adenocarcinoma, with estimated nodal risk  $\geq 20\%$ . Randomisation was 1:1 to PORT (68 Gy/25# to prostate) or whole-pelvic radiotherapy (WPRT, 68 Gy/25# to prostate, 50 Gy/25# to pelvic nodes, including common iliac) using computerised stratified block randomisation, stratified by Gleason score, type of androgen deprivation, prostate-specific antigen at diagnosis, and prior transurethral resection of the prostate. All patients received image-guided, intensity-modulated radiotherapy and minimum two years of androgen deprivation therapy. The primary end point was five-year biochemical failure-free survival (BFFS), and secondary end points were disease-free survival (DFS) and overall survival (OS).

#### RESULTS:

From November 2011 to August 2017, a total of 224 patients were randomly assigned (PORT = 114, WPRT = 110). At a median follow-up of 68 months, 36 biochemical failures (PORT = 25, WPRT = 7) and 24 deaths (PORT = 13, WPRT = 11) were recorded. Five-year BFFS was 95.0% (95% CI, 88.4 to 97.9) with WPRT versus 81.2% (95% CI, 71.6 to 87.8) with PORT, with an unadjusted hazard ratio (HR) of 0.23 (95% CI, 0.10 to 0.52;  $P < .0001$ ). WPRT also showed higher five-year DFS (89.5% v 77.2%; HR, 0.40; 95% CI, 0.22 to 0.73;  $P = .002$ ), but five-year OS did not appear to differ (92.5% v 90.8%; HR, 0.92; 95% CI, 0.41 to 2.05;  $P = .83$ ). Distant metastasis-free survival was also higher with WPRT (95.9% v 89.2%; HR, 0.35; 95% CI, 0.15 to 0.82;  $P = .01$ ). Benefit in BFFS and DFS was maintained across prognostic subgroups.

#### CONCLUSION:

Prophylactic pelvic irradiation for high-risk, locally advanced prostate cancer improved BFFS and DFS as compared with PORT, but OS did not appear to differ.