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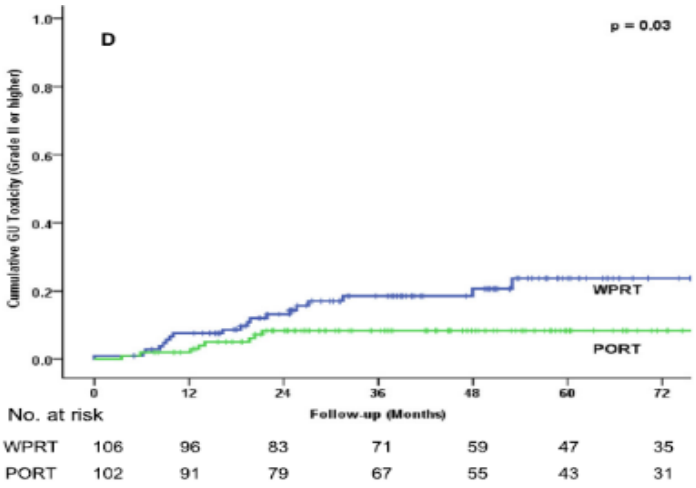
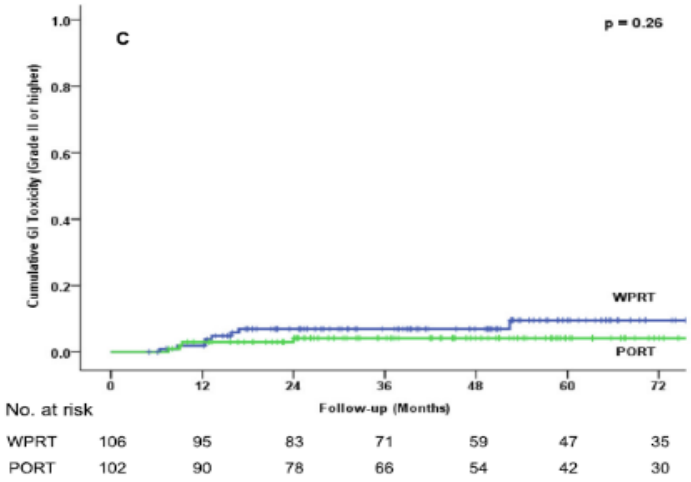
Randomised trial comparing pelvic radiotherapy to prostate-only radiotherapy shows increased late urinary toxicity, no difference in patient quality of life

Radical radiotherapy to the prostate is the recommended curative treatment for 'high risk' prostate cancer which is localised to the prostate, but with increased risk of involvement of pelvic lymph nodes. Yet, the benefit of radiotherapy to the whole pelvis has not been established. Randomised trial of Prostate Only or Pelvic Radiotherapy in high risk prostate cancer **(POP-RT)** from Tata Memorial Centre is comparing the benefit of radiotherapy to pelvic nodes in addition to prostate, using modern conformal technique of image guided intensity modulated radiotherapy (IG-IMRT). While there was no difference in short-term side effects for the bladder or bowel, five-year follow-up results suggest increased late urinary toxicity with pelvic radiotherapy. This difference was not reflected in the quality of life scores reported by the patients, which were similar in both the arms of the trial. Late gastrointestinal toxicity was also similar between the two arms. The final results of clinical outcomes are awaited, to answer if the benefit of prophylactic pelvic nodal radiotherapy for high risk prostate cancer is worth the increase in late toxicity.



Pelvic radiotherapy was associated with significantly higher late bladder toxicity (≥grade II, 17.7% vs. 7.5%, p=0.03). It was observed that the volume of bladder exposed to mid-level radiotherapy doses of 30-40 Gy was much higher in pelvic radiotherapy arm. Patient-reported quality of life scores did not reflect this difference, and scores for all the function and symptom subscales of quality of life were similar in both the arms.



Previous trials exploring the benefit of pelvic radiotherapy used older treatment techniques, which caused concerns regarding gastrointestinal adverse effects. Toxicity results and dosimetric analysis from POP-RT trial demonstrate the excellent bowel sparing achieved with IG-IMRT, resulting in overall low incidence of gastrointestinal toxicity (≥grade II, WPRT 6.5%, PORT 3.8%, p=0.39). The rates of bladder and bowel side effects observed in the current trial compare favourably with the toxicity rates reported in global prostate cancer trials. Final clinical outcomes from the POP-RT trial are awaited, to consider the increased risk of toxicity vis-à-vis a possible benefit in tumour control.
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