



# READ IT BEFORE YOUR PATIENTS

## Cervical

### Late Toxicity After Adjuvant Conventional Radiation Versus Image-Guided Intensity-Modulated Radiotherapy for Cervical Cancer (PARCER): A Randomised Controlled Trial.

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*J Clin Oncol.* 2021 Nov 20;39(33):3682-3692. doi: 10.1200/JCO.20.02530.

#### PURPOSE

Postoperative Adjuvant Radiation in Cervical Cancer (PARCER), a phase III randomised trial, compared late toxicity after image-guided intensity-modulated radiotherapy (IG-IMRT) with three-dimensional conformal radiation therapy (3D-CRT) in women with cervical cancer undergoing postoperative radiation.

#### METHODS

Patients were randomly assigned to receive either IG-IMRT or 3D-CRT after stratification for the type of hysterectomy and use of concurrent chemotherapy. The primary end point was 3.0-year grade  $\geq 2$  late GI toxicity assessed using Common Toxicity Criteria for Adverse Events v 3.0 and estimated using time-to-event, intention-to-treat analysis, with a study level type I error of 0.05 and a nominal  $\alpha$  of .047 after accounting for one interim analysis. Secondary end points included acute toxicity, health-related quality of life, and pelvic relapse-free, disease-free, and overall survival.

#### RESULTS

Between 2011 and 2019, 300 patients were randomly assigned (IG-IMRT 151 and 3D-CRT 149). At a median follow-up of 46 (interquartile range, 20-72) months, the 3.0-year cumulative incidence of grade  $\geq 2.0$  late GI toxicity in the IG-IMRT and 3D-CRT arms were 21.1% versus 42.4% (hazard ratio [HR] 0.46; 95% CI, 0.29 to 0.73;  $P < .001$ ). The cumulative incidence of grade  $\geq 2.0$  any late toxicity was 28.1% versus 48.9% (HR 0.50; 95% CI, 0.33 to 0.76;  $P < .001$ ), respectively. Patients reported reduced diarrhea ( $P = .04$ ), improved appetite ( $P = .008$ ), and lesser bowel symptoms ( $P = .002$ ) with IG-IMRT. However, no difference was observed in the time by treatment interaction. The 3.0-year pelvic relapse-free survival and disease-free survival in the IG-IMRT versus the 3D-CRT arm were 81.8% versus 84% (HR 1.17; 95% CI, 0.68 to 1.99;  $P = .55$ ) and 76.9% versus 81.2% (HR 1.03; 95% CI, 0.62 to 1.71;  $P = .89$ ), respectively.

#### CONCLUSION

IG-IMRT results in reduced toxicity with no difference in disease outcomes.