Hypofractioned post-prostatectomy radiotherapy new acceptable practice standard based on NRG Oncology trial findings

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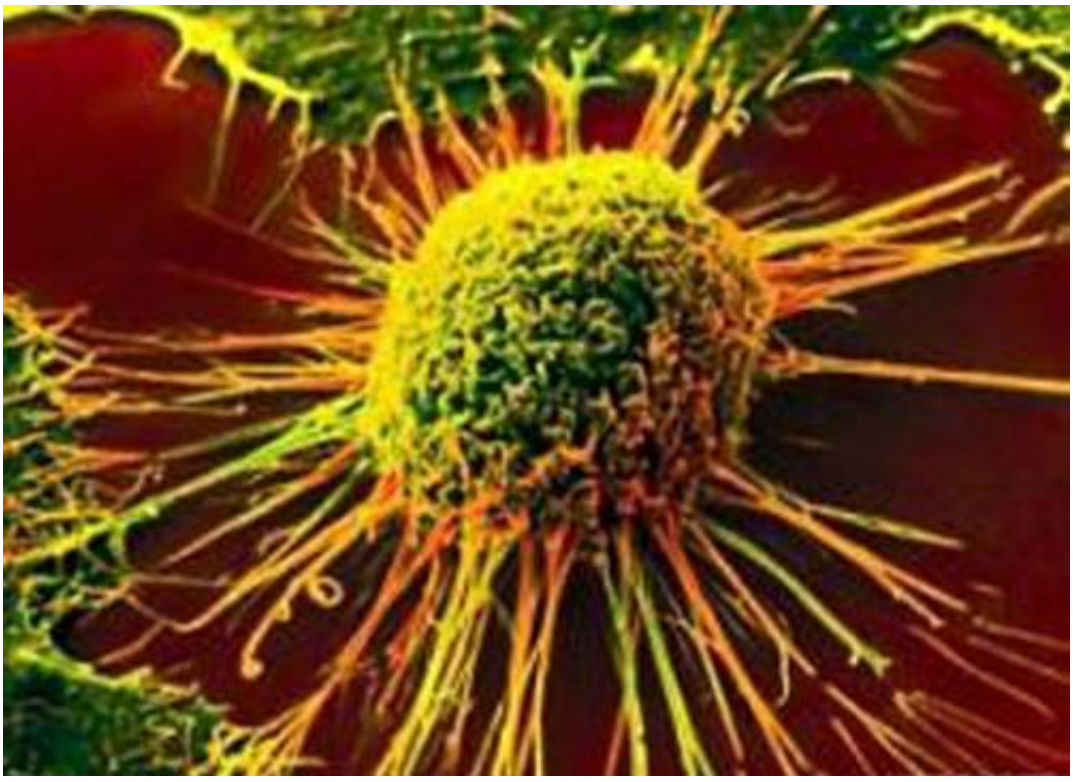

Results from the Phase III NRG Oncology NRG-GU003 clinical trial comparing hypofractioned post-prostatectomy radiotherapy (HYPORT)

to conventionally fractioned post-prostatectomy radiotherapy (COPORT) determined that HYPORT was non-inferior to COPORT in terms of late gastrointestinal (GI) or genitourinary (GU) toxicity for patients primarily treated with prostatectomy for their prostate cancer.

HYPORT was not associated with significantly higher patient-reported GU or GI symptoms at 1-2 years following radiotherapy, thus indicating HYPORT can be used as an acceptable new practice standard. There was greater short-term GI toxicity, mostly rectal irritation, associated with HYPORT as one would expect with the shorter regimen, but this difference resolved at 6 months following radiotherapy.

These results were recently published in the *JAMA Oncology*.

"This study confirms what many doctors have suspected, which is a shorter course of 25 treatments doesn't compromise quality-of-life compared to 37 treatments. The shorter course only requires a simple adjustment, which means any radiation oncology center can make the switch."

"Now, many more patients are expected to be offered radiation because it is less burdensome. This is a big win for patients because radiation is often curative." stated Mark K. Buyyounouski, MD, a radiation oncologist at the Stanford University Cancer Center and the lead author of the NRG-GU003 manuscript.

NRG-GU003 accrued a total of 296 patients with prostate cancer. Patients were stratified according to baseline EPIC score using four tiers based on GU and GI scores and androgen deprivation therapy use. Patients were then randomly assigned to receive either COPORT at 66.6 Gy in 37 fractions or HYPORT at 62.5 Gy in 25 fractions.

The trial's co-primary endpoint was the two-year change score from

baseline in the bowel and urinary domains of the patient-reported Expanded Prostate Cancer Index Composite (EPIC) questionnaire.

The COPORT treatment arm included 152 patients, and the HYPORT treatment arm included 144 patients. At the end of radiotherapy, the HYPORT and COPORT mean GU change scores were neither clinically significant nor significantly different and remained so at 6 and 12 months.

The mean GI change scores for HYPORT and COPORT were both clinically significant and significantly different at the end of RT (HYPORT mean GI = -15.0 vs. COPORT mean GI = -6.8 p

The 24-month differences in mean GU and GI change scores for HYPORT and COPORT were not significantly greater than the non-inferiority margins of -5 and -6, respectively (HYPORT mean GU = -5.0 vs. COPORT mean GU = -4.1, p = 0.98; HYPORT mean GI = -4.2 vs. COPORT mean GI = -1.4, p = 0.99).

With a median follow-up for censored patients of 2.1 years, there was no difference between HYPORT versus COPORT for biochemical failure defined as a PSA ≥ 0.4 ng/mL and rising (2-yr rate, 12% vs. 8%, p = 0.29).

NRG-GU003 had an 83% compliance rate at 2 years for the bowel and urinary domains of the EPIC. Future research in HYPORT versus COPORT could benefit from examining any potential long-term differences in cancer control between the treatments or can test this in a larger sample size.

More information: Mark K. Buyyounouski et al, Noninferiority of

Hypofractionated vs Conventional Postprostatectomy Radiotherapy for Genitourinary and Gastrointestinal Symptoms, *JAMA Oncology* (2024). DOI: 10.1001/jamaoncol.2023.7291