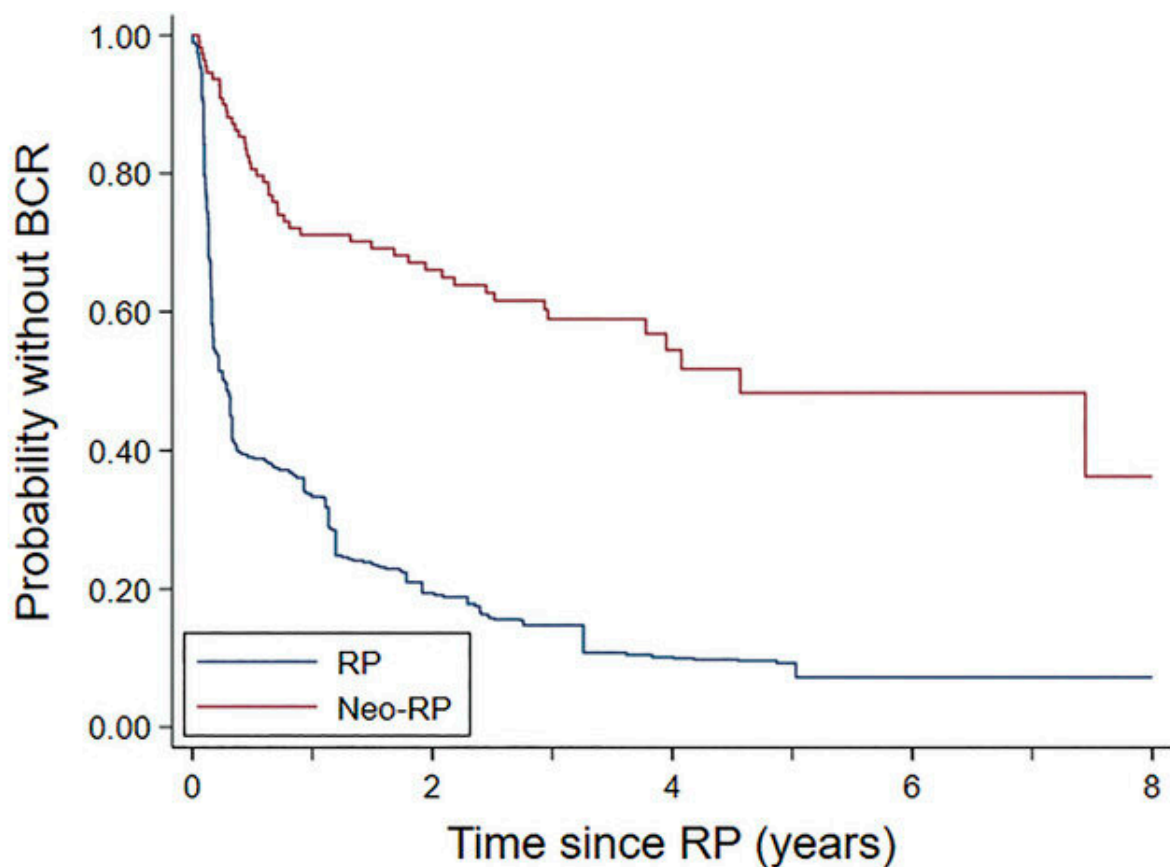


New hormone therapies before surgery may improve outcomes in high-risk prostate cancer

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Number at risk		0	2	4	6	8
RP	257		41	17	6	1
Neo-RP	112		61	22	9	3

Time to BCR in the neo-RP and RP cohorts after IPTW. The number of participants at risk are based on unweighted population. Credit: *Journal of Urology* (2022). DOI: 10.1097/JU.0000000000002803

For high-risk patients with prostate cancer, treatment with novel hormonal agents (NHAs) followed by surgery can reduce the risk of recurrent and progressive cancer, compared to initial treatment with surgery, suggests a study in the *Journal of Urology*.

"Neoadjuvant therapy with NHAs before radical prostatectomy is an innovative approach to treatment of [prostate cancer](#) with high-risk characteristics," comments senior author Mary-Ellen Taplin, MD, of Dana-Farber Cancer Institute, Boston. "While we await the results of definitive clinical trials, our findings suggest that this approach can improve key outcomes, compared to starting treatment with radical prostatectomy."

The study was led by Praful Ravi, MB, BChir, also of Dana-Farber.

Promising outcomes of neoadjuvant NHAs for high-risk prostate cancer

About 20% of patients with localized prostate cancers have characteristics placing them at high risk of cancer recurrence and progression. Even after treatment with surgery, radiation, and standard hormonal therapy, men with these high-risk prostate cancers (HRPCs) are more likely to have unfavorable outcomes. About half of patients with HRPC will have biochemical recurrence (BCR), based on rising prostate-specific antigen levels. About two-thirds of deaths from prostate cancer occur in men with HRPCs.

Recent studies have evaluated the use of NHAs as initial (neoadjuvant) therapy for HRPC, with the goal of shrinking the tumor before prostate cancer surgery ([radical prostatectomy](#), or RP). A clinical trial is underway to compare the outcomes of neoadjuvant NHA versus

standard hormone therapy. However, it won't answer the question of whether neoadjuvant NHA therapy followed by RP can improve outcomes, compared to initial RP.

To address this issue, Dr. Taplin and colleagues compared outcomes in two groups of patients with HRPC. One group included 259 men with HRPC treated from 2010 to 2016, who underwent RP without any neoadjuvant therapy. The other group consisted of 112 men who received neoadjuvant therapy with NHAs before surgery (neo-RP). The main outcomes of interest were BCR and survival without cancer progression (metastasis-free survival). The analysis included adjustment (inverse probability of treatment weighting) to minimize differences in characteristics between groups.

After neoadjuvant therapy, 12% of men in the neo-RP group were classified as having minimal residual disease: in other words, the prostate cancer was almost completely eliminated after treatment with NHAs. Patients undergoing neo-RP were also more likely to have negative margins after RP, indicating no evidence of [cancer](#) after surgery.

Key follow-up outcomes were also better after neo-RP. On adjusted analysis, 59% of men receiving NHAs before surgery were free of BCR at 3 years' follow-up, compared to 15% of those undergoing RP without [neoadjuvant therapy](#). There was a similar improvement in rates of metastasis-free survival. Ninety-six percent of men in the neo-RP group were alive without evidence of tumor spread after 3 years, compared to 68% in the RP group.

Men in the neo-RP group were also less likely to need further treatment, including adjuvant therapy (7% versus 24%) or salvage therapy (34% versus 46%). With current follow-up of about 6 years, overall survival rate was not significantly different between groups.

The researchers note some limitations of their study—particularly the inability to account for other confounding factors that might have contributed to differences in outcomes between groups. However, "the results suggest significant benefit with [NHA prior to RP] in unselected patients with HRPC," Drs. Ravi and Taplin and coauthors conclude. They emphasize the need to confirm the benefits of the neo-RP approach in ongoing randomized trials.

More information: Praful Ravi et al, Neoadjuvant Novel Hormonal Therapy Followed by Prostatectomy versus Up-Front Prostatectomy for High-Risk Prostate Cancer: A Comparative Analysis, *Journal of Urology* (2022). [DOI: 10.1097/JU.0000000000002803](https://doi.org/10.1097/JU.0000000000002803)

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