Study finds neoadjuvant chemotherapy significantly improves outcomes for penile squamous cell carcinoma patients
Penile squamous cell carcinoma is a rare malignancy with limited treatment options and poor prognosis, especially in advanced stages. Because of its rarity, few studies focus on better understanding and
managing this disease.

In a new article published in the Journal of the National Cancer Institute, Moffitt Cancer Center researchers share data on the efficacy and safety of neoadjuvant chemotherapy for locally advanced penile squamous cell carcinoma, addressing a critical gap in evidence regarding treatment options for this rare and aggressive cancer.

The Moffitt team, in collaboration with institutions across the United States, Europe, and South America, examined the outcomes of 209 patients with locally advanced penile squamous cell carcinoma who received neoadjuvant chemotherapy followed by consolidative lymphadenectomy, a surgical procedure to remove and dissect lymph nodes to test for malignancy. Neoadjuvant chemotherapy is therapy given prior to a patient's main treatment; for example, to help shrink a tumor before surgical resection.

Over half of the patients (57.2%) demonstrated an objective response, with 43.2% experiencing a partial response and 13.9% achieving a complete response.

These responders experienced significantly longer overall survival compared to nonresponders. Patients who responded had a median overall survival of 73.0 months, compared to 17.0 months for nonresponders. Additionally, the study revealed a median progression-free survival of 26.0 months, highlighting the potential for long-term disease control.

"We also found that neoadjuvant platinum-based chemotherapy was well tolerated, with only 17% of patients experiencing grade 3 or higher treatment-related adverse events. Importantly, no treatment-related mortality was observed," said study author Jad Chahoud, M.D., M.P.H., assistant member of the Genitourinary Oncology Department at Moffitt.
The study's publication comes at a critical time as clinical trial efforts are ongoing to improve outcomes for penile squamous cell carcinoma patients. The findings represent the largest cohort analysis reported to date for this condition and can help clinical decision-making and shape treatment strategies for locally advanced penile squamous cell carcinoma.

"Our findings provide compelling evidence for the efficacy and safety of neoadjuvant chemotherapy in treating locally advanced penile squamous cell carcinoma. These results underscore the importance of a multimodal approach in addressing this challenging disease and offer hope for improved patient outcomes," said study author Philippe Spiess, M.D., assistant chief of Surgical Services and senior member of the Genitourinary Oncology Department at Moffitt.

**More information:** Jad Chahoud et al, Neoadjuvant Platinum-Based Chemotherapy and Lymphadenectomy for Penile Cancer: An International, Multi-Institutional, Real-World Study, *Journal of the National Cancer Institute* (2024). DOI: 10.1093/jnci/djae034. [academic.oup.com/jnci/advance- ... irectedFrom=fulltext](https://academic.oup.com/jnci/advance- ... irectedFrom=fulltext)

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