Impact of positive surgical margins on overall mortality in localized neuroendocrine carcinoma of prostate treated with radical prostatectomy

Chandler Bronkema  
*Henry Ford Health System*, cbronke1@hfhs.org

Sohrab Arora  
*Henry Ford Health System*, sarora3@hfhs.org

Jacob Keeley  
*Henry Ford Health System*, JKeeley2@hfhs.org

Deepansh Dalela  
*Henry Ford Health System*, ddalela1@hfhs.org

Akshay Sood  
*Henry Ford Health System*, ASOOD1@hfhs.org

See next page for additional authors

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Sohrab Arora, Chandler Bronkema, Jacob Keeley, Deepansh Dalela, Akshay Sood, Alex Borchert, Lee Baumgarten, Craig G Rogers, James Peabody, Mani Menon, Firas Abdollah, Detroit, MI
Introduction

- Neuroendocrine (NEC) carcinoma is a rare variant of prostate adenocarcinoma (PCa) associated with:
  - Advanced local stage
  - High incidence of metastatic disease
  - Poor survival
- Some men with localized disease get local therapy in the form of radical prostatectomy (RP).
- Prognostic significance of positive surgical margin (PSM) after RP in this scenario is unknown.
- Aim: to address this void in literature.
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Methods

- We focused on 92 adult patients diagnosed with nonmetastatic NEC who underwent RP between 2004 and 2015 within the NCDB.
- Overall survival (OS) in those with PSM was compared to those who with negative surgical margin (NSM) using Kaplan-Meier survival analyses.
- Cox proportional hazards model—adjusted for age, race, local tumor stage, and Charlson comorbidity score—was then used to test the effect of PSM on overall mortality.
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Results

- Advanced local stage $\geq$ T3 was present in 27 (29%) patients.
- PSM were present in 42 (45%) patients; NSM in 50 (54%) patients.
- Median follow up in patients with PSM was 27 months compared to 54 months in the NSM group.
- The OS at median follow up in patients with NSM was 73%, compared to 56% in PSM group.
- PSM group had a higher overall mortality (HR 3.0; CI 1.4-6.6; p=0.007) compared to the NSM group.
- The effect of PSM on overall mortality was confirmed by cox regression analysis.
Conclusion:

In surgically treated nonmetastatic NEC PCa, PSM are associated with a higher overall mortality independent of age, local tumor stage, and comorbidities.