Signet Ring Cell Urachal Carcinoma: A National Cancer Database Analysis of Clinicopathologic Features and Outcomes

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Introduction

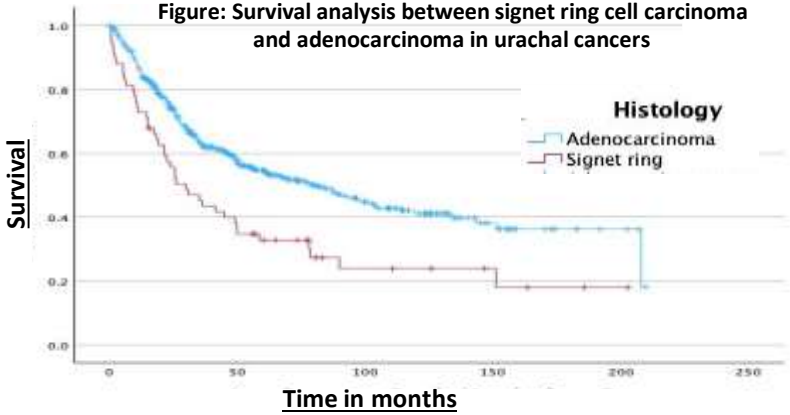
- Signet ring cell carcinoma (SRCC) of the urachus - Extremely rare (0.12–0.6%) and aggressive variant.
- Characterized by mucin-laden cells with poor response to conventional therapies.
- Limited evidence from small series; national-level data remain sparse.
- **Objective:**
  - ➢ To characterize clinicopathological features, treatment patterns, and survival outcomes of urachal SRCC.
  - ➢ To assess the impact of surgery and chemotherapy on prognosis.

Methods

- Database: NCDB (2004–2018).
- Patients: 60 with histologically confirmed SRCC.
- Variables: demographics, stage, surgery, chemotherapy.
- Analysis: Kaplan–Meier survival, log-rank tests.

Results - Survival Analysis

Figure: Survival analysis between signet ring cell carcinoma and adenocarcinoma in urachal cancers



- Median overall survival (OS): ~30 months
- 5-year survival: <25%
- SRCC vs non-SRCC urachal carcinoma: 29.6 vs 79.0 months (p<0.001)
- Chemotherapy vs none: 21.2 vs 36.0 months (p=0.397)
- Partial cystectomy vs radical cystectomy: 58.5 vs 23.8 months (p=0.007)

Results - Demographics

- Male 65%; Female 35%
- White 76.7%; Black 11.7%; Asian 11.7%
- Median age at diagnosis: 60 years
- Surgery: Partial cystectomy 56.7%; Radical cystectomy 8.3%; Local excision 5%; No surgery 11.7%; Unknown 18.3%
- Chemotherapy: 38.4% (Multi-agent 31.7%; Single-agent 5%)

Conclusion

- Urachal SRCC is rare (0.12–0.6%) and aggressive, with poor survival (~30 months)
- Chemotherapy shows no survival benefit.
- Surgery remains the mainstay of treatment