



Real-World Outcomes of Testicular Germ Cell Tumors in Pakistan: A Retrospective Study from A Tertiary Care Center

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BACKGROUND:

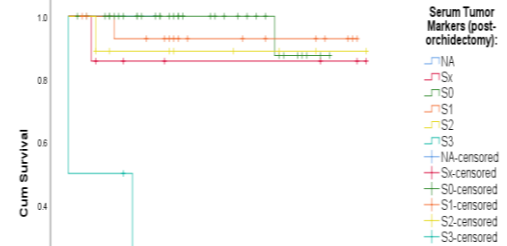
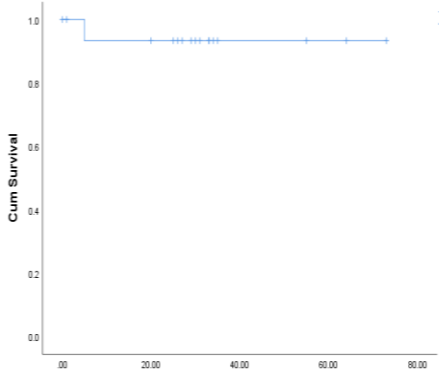
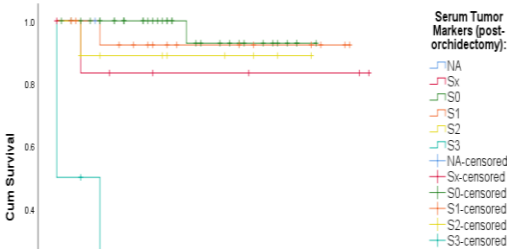
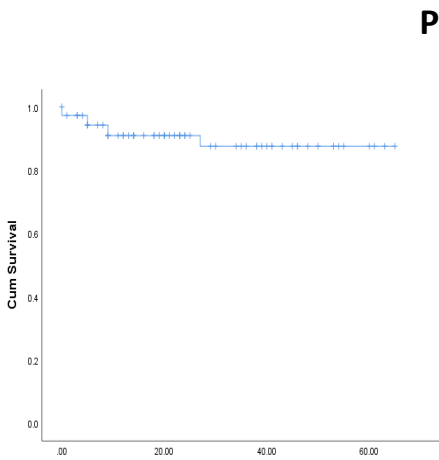
Real-world outcome data on Testicular Germ Cell Tumors (GCTs) from low- and middle-income countries (LMICs) remain scarce. This study evaluates the clinicopathological and prognostic factors, treatment patterns, and survival outcomes among adult patients with GCTs treated at a tertiary care center in Pakistan.

METHODS:

- Retrospective observational study
- Done at Aga Khan University Hospital, Karachi, Pakistan (2020-2024).
- Adult patients (≥ 18 years) with testicular GCTs.
- Patient demographics, clinicopathological and treatment patterns, and survival data were collected.
- Progression-free survival (PFS) and overall survival (OS) were estimated using Kaplan-Meier methods.
- Prognostic factors were analyzed using Cox proportional hazards regression.

RESULTS

Variables	No. (%)
Tumor type	
Seminoma	36(49.3)
No seminoma	15(20.5)
Mixed GCT	22(30.1)
Tumor stage (AJCC)	
NA	4(5.5)
IA	17(23.3)
IB	10(13.7)
IS	5(6.8)
IIA	9(12.3)
IIC	5(6.8)
IIIA	5(6.8)
IIIB	6(8.2)
IIIC	12(16.4)
Serum tumor marker level	
Sx	8(11)
S0	36(49.3)
S1	16(21.9)
S2	9(12.3)
S3	4(5.5)
Chemotherapy	
Yes	58(79.5)
No	15(20.5)
Regimen	
None	15(20.5)
BEP	36(49.3)
EP	10(13.7)
VIP	4(5.5)
Carbo AUC 5	2(2.7)
Carbo AUC 7	6(8.2)



- Seminoma, stage IA, and S0 were predominant; BEP was the most common regimen.
- Mean progression-free survival was 58 months (95% CI: 55.7-83.0).
- Mean overall survival was 58.76 months (95% CI: 54.39–63.13).
- S3 patients had markedly inferior PFS and OS with rapid decline in survival (HR 2.70, $p = 0.006$).

CONCLUSION:

- GCTs at our institute demonstrated favorable long-term outcomes consistent with the established high curability of these tumors.
- Post-orchidectomy tumor markers emerged as the most important prognostic factor.

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Conflict of interest: None.