

Methodology Biomarkers analyzed in tumour tissue or blood were somatic and germline mutations by whole-exome sequencing and whole-transcriptomic profiling by RNAseq. Associations were assessed using the Cox proportional hazards model. For continuous biomarkers, hazard ratios (HRs) and 95% CIs were reported using a median cutoff.

Result(s)* Within the avelumab alone arm, higher expression of CD8+ T-cell signature correlated with longer PFS (HR, 0.61 [95% CI 0.43-0.87]), and higher tumour mutational burden (>0.6 mut/Mb) and presence of the high-affinity *FCGR2A* allele correlated with longer OS (HR [95% CI], 0.63 [0.42-0.96] and 0.53 [0.34-0.83], respectively), while presence of APOBEC and homologous recombination deficiency (HRD) mutational signatures were associated with shorter OS (HR [95% CI], 2.17 [1.22-3.89] and 1.68 [1.07-2.62], respectively). In patients with PFS of <6 months, a lower score for several signatures, including P53 and angiogenesis, predicted better outcomes within the avelumab alone arm (HR [95% CI], 0.37 [0.23-0.60] and 0.52 [0.33-0.82], respectively). *BRCA1/2* mutations (germline and/or somatic) were not associated with improved outcomes. Within the avelumab alone arm, higher expression of TGF- β signaling, estrogen receptor early expression signature, and epithelial-to-mesenchymal transition gene signatures correlated with shorter OS (HR [95% CI], 1.64 [1.10-2.47], 1.63 [1.09-2.45], and 1.57 [1.05-2.35], respectively). Higher expression of signatures for mesenchymal cells, cancer-associated fibroblasts, and fat cells were marginally associated with shorter OS (HR [95% CI], 1.47 [0.97-2.23], 1.45 [0.95-2.21], and 1.50 [0.99-2.27], respectively). Multi-variable analyses are ongoing.

Conclusion* Although JAVELIN Ovarian 200 did not meet its primary endpoints, these analyses indicate potential subgroups of patients who could have improved outcomes with immunotherapy alone and provide insights into the biology of PRROC that may inform future trials.

235

BORDERLINE OVARIAN TUMORS (BOT): CLINICO-PATHOLOGICAL FEATURES, ONCOLOGICAL AND FERTILITY OUTCOMES

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Introduction/Background* BOT are heterogeneous subset of epithelial ovarian tumors, predominantly diagnosed at earlier stages with overall excellent prognosis. Though less but the risk of recurrence remains a matter of concern. In this study, we analyzed the clinicopathological variables, oncological and fertility outcomes of BOT.

Methodology This was a retrospective, cross-sectional study conducted at the department of Obstetrics & Gynaecology, Aga Khan hospital Karachi from 2002 to 2018.

Result(s)* A total of 73 patients with BOT were included with a mean age of 43 years. Thirty five (48%) patients had fertility sparing surgery (FSS) while 38(52%) underwent debulking surgery. Pre-operative CA-125 IU level was 125 in FSS group and 67 in debulking group.

Laparotomy was the common surgical approach in both the groups with Only 5 (14%) patients in FSS group had minimal access surgery. Only 3 patients (8%) had residual disease in debulking group.

Majority of patients in both FSS and debulking groups had FIGO stage 1 disease 34 (97%) and 34(89%) respectively. The serous histological type was common in both the groups while unilateral lesion more prevalent in the FSS group (83% vs. 68%).

Recurrence was reported in 3(8.6%) patient in FSS group, while 1 (2.6%) in debulking group. The average time to recurrence was 31 months (11-51 months). Among the 4 recurrences 3 had either capsule breach or surface disease and 3 had mucinous and 1 was serous histotype. Among the recurrences 3 were in stage 1 and one in stage 3C. Cytology was positive in 4(11.4%) patients in FSS group and 8(21%) patients in debulking group but it did not have any impact on recurrence. Three patients (8.5%) conceived in FSS and had live births. Surgical approach was laparotomy in these patients and all of them had stage 1A disease.

Conclusion* BOT have an excellent prognosis. Relapses occur late in the trajectory of disease and hence regular follow-ups are important. Recurrences are independent of age and are more common in mucinous tumors with surface disease and can occur even in early stages.

236

WHAT CAN WE LEARN FROM THE 10 MM LYMPH NODE SIZE CUT-OFF ON THE CT IN ADVANCED OVARIAN CANCER AT THE TIME OF INTERVAL DEBULKING SURGERY?

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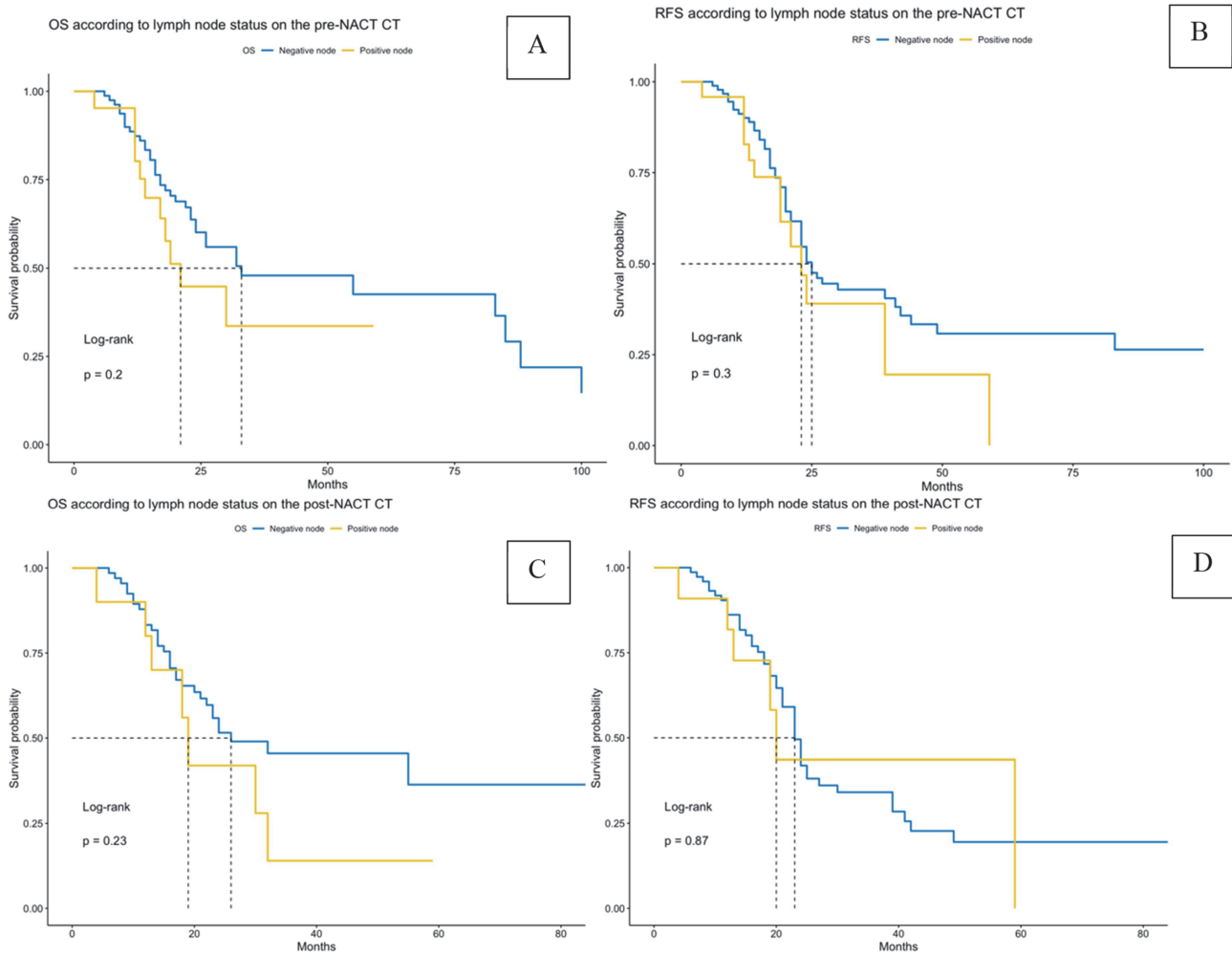
Introduction/Background* The benefit of a systematic lymphadenectomy is still debated in patients undergoing neo-adjuvant chemotherapy (NACT) followed by interval debulking surgery (IDS) in ovarian cancer (OC). The objective of this study was to evaluate the predictive value of the pre-NACT and post-NACT CT in predicting definitive histological lymph node involvement. The prognostic value of a positive node on the CT was also assessed.

Methodology A retrospective, unicentric cohort study was performed including all patients with ovarian cancer who

Abstract 236 Table 1 Diagnostic value of CT (pre- or post-NACT) in predicting histological involvement of lymph nodes in patients who underwent NACT followed by interval debulking surgery with lymphadenectomy for ovarian

	Patients with histological positive nodes	Patients with histological negative nodes	Total patients
Patients with negative nodes on pre-NACT CT	44	41	85
Patients with positive nodes on pre-NACT CT	24	9	33
Total patients	68	50	118

Sensitivity= 35.29%, IC 95%=24.08% to 47.83%
 Specificity= 82.00%, IC 95%=68.56% to 91.42%
 Positive Likelihood Ratio= 1.96, IC 95%=1.00 to 3.85
 Negative Likelihood Ratio= 0.79, IC 95%=0.63 to 0.98
 Positive Predictive Value= 73.03%, IC 95%=58.00% to 84.15%
 Negative Predictive Value= 47.85%, IC 95%=42.45% to 53.31%
 Accuracy= 54.91%, IC 95%=45.48% to 64.08%



Abstract 236 Figure 1 Patients with a stage IIB-IV epithelial ovarian cancer who underwent neo-adjuvant chemotherapy (NACT) followed by interval debulking surgery with a systematic lymphadenectomy
 A. and B. Overall survival (OS, A) and recurrence free survival (RFS, figure B) of patients who had nodes considered positive (≥ 10 mm) versus negative on the pre-NACT CT (computed tomography)
 C. and D. Overall survival (OS, C) and recurrence free survival (RFS, figure D) of patients who had nodes considered positive (≥ 10 mm) versus negative on the post-NACT CT

underwent NACT and IDS with a lymphadenectomy between 2005-2018. CT were analyzed blinded to pathology, and nodes with small axis ≥ 10 mm on CT were considered positive. Sensitivity (Se), specificity (Sp), and negative (NPV) and positive predictive values (PPV) and their CI95% were calculated. The 2-year recurrence free survival (RFS) and 5-year overall survival (OS) was compared.

Result(s)* 158 patients were included, among which 92 (58%) had histologically positive lymph nodes. CT had a Se, Sp, NPV and PPV of 35%, 82%, 47% and 73% before NACT and 20%, 97%, 47% and 91% after NACT, respectively. Patients with nodes considered positive had a non-significant lower 2-year RFS and 5-year OS on the pre-NACT and post-NACT CT. Patients at ‘high risk’ (nodes stayed positive on the CT or became positive after NACT) also had a non-significant lower 2-year RFS and 5-year OS.

Conclusion* Presence of enlarged lymph nodes on CT is a weak indicator of lymph node involvement in patients with advanced ovarian cancer undergoing NACT. However, it could be used to assess prognosis.

Abstract 236 Table 2

	Patients with histological positive nodes	Patients with histological negative nodes	Total patients
Patients with negative nodes on post-NACT CT	38	37	75
Patients with positive nodes on post-NACT CT	10	1	11
Total patients	48	38	86

Sensitivity= 20.83%, IC 95%=10.47% to 34.99%
 Specificity= 97.37%, IC 95%=86.19% to 99.93%
 Positive Likelihood Ratio= 7.92, IC 95%=1.06 to 59.15
 Negative Likelihood Ratio= 0.81, IC 95%=0.70 to 0.95
 Positive Predictive Value= 91.62%, IC 95%=59.40% to 98.79%
 Negative Predictive Value= 47.11%, IC 95%=43.29% to 50.96%
 Accuracy= 52.98%, IC 95%=41.91% to 63.84%
Abbreviations: CT = computed tomography, CI = confidence interval, NACT = neo-adjuvant chemotherapy