



Abstract #339 Figure 1 Overall Survival and Recurrence Free Survival of PDS, IDS, and Secondary Debulking subgroups

Conclusion Patients undergoing splenectomy for advanced ovarian cancer seem to have a more favorable prognosis in terms of PFS when hilar metastases are present. In the setting of PDS, PFS is better, compared to IDS or secondary debulking.

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THE BCAM-AKT2 FUSION PROTEIN EFFECT ON THE IGF1 SIGNALING PATHWAY IN EPITHELIAL OVARIAN CANCER CELLS

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Introduction/Background The Insulin Growth Factor1 Receptor (IGF1R) has been identified as a key player in the development of ovarian cancer, making it an appealing target for therapeutic intervention. Fusion genes associated with the IGF1R are good candidates to play this role. Recently, the BCAM-AKT2 fusion protein was identified in ovarian cancer patients. We aim to investigate the BCAM-AKT2 fusion protein involvement in the IGF1 signaling pathway and the mechanism behind the oncogenic effect in epithelial ovarian cancer (EOC).

Methodology In-vitro experiments were conducted in EOC cell lines. Protein expression levels of BCAM-AKT2, IGF1R, and the downstream key factors were measured by western blots. In addition, an XTT assay was used to measure the effect of the BCAM-AKT2 fusion protein on proliferation of EOC cell line. Moreover, RNA from SKOV3 and OVCAR4 transfected cells was extracted and RNA-seq was performed to determine the effect of BCAM-AKT2 on gene expression.

Results XTT assays suggest that BCAM-AKT2 induces EOC proliferation. RNA-seq experiment revealed activation of unfolded protein response, and inhibition of viral response, interferon and pyroptosis signaling pathways as a result of BCAM-AKT2 overexpression in SKOV3. However, BCAM-

AKT2 did not affect gene expression in OVCAR4. Interestingly, IGF1R protein expression and activation were not affected by the BCAM-AKT2 expression. Moreover, BCAM-AKT2 phosphorylation is independent of IGF1 treatment.

Conclusion Our results suggest a possible effect of the BCAM-AKT2 fusion protein on key canonical pathways in EOC. We believe that elucidation of the mechanism of the fusion protein will help identify new biomarkers for ovarian cancer.

Disclosures The authors have no conflicts of interest to declare

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FEASIBILITY OF SENTINEL LYMPH NODE MAPPING IN OVARIAN TUMORS: A SYSTEMATIC REVIEW AND META-ANALYSIS OF THE LITERATURE

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Introduction/Background Since the presence of lymph node metastases upstages the disease and to reduce the morbidity of total lymphadenectomy, sentinel lymph node (SLN) mapping in ovarian mass has been the focus of extensive research. This study aims to review all the literature associated with ovarian SLN mapping and assess the feasibility of ovarian SLN mapping.

Methodology PubMed and Scopus were searched using the following keywords: (Sentinel lymph node) AND (Ovary OR Ovarian) AND (Tumor OR Neoplasm OR Cancer). All studies with information regarding sentinel node biopsy in ovaries were included. In total, two indices were calculated for included studies: detection rate and false-negative rate. Pooled detection rate, sensitivity, heterogeneity, and publication bias were evaluated.

Results Overall, the systematic review included 14 studies. Ovarian SLN detection rate can vary depending on the type of tracer, site of injection, etc., which signifies an overall pooled detection rate of 86% [95% CI: 75–93]. The forest plot of detection rate pooling is provided (Cochrane Q-value = 31.57, $p = 0.003$; $I^2 = 58.8\%$). Trim and fill method resulted in trimming of 7 studies, which decreased the pooled detection rate to 79.1% [95% CI: 67.1–87.5]. Overall, pooled sensitivity was 91% [59–100] (Cochrane Q-value = 3.93; $p = 0.41$; $I^2 = 0\%$). The proportion of lymph node positive patients was 0–25% in these studies with overall 14.28%.

Conclusion Sentinel lymph node mapping in ovarian tumors is feasible and seems to have high sensitivity for detection of lymph node involvement in ovarian malignant tumors. Mapping material, injection site, and previous ovarian surgery were associated with successful mapping. Larger studies are needed to better evaluate the sensitivity of this procedure in ovarian malignancies.

Disclosures none