

## P-6:

# Carcinoid Tumors of the Ovary: An Observational Cohort Study of 67 Primary and Metastatic Cases

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**BACKGROUND:** Ovarian carcinoids/neuroendocrine tumors are exceptionally rare (0.1% of ovarian neoplasms). In this retrospective review, we analyzed the clinical outcomes of 67 primary and metastatic cases of ovarian carcinoids.

**METHODS:** All patients with ovarian neuroendocrine tumors treated at a single institution between 1994 and 2015 were retrospectively reviewed. Outcomes and pathologic features were analyzed.

**RESULTS:** Of 67 patients, 29 had primary and 38 had metastatic carcinoids to the ovary. Patients with primary tumors had a mean age of 48.7 years. The majority of primary tumors were histologically benign, 6 (22%) were malignant (3 mucinous, 1 insular, and 2 undifferentiated carcinomas). One patient with primary ovarian malignancy had carcinoid syndrome. Patients with metastatic carcinoid had a mean age of 53 years. Tumors were bilateral in 72% of metastatic cases and 45% had symptoms of carcinoid syndrome. Eighty-two percent had metastasized from a gastrointestinal primary, of which 52% were from small bowel. Surgery was performed in almost all cases (95%) and 74% received adjuvant treatments, the most common being octreotide. At 4 year follow-up, 50% of patients with primary ovarian malignancy were alive. There were no disease specific deaths in the primary benign cases. Five-year survival was 50% for the metastatic cases. For the entire cohort, immunoreactivity was positive for neurosecretory granules in all cases; Ki67 was low in most (87%) metastatic cases; histologically severe cellular atypia was present in 6 cases.

**CONCLUSION:** The natural history of ovarian carcinoid (neuroendocrine tumors) is more indolent than common ovarian carcinomas. Carcinoid syndrome and bilateral disease was far more common in metastatic cases. The most common perioperative treatments included octreotide (Sandostatin<sup>®</sup>) or lanreotide (Somatuline<sup>®</sup>). The rather low-grade histologic features of carcinoid do not always correlate with the metastatic potential of the tumors and patients' survival, requiring personalized therapeutic strategies.