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# PREVALENCE OF CACHEXIA IN TREATMENT-NAÏVE PATIENTS WITH GYNAECOLOGICAL CANCER: A SYSTEMATIC REVIEW

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Background Approximately half of all cancer patients develop cachexia, with 20% of cancer-related deaths attributed to cachexia. Gynaecological cancer has not featured extensively in published cachexia literature. Prevalence of cachexia in this population is therefore unclear. The aim of this review is to report estimated prevalence of cachexia in patients with gynaecological cancer prior to treatment.

Methods A systematic review was conducted to estimate the prevalence of cachexia at diagnosis in patients with gynaecological cancer. CINAHL, Cochrane Library, EMBASE, MEDLINE Ovid, Scopus and Web of Science were searched and additional relevant articles were identified by hand searching a number of key journals. A narrative synthesis was used to integrate the findings from the included studies.

**Results** Following de-duplication, the title and abstracts of 7894 articles were screened; two studies were identified as eligible for inclusion. Both included patients with a cervical cancer diagnosis. Prevalence of cachexia ranged from 0 – 32.4%.

Conclusions Well-designed and robust studies in treatmentnaive patients with gynaecological cancer are needed in order to quantify the true prevalence of cachexia. This would support the early identification of at-risk patients for whom interventions may be most beneficial.

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DIFFERENTIAL GENE EXPRESSION PATTERN BETWEEN PREINVASIVE NEOPLASIA AND EARLY INVASIVE CERVICAL CARCINOMA: PUTATIVE MECHANISMS OF ANGIOGENESIS AND EPITHELIAL-MESENCHYMAL TRANSITION INVOLVED IN TUMOR INVASION AND METASTASIS

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Introduction The establishment of a proangiogenic phenotype and epithelial-mesenchymal transition (EMT) are regarded as prerequisites for activation of invasive growth and dissemination of malignant cells in epithelial tumors. Various borderline conditions, as for example a transition between intraepithelial neoplasia and microcarcinoma, can be the source of critical factors that act as driving forces for further tumor spread, but in the case of cervical cancer these issues remain poorly studied.

Methods RNA-sequencing and bioinformatics analysis were used to compare transcriptomes and signaling pathways activation profiles in HPV-positive preinvasive neoplastic

lesions and early-stage invasive cervical carcinoma samples obtained from patients. Flow cytometry was applied to evaluate the expression of three key lymphangiogenesis and EMT markers (VEGFR3, MET, and SLUG) in epithelial cells derived from enzymatically treated tissue specimens.

Results The differentially expressed genes were screened for angiogenesis, lymphangiogenesis, EMT, and invasion regulatory factors and subsequent pathway analysis confirmed enrichment for angiogenesis, epithelial organization, and cell guidance pathways at transition from intraepithelial neoplasia to invasive carcinoma and suggested inflammatory antiviral response-associated pathways to be critically implicated in initiation of invasive growth of cervical cancer. Cell-phenotype-specific expression pattern for VEGFR3, MET, and SLUG was revealed which appeared to be correlated with the amount of tumor-infiltrating lymphocytes at the earliest stages of cancer progression.

Conclusion These findings extend the existing knowledge about driving forces of angiogenesis and metastasis in cervical cancer and may be useful for developing new treatments. The study was supported by the state assignment of the Ministry of Science and Higher Education, project No.0752-2020-0007 (AAAA-A20-120070290151-6).

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# A CARCINOID TUMOR ARISING FROM A MATURE CYSTIC TERATOMA IN A 33-YEAR OLD PATIENT: A CASE REPORT

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Malignant transformation is extremely a rare complication of mature cystic teratoma and it usually occurs in postmenopausal women. The most common form of malignant transformation is squamous cell carcinoma. Carcinoid tumors are rare tumors of the diffuse neuroendocrine system and it represents about 0.1% of all ovarian neoplasms.

In this report, a carcinoid tumor arising from a mature cystic teratoma in a 33 year old nulligravid is presented. Adnexal mass was detected during physical examination. She underwent exploratory laparotomy. The left ovary was cystically enlarged to  $10 \times 9 \times 8$  cm with intact, thick whitish capsule and areas with normal ovarian tissues. The uterus, right ovary, bilateral fallopian tubes and appendix were grossly normal. Intraoperative diagnosis of Dermoid cyst was made, hence, left oophorocystectomy was done. On cut section, the cyst contained sebum and hair strands. Histopathologic diagnosis revealed a carcinoid tumor arising from a mature cystic teratoma. Immunohistochemical staining showed positivity for chromogranin and synaptophysin. Based on morphological and immunohistochemical staining, the tumor was diagnosed as a carcinoid tumor arising from a mature cystic teratoma. Our patient did not present with carcinoid syndrome.

Malignant transformation is a rare complication of mature cystic teratomas. Preoperative diagnosis of Mature Cystic Teratoma of the ovary can be made through history, physical examination and radiologic findings. The treatment of