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INCREASING INCIDENCE OF SEX CORD-STROMAL TUMORS IN THE UNITED STATES

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Introduction The incidence of ovarian cancer has decreased in the United States since the 1980s, due to decreasing incidence of epithelial ovarian cancers. The purpose of this study was to analyze trends in incidence of non-epithelial ovarian cancers.

Methods Data were obtained from the United States Cancer Statistics (USCS) database from 2001 to 2016. Age-adjusted incidence per 100,000 women and annual percent change (APC) in incidence were calculated using SEER*Stat and Joinpoint Software.

Results 18,346 women were diagnosed with non-epithelial ovarian tumors. 6,720 had sex cord-stromal tumors (SCST), of which 82.3% were granulosa cell tumors and 9.7% were Sertoli-Leydig cell tumors. 10,035 were germ cell tumors. The age-adjusted incidence rate was 0.28 for SCST, 0.24 for granulosa cell tumors, and 0.41 for germ cell tumors. Blacks had the highest incidence of SCST (0.61). Over a sixteen-year period, the overall incidence of SCST increased 1.70% annually (95% CI 1.13, 2.28; p<0.001), and the incidence of granulosa cell tumors increased 2.24% annually (95% CI 1.60, 2.88; p<0.001). The incidence of mixed germ cell tumors also increased 3.4% annually (95% CI 1.89, 4.86; p<0.001). However, the incidences of Sertoli-Leydig cell tumors and other subtypes of germ cell tumors were unchanged in the same time period.

Conclusions The incidence of sex cord-stromal tumors is increasing in the United States. Given prior studies suggesting risk is minimally affected by reproductive or lifestyle factors, further research is needed to elucidate mechanisms underlying this trend.

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OPPORTUNISTIC ASSESSMENT OF BONE MINERAL DENSITY ON COMPUTED TOMOGRAPHY IN THE GYNAECOLOGICAL ONCLOGY SETTING

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Introduction Women with gynaecological cancers are at increased risk of cancer treatment-induced bone loss (CTIBL). Assessment of bone mineral density (BMD) is recommended internationally prior to commencement of any therapy associated with CTIBL. However, access to DXA is variable. This study explores the utility of assessment of BMD on CTs performed for cancer staging in the gynaecological oncology setting.

Methods Prospective, cross-sectional, validation study comparing quantitative BMD assessment on CT (performed at 120kV) to the gold standard, DXA. CT assessment was performed using simple region of interest placement on lumbar vertebral trabecular bone and recording of resultant Hounsfield units (HU). Forty-eight women were included in this study.

Results CT BMD measurement showed significant correlation with DXA diagnostic categories and BMD. AUC for differentiation of normal from abnormally low BMD on CT ranged from 0.75–0.81. Threshold analysis (Youden’s J-statistic) identified the optimal threshold for differentiation of normal from abnormal BMD as 148HU at L3 (sensitivity 82.4%, specificity 83.9%).

Conclusion Assessment of BMD on CT at diagnosis of a gynaecological cancer is simple, differentiates normal from abnormally low BMD with a high degree of accuracy, and requires a negligible increase in reporting time. For this high-risk cohort, it can facilitate early identification of patients with low BMD and optimisation of their bone health prior to deleterious effects of therapy. It can improve prioritisation of DXA referrals and commencement of either therapeutic or prophylactic bone modifying agents as clinically appropriate.

The sensitivity and specificity of thresholds should be considered in determining the appropriate threshold for the chosen clinical application.

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INTRAVENOUS LEIOMYOMATOSIS


Introduction The morphology of intravenous leiomyomatosis is similar to uterus leiomyoma, however, it often exhibits clinical features of malignant tumor: invasive growth, lung and peritoneal metastasis, tumor thrombi in the lumen of veins. The