to minimize the rate of unnecessary LND associated morbidity. Although its use in EC is relatively new, SLN biopsy has been shown to be highly accurate for staging purpose. However, some studies reported on decreased sentinel node detection rate among obese patients. Thus, we sought to determine if SLN technique is reliable with certain factors associated with successful mapping in obese EC patients and whether omitting LND impacts oncologic outcomes.

Methodology A prospective cohort study of obese patients (BMI) ≥35 kg/m2), diagnosed with endometrial carcinoma between 2007 and 2017, comparing surgical and oncological outcomes of two patients cohorts: LND (± SLN) and SLN. 2-year progression-free survival (PFS), overall survival (OS), and disease-specific survival (DSS) were analyzed using life tables, Kaplan-Meier survival curves and log-rank tests.

Results Out of 223 patients with median BMI of 40.6 kg/m2, 140 patients underwent LND (with or without SLN) and 83 patients underwent SLN. The median operative time for surgical staging in SLN only group was shorter in 47.5 minutes than for patients in the LND±SLN group (190.5 minutes (108–393) vs. 238 minutes (131–440), respectively, ($p < 0.001$)), and they had reduced estimated blood loss (EBL) compared to the LND±SLN group (30 ml (0–300) vs. 40 ml (0–800 ml), P=0.03). At a 24 months follow-up cut-off, 98% of the patients were alive and 95.5% were free of disease, without significant differences in OS, DSS and PFS between the two groups (p=0.7, p=0.8 and p=0.4, respectively). Overall, 171 patients underwent SLN biopsy (±LND) and stratified by the tracer used for mapping (ICG versus blue dye). The ICG injected group had higher successful mapping and bilateral detection rates (92.8% vs 71.7%, p<0.001 and 80.2% vs 43.3%, p<0.001, respectfully).

Conclusion Omitting LND from surgical staging where SLN is performed was associated with shorter operative time and minimal bleeding without affecting survival. ICG with NIR fluorescence imaging results in higher detection than with blue dye, indicating that ICG should be the dye of choice in obese endometrial cancer patients.

Disclosures We have no disclosures.

72 SENTINEL LYMPH NODE MAPPING: THE ANSWER TO THE SURGICAL STAGING DILEMMA IN ELDERLY PATIENTS WITH ENDOMETRIAL CANCER

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Introduction/Background Nearly half of women diagnosed with endometrial cancer (EC) are 70 years old or older. Furthermore, elderly patients (>65 years) have been at risk for adverse perioperative outcomes throughout various surgical procedures and have a poorer prognosis which is related to both aggressive disease and under-treatment. We aimed to compare surgical and oncological outcomes between elderly (>65 year-old), intermediate to high risk, endometrial cancer patients undergoing staging with sentinel lymph node (SLN) staging and pelvic lymphadenectomy (LND).

Methodology A prospective cohort study of elderly patients diagnosed with endometrial carcinoma between 2007 and 2017, treated in a single center in Montreal, comparing surgical and oncological outcomes of 3 endometrial cancer patients cohorts in non-overlapping eras, undergoing surgical staging including: LND, LND+SLN or SLN. 2-year progression-free survival (PFS), overall survival (OS), and disease-specific survival (DSS) were analyzed using life tables, Kaplan-Meier survival curves and log-rank tests.

Results Out of 278 patients with a median age of 73 (65–91) years, that were staged and met the study inclusion criteria, 84 patients underwent LND only, 120 underwent SLN followed by LND and 74 patients had only SLN. Patients in the SLN group had significantly less dissected nodes (mean of 5.4 nodes vs 10.4 and 10.0 in the SLN+LND and the LND cohorts, respectively, p<0.001), shorter surgeries with a median time of 199 minutes (range, 75–393) compared to 231 (range, 125–403) and 229 (range, 151–440) minutes in the SLN+LND and LND cohorts, respectively (p<0.001) and minimal estimated blood loss with a median estimated blood loss of 20 ml (5–150) vs. 25 ml (5–800]) and 40(5–400) in the SLN+LND and LND cohorts, respectively (p=0.002). 42.4%, 19.8% and 36.2% of the all cohort received vaginal brachytherapy, external beam radiation and chemotherapy, respectively, with significantly more patients in the SLN group receiving brachytherapy (54.1% vs 41.7% and 33.3% in the SLN+LND and LND cohorts, respectively, p=0.03). 2-year overall survival and progression free survival were not significantly different between the 3 groups (p=0.45, p=0.51, respectively). On multivariable analysis, adjusted factors that were statistically significant on univariable analysis (age, ASA score, stage, grade, LVSI), adding SLN was associated with better OS, (HR 0.2, CI [0.1–0.6], P=0.006) and PFS (HR 0.5, CI [0.1–1.0], P=0.05).

Conclusion SLN based surgical staging is feasible, precise, affects adjuvant treatment and associated with better surgical and oncological outcomes in intermediate and high risk elderly patients.

Disclosures We have no disclosures.

88 TUMOUR MOLECULAR FEATURES PREDICT ENDOMETRIAL CANCER PATIENTS' SURVIVAL AFTER DIFFERENT SURGICAL APPROACHES

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Background The Cancer Genome Atlas (TCGA) project has shed light on the vital role of tumour molecular features in predicting endometrial cancer (EC) patients' survival. This study aims to investigate the survival impact of surgical approaches on EC patients with different molecular features.

Methodology 473 eligible EC patients from TCGA database were selected. Clinicopathological characteristics and genetic features of open and minimally invasive surgery (MIS) group were compared. To analyse the prognostic impact of surgical approach, survival analyses were conducted in patients with different genetic alterations. Finally, a simplified model based on molecular features was established to help select patients suitable for MIS or open surgery.

Results In the eligible patients, 291 (61.5%) received open surgery and 182 (38.5%) received MIS. Clinicopathological and genetic features were comparable between the two groups except the year of diagnosis (p<0.001). Among all patients, 4