**VARIATION IN PRACTICE IN ENDOMETRIAL CANCER (EC): CAN MOLECULAR CLASSIFICATION DIRECT CARE AND REDUCE COSTS ASSOCIATED WITH MANAGEMENT?**

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**Objectives** We wished to assess the potential impact of directing EC management based on molecular classification, and the projected cost implications of molecular subtype-directed care.

**Methods** Surgical staging, treatment, surveillance, and hereditary cancer program (HCP) referrals were assessed for all ECs managed in a single calendar year (2016) across 24 Canadian centers. Variation of practice was recorded, as well as where a change in management would be projected and associated cost implications of that change based on molecular subtype assignment.

**Results** Data from 862 patients revealed wide variation in surgical staging, with lymph node dissection (LND) performed in 61% of ECs (range 25–100%), including 38% LND in Gr1 ECs (0–100%). Adjutant therapy (type, when/if given) and cancer surveillance (frequency, site e.g., community vs. cancer center) was inconsistent within and across centers for both early- and late-stage disease. Molecular classification identified 29% MMRd ECs (n=247) but only 8% of these women had been referred to HCP. 30 women who did consult HCP were MMRproficient. 38% of MMRd ECs had no LND and 43% did not receive radiation. 16% and 18% of p53abn ECs had no LND or omentectomy respectively, and only 58% received chemotherapy. Escalation of treatment in early-stage POLEmut and NSMP ECs (n=63 treated, where molecular classification would direct observation or brachytherapy-only) would have reduced costs by $348,896–407,830 CAD or $5338–6466 CAD per patient.

**Conclusions** There is currently profound variation in practice for all aspects of EC management with implications to patients and health systems. Molecular classification can provide consistency in care and direct biologically-informed management.

**SENITEL LYMPH NODE BIOPSY VERSUS LYPHADENECTOMY FOR INTERMEDIATE AND HIGH GRADE ENDOMETRIAL CANCER STAGING (SENTOR TRIAL): A PROSPECTIVE MULTICENTER COHORT STUDY**

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**Background** It is unclear whether sentinel lymph node biopsy (SLNB) can replace lymphadenectomy in women with high grade endometrial cancer (EC). We performed a prospective multicenter cohort study (the SENTOR trial) to evaluate the diagnostic accuracy of SLNB using indocyanine green in intermediate and high grade EC (NCT01886066).

**Methods** Patients with clinical stage I grade 2 endometrioid or high grade EC scheduled for minimally invasive hysterectomy at three academic centers in Toronto, Canada, were prospectively enrolled for SLNB followed by pelvic (PLND) and para-aortic lymphadenectomy (PALND) as the reference standard. The study was powered to determine sensitivity of the SLNB algorithm as the primary endpoint.

**Results** We enrolled 156 patients (126 high grade); all underwent SLNB and PLND, and 106 (84%) with high grade EC underwent PALND. Sentinel lymph node detection rates were 97% per patient (95% CI 94–99), 88% per hemipelvis (95% CI 83–91), and 78% bilaterally (95% CI 70–84). Of 27 patients (17%) with nodal metastases, 26 were correctly identified by the SLNB algorithm, yielding a sensitivity of 96% (95% CI 81–100), false negative rate of 4% (95% CI 0–19), and negative predictive value of 99% (95% CI 96–100). Only one patient (0.6%) was misclassified by the SLNB algorithm. Two of 27 node-positive patients (7.5%) were identified outside traditional PLND boundaries, and five of 27 (18.5%) required immunohistochemistry for diagnosis.

**Conclusion** SLNB has comparable, if not superior, diagnostic accuracy relative to lymphadenectomy in high grade EC patients. SLNB is a viable option for the surgical staging of EC.