Methods Thirty-five aGCTs were subjected to massively parallel sequencing targeting 468 cancer-related genes (7 primary aGCTs that did not recur >4 years, 9 primary and matched recurrent aGCTs, 10 recurrent aGCTs). These cases and additional 12 aGCTs (n=3, primary aGCTs that did not recur; n=9, recurrent aGCTs) were subjected to Sanger sequencing analysis of the TERT promoter.

Results All aGCTs included harbored the FOXL2 p.C134W hotspot mutation. A significantly higher frequency of TERT promoter mutations was found in recurrent (64%) than in primary aGCTs (26%; p=0.017). Moreover, aGCT recurrences harbored a higher frequency of somatic KMT2D and TP53 mutations (16%), each, than primary aGCTs with subsequent recurrences (11% and 0%) and primary aGCTs without subsequent recurrences (14% and 0%). We identified a higher frequency of CDKN2A/B homozygous deletions in recurrent (16%) than in primary aGCTs (6%), and other gene alterations restricted to recurrent aGCTs. Pathway analysis revealed that aGCTs are underpinned by genetic alterations affecting the cell cycle pathway. Clonal decomposition of matched primary and recurrent aGCTs showed that aGCTs display multiple clones at diagnosis and relapse.

Conclusions Our findings suggest that although FOXL2 plays a crucial role in the tumorigenesis of aGCTs, recurrences might be associated with genetic alterations affecting TERT, cell cycle-related genes such as TP53 and CDKN2A/B, and other cancer-related genes, including KMT2D, TET2 and EPHA5.

Plenary 3

IGCS19-0583


Methods This is a large single center retrospective study. From our institution’s patient registry, we identified a total of 587 early-stage cervical cancer patients who underwent either MIS or ARH between 2000 and 2017. We excluded the following patients from the final analysis: (1) received neo-adjuvant treatment prior to surgery; (2) had histologic types other than squamous cell carcinoma, adenocarcinoma, or adenosquamous carcinoma; (3) were double primary cancer cases; (4) had stages higher than stageIb1 (FIGO 2009). We included only patients who underwent radical hysterectomy for early-stage cervical cancer and radical parametrectomy for stumps cancer patients in our study population.

Results In total, 230 and 357 patients were assigned to the MIS and ARH groups, retrospectively. There were no significant differences for any demographics including age, stage, histology. Five-year recurrence free survival was 88.6% (95% CI, 83.4%-92.3%) and 93.5% (95% CI, 90.4%-95.7%), (p=0.04) respectively in the MIS and ARH group, and the five-year cancer specific survival was 95.4% (95% CI, 90.9%-97.7%) and 97.4% (95% CI, 95.1%-98.7%), (p=0.12) in the MIS and ARH group, respectively. MIS group have more peritoneal relapse compared to ARH (p=0.02). The relapse rate tended to be highest for squamous cell carcinoma in MIS group (p=0.09). Disease free survival and cancer specific survival were worse in the MIS group p= value=0.04 and 0.12 respectively.
Conclusions

MIS was associated with a higher recurrence rate and mostly of peritoneal-combined type than ARH. MIS tended to have a higher mortality rate than ARH although not statistically significant in patients with early-stage cervical cancer cases.

IGCS19-0577

ORAL APIXABAN COMPARED TO SUBCUTANEOUS ENOXAPARIN FOR THROMBOPROPHYLAXIS IN WOMEN UNDERGOING SURGERY FOR SUSPECTED GYNECOLOGIC CANCER: FINAL RESULTS OF A MULTI-INSTITUTIONAL RANDOMIZED, CONTROLLED TRIAL

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Objectives

Venous thromboembolism (VTE) is a serious complication following gynecologic oncology surgery with 26% DVT and 9% pulmonary embolism rates. Current guidelines recommend subcutaneous enoxaparin for thromboprophylaxis. We evaluated safety of apixaban (oral factor Xa inhibitor) versus enoxaparin for post-operative thromboprophylaxis in women with suspected gynecologic cancer.

Methods

A randomized study determined safety (major bleeding) of apixaban versus enoxaparin. Secondary outcomes included VTE, adverse events (AE), satisfaction. Women (18–89) were randomized to 28-days of 2.5mg apixaban BID or 40mg enoxaparin QD and followed for 90-days. Chi square and Fisher’s exact statistics were used; *P*<0.05 determined significance.

Results

Four hundred women completed therapy (mean age 56.6 years; mean BMI 28.5). Groups were similar for race, cancer diagnosis/stage, and surgery. Seventy-eight percent of surgeries were open laparotomies; 70% involved hysterectomy. Two major bleeding events occurred on treatment: 1/205 in apixaban arm vs.1/195 in enoxaparin arm (OR=0.95; 95%CI: 0.06–15.1; *P*=0.972). Five VTE events occurred: 2/205 vs. 3/195 respectively (OR=0.63; 95%CI: 0.12–3.75; *P*=0.616). Women receiving apixaban were 98% less likely to report pain (OR= 0.02, 95% CI 0.01–0.05, *P*<0.001) and 99% less likely to report difficulty administering treatment (OR= 0.01, 95% CI 0.001–0.13, *P*<0.001) compared to enoxaparin. There were 97 related AEs; AEs were rare (2%) and similar: wound infection (*P*=0.745), wound dehiscence (*P*=0.100), arthralgia (*P*=0.321), dizziness (*P*=0.078), vaginal bleeding (*P*=0.410), and headache (*P*=0.875).

Conclusions

Apixaban is a safe alternative to enoxaparin for thromboprophylaxis following gynecologic oncology surgery. Women taking apixaban had less pain and difficulty administering treatment. Efficacy of apixaban to prevent VTE is hypothesized as equivalent to enoxaparin.