one year after radiotherapy. Patient is without the recurrence for 12 months but we know that any chemotherapy or radiotherapy will cause the huge toxicity that is why she is only under observation. We tried to balance the benefits from the radicality and the minimally invasive surgery at this particular patient.

385 UNDIAGNOSED INVASIVE CERVICAL CANCER

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10.1136/ijgc-2021-ESGO.27

Introduction/Background* Radical parametrectomy (RP) and upper vaginectomy (UV) is a challenging operation indicated when an occult cervical cancer (CC) is diagnosed after hysterectomy for another medical reason. It's a technically difficult procedure due to adhesions from the previous surgery and the absence of a uterus to assist dissection and achieve adequate negative margins.

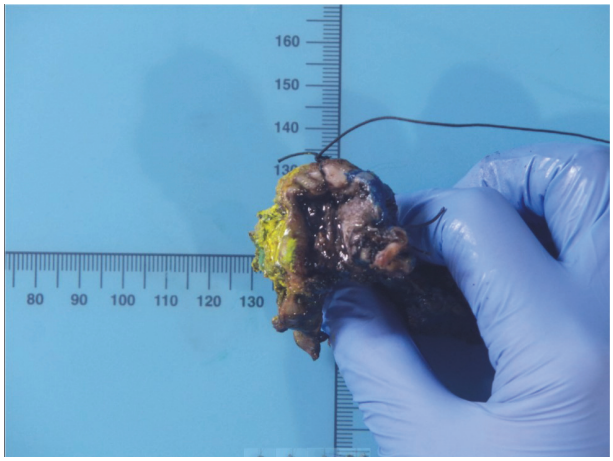
Methodology

Result(s)* A 57-year-old woman, with no known medical comorbidities, was referred to our hospital from an outside private institution after having undergone a simple hysterectomy (SH) with the diagnosis of incidental squamous cervical carcinoma.

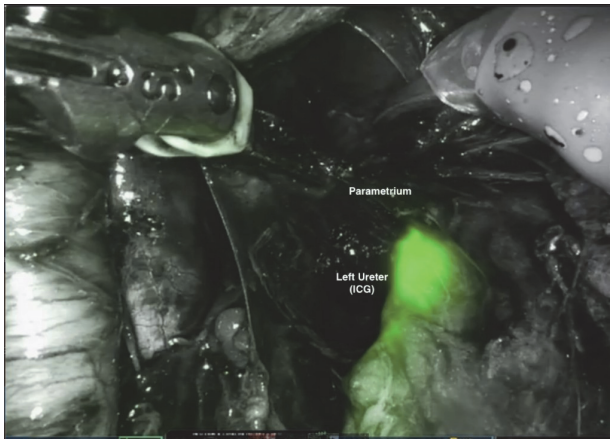
The patient had initially presented with 4 weeks history of postmenopausal bleeding. No abnormalities were noted during a speculum examination, she had a negative smear test four months previously, and a normal pelvic ultrasound. *Endometrial biopsy was inconclusive and the patient subsequently* underwent a SH and bilateral salpingo-oophorectomy.

Pathology revealed an incidentally well differentiated squamous CC, measuring 3.5 cm in diameter and 1 cm of deep invasion (IB1 FIGO 2018). There was extensive lymphovascular space invasion and the cervical margins were also affected.

Postoperative staging scan (PET/TC), did not show any evidence of residual local or metastatic disease. A complete pelvic lymphadenectomy, with negative intraoperative result, RP and UV by laparoscopic-robotic surgery was performed. Due to the results of the LACC Trial, an open colpectomy was performed.



Abstract 385 Figure 1



Abstract 385 Figure 2

The surgery lasted approximately 345 min and the patient was discharged 3 days after surgery. Two weeks later, she presented painful lymphoedema, and was diagnosed with bilateral pelvic lymphocysts, requiring drainage by interventional radiology.

Parametrectomy pathology demonstrated a residual focus (4 mm) of squamous carcinoma at the vagina, and free margins. Subsequently, a metastasis was found in one left pelvic node – upstaging to FIGO IIIC1. Adjuvant chemoradiation with weekly cisplatin and whole pelvic radiation was planned.

Conclusion* *CC may be found incidentally after SH carried out for benign gynecologic conditions or preinvasive cervical lesions*. SH is suboptimal procedure and associated with significantly inferior survival rates. Further treatment, such as radiotherapy (RT) or additional surgery, is warranted. *PET-CT have false negative, so surgery allow re-staging with a prognostic value and condition subsequent complementary treatment*.

389 SERIAL BONE DENSITY CHANGES IN WOMEN AFTER PELVIC CHEMORADIATION FOR CERVICAL CANCER

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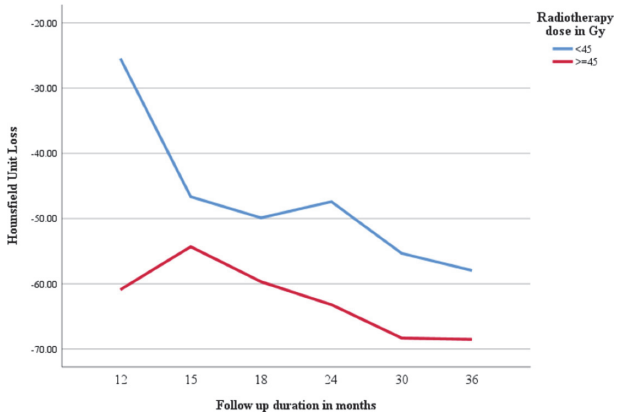
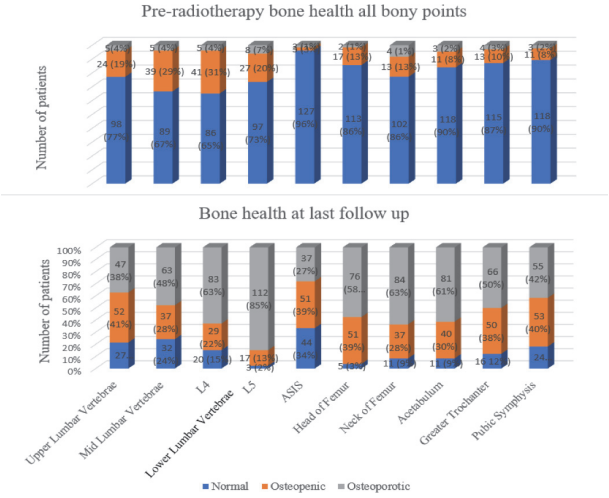
Introduction/Background* Pelvic radiation therapy (RT) is associated with high doses to the lumbo-pelvic girdle. However, the impact of RT dose on bone density (BD) is not known. Present study was designed to understand the impact of RT dose on BD loss.

Methodology Patients recruited into a phase III trial of adjuvant radiation with at least 2 CT imaging data sets at baseline and follow up were eligible. The primary endpoint was to report correlation if any between RT dose and BD loss. Across the lumbopelvic region (L1-L5 vertebra, pubic symphysis, femur, acetabulum, greater trochanter, and anterior-superior iliac spine) points were predefined to estimate the RT dose received and Hounsfield (HU) units at pre RT and follow up time points on Eclipse version 13.5. Bone health was categorized as Normal >130HU, Osteopenic= 110-130 HU or Osteoporotic <110HU based on CT HU values. Univariate



Abstract 389 Figure 1



Abstract 389 Figure 2

and multivariate analysis was performed. Additionally, linear mixed model was used to report interaction of follow up duration and RT dose.

Result(s)* Overall 132 patients were included. The median RT doses was as follows: L1-L2: 1.2-2.1 Gy (1.1-2.4Gy), L4:11 Gy (7.5-17.8 Gy), L5: 47 Gy (42.6-49.3 Gy), Femur: 44-48 Gy (41-50 Gy), Acetabulum: 48 Gy (42-49 Gy), Greater Trochanter 26-30 Gy (17-35 Gy). The median HU loss was 33 HU for doses between 1-11 Gy, 45 HU for12-25 Gy and 60 HU for 26-50 Gy. Before RT, 96% patients had normal bone health. At 24 months only 3% had normal bone health whereas 85% were osteoporotic ($p<0.001$). Both RT dose ($p<0.02$) and time ($p<0.001$) predicted for BD loss whereas interaction of dose x time was not significant ($p=0.56$). No other patient and treatment related factors predicted for BD changes on univariate analysis. Multivariate analysis was not performed.

Conclusion* RT doses correlated with BD loss in cohort of patients undergoing postoperative pelvic RT. The results highlight the need for structured evaluation of bone density after pelvic RT.

401 CLINICAL EVALUATION OF DNA METHYLATION AND HPV DNA TESTING IN URINE FOR CERVICAL INTRAEPITHELIAL NEOPLASIA AND CERVICAL CANCER DETECTION

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Introduction/Background* Urine, as a liquid biopsy, can be obtained easily and noninvasively. Urine sampling might increase effectiveness of cervical cancer screening programs, by attracting women currently unreached by conventional screening methods (e.g. repetitive non-responders). An emerging biomarker for early cancer detection is DNA methylation. Altered DNA methylation is a common epigenetic event that occurs during the early stages of carcinogenesis, and has been linked to gene silencing of tumor suppressor genes. We aimed to determine the performance of high risk human papillomavirus (hrHPV) and host cell gene DNA methylation testing in urine for cervical cancer and high-grade cervical intraepithelial neoplasia (CIN2 and CIN3) detection. Paired cervicovaginal samples, used for conventional cervical cancer screening, were tested for comparison.

Methodology A total of 269 women were included in this study: 113 women diagnosed with cervical cancer (paired urine samples, cervicovaginal self-samples and cervical scrapes), 92 women diagnosed with a CIN2 or CIN3 lesion (paired urine samples and cervicovaginal self-samples) and 64 healthy female controls (urine samples). Samples were tested for five DNA methylation markers (ASCL1, GHSR, LHX8, SST, ZIC1) and hrHPV DNA. Methylation levels in urine were compared, performance was calculated based on AUCs and logistic regression, and a marker panel was obtained by multivariable logistic regression. Agreement within samples was determined using Cohen's kappa statistics and the Spearman correlation coefficients.

Result(s)* All markers in urine increased significantly with severity of disease, marker panel ASCL1/LHX8 resulted in an AUC of 0.84 for cervical cancer and CIN3 (CIN3+) detection, with a sensitivity of 77% and 86%, at a predefined specificity of 80% and 70%. In samples from women with cervical cancer, 83% hrHPV-positivity and 94% ASCL1/LHX8-positivity was found in urine, 88% and 94% in self-samples, and 92% and 98% in cervical scrapes, respectively. Between paired samples from women with CIN2/3 and cervical cancer, a fair to strong correlation for methylation markers and a moderate to strong agreement for hrHPV DNA was found.

Conclusion* For women currently unreached by conventional screening methods, DNA methylation and hrHPV DNA testing in urine offers a promising solution to detect cervical cancer and high grade CIN lesions.