

Patients undergoing conization before radical hysterectomy, received less adjuvant treatment ($p < 0.001$) and had a better 5-year disease-free survival (DFS) than patients who did not receive conization (89.8% versus 80.0%, respectively; $p = 0.010$) (figure 1). No difference in 5-year overall survival (OS) (97.1% versus 91.4%, respectively; $p = 0.114$) and in recurrence pattern ($p = 0.115$) was reported between the two groups. Factors significantly independently related to higher risk of recurrence were pathologic tumor diameter > 20 mm and no conization before radical hysterectomy ($p = 0.011$ and $p = 0.018$, respectively). The only independent variable influencing OS was pathologic tumor diameter > 20 mm ($p = 0.020$).

Conclusions Conization before radical hysterectomy was associated with improved DFS and lower probability of receiving adjuvant treatment in patients with FIGO-stage IB1 cervical cancer. No difference in peri-operative complications and OS was noted in these groups of patients.

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COMPARISON OF STAGE DISTRIBUTION AND OUTCOMES OF RADIOTHERAPY-TREATED CERVICAL CANCER BETWEEN THE INTERNATIONAL FEDERATION OF GYNECOLOGY AND OBSTETRICS 2009 AND 2018 STAGING SYSTEMS

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Introduction Three-dimensional image-guided brachytherapy (3D-IGBT) has become widespread, improving the outcomes of cervical cancers dramatically. In 2018, the International Federation of Gynecology and Obstetrics (FIGO) staging system for cervical cancer was revised. However, the influence of the revisions on the stage distribution and outcomes of cervical cancers treated with 3D-IGBT remains unclear. To address this issue, we assembled a study cohort that comprised solely of cases treated with definitive radiotherapy using 3D-IGBT and compared the stage distribution and outcomes between the FIGO 2009 and FIGO 2018 staging systems.

Methods Patients with cervical squamous cell carcinoma treated with definitive radiotherapy using 3D-IGBT from 2009 through 2017 were retrospectively collected. The patients were stratified using the FIGO 2009 or 2018 criteria, and survival was analyzed by Kaplan-Meier methods.

Results In 221 patients (median follow-up, 60 months), stage migration occurred in 52.9% of the patients. Patients classified with the 2018 criteria as stage IIICr had the highest proportion (43.8%) of migration, and were mainly from the 2009 stages IIB and IIIB. The 2009 and 2018 schemas showed comparable performance at stratifying 5-year overall survival (OS) and 5-year progression-free survival (PFS) for patients in stages IB–IVA. The 2018 criteria effectively stratified 5-year OS and PFS in the stage III substages. The 5-year OS and PFS for stage IIIC1r patients varied according to tumor T stage.

Conclusion These results provide evidence for the utility of the revised 2018 FIGO staging system in the clinical management of cervical cancers in the 3D-IGBT era.

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THE CHANGING NATURE OF REFERRAL PATHWAYS FOR RISK REDUCING SALPINGO-OOPHORECTOMY IN A UK CANCER CENTRE

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Introduction In 2013 the National Institute of Clinical Excellence (NICE) released guidance changing the threshold for BRCA testing from a lifetime risk of 20% to 10%. In 2015 NHS England brought this change into practice. Previously the majority of women were referred based on family history alone. This study will demonstrate how this evidence has changed when and how women are referred for risk management in our hospital.

Methods A retrospective study of 274 patients referred to the family history clinic for consideration of risk reducing surgery between January 2009 and December 2018 at the Royal Derby Hospital.

Results The number of referrals made in 2013 and 2014 were double those made in 2012 however this trend did not continue. Prior to 2015 69% of referrals were based on family history alone, compared to 34% after 2015. In 2018 all women undergoing risk reducing surgery had a genetic diagnosis, compared to 30% in 2009. Median age at surgery has reduced from 50 in 2009, to 43 in 2018.

Conclusion There has been no significant increase in referrals despite a lower threshold for BRCA testing. Women not previously eligible for testing were still offered surgery based on family history alone. Genetic diagnosis has allowed more accurate risk assessment and enables us to counsel women appropriately. Salpingo-oophorectomy reduces ovarian cancer risk from up to 50% to around 1%. Women are now being diagnosed with the BRCA gene at a younger age which is reflected in the fall in median age at surgery.

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SENTINEL LYMPH NODE DETECTION IN ENDOMETRIAL CANCER: LAPAROSCOPIC VERSUS ROBOTIC APPROACH

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Introduction Sentinel lymph node (SLN) mapping with indocyanine green (ICG) is widely utilized in the staging process for apparent uterine-confined endometrial cancer. The aims of the present study were to assess bilateral SLN mapping with laparoscopic versus robotic approach, to assess variables affecting bilateral detection rate and to assess survival difference in patients with no/unilateral, compared to bilateral SLN detection.

Methods All patients diagnosed with endometrial cancer FIGO stage IA-IVB, treated with minimally-invasive primary surgery

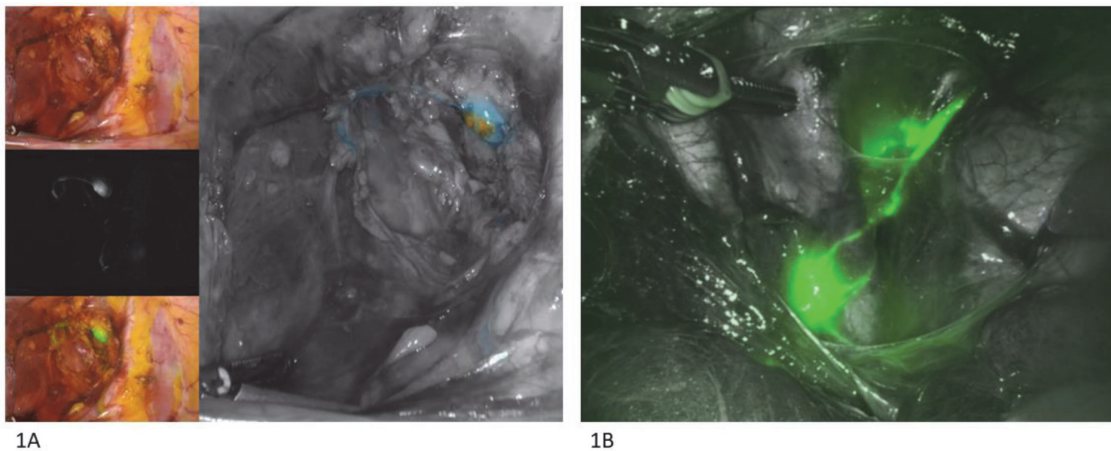
and undergoing indocyanine-green (ICG) injection to detect SLN, between 01/2015–12/2019, were included.

Results 387 (70.5%) patients had bilateral SLN mapping, 102 (18.6%) and 60 (10.9%) had unilateral and no mapping, respectively. Patients who underwent robotic approach were older (median 61 versus 64 years, $p=0.046$) and had a higher BMI (median 26.0 versus 34.8 kg/m², $p<0.001$). No

difference in any SLN mapping or in bilateral SLN detection was evident between laparoscopic or robotic approach ($p=0.892$ and $p=0.507$, respectively). Patients with bilateral SLN detection in the entire cohort were younger ($p<0.001$) and had better 3-year DFS compared to patients with no/unilateral SLN mapping (77.0% versus 66.3%, respectively, $p=0.036$). No 3-year OS difference was reported ($p=0.491$).

Abstract 377 Table 1 Comparison of characteristics of patients operated with Laparoscopic and robotic approach

Characteristic	LPS=286	Robot=263	p-value
Age (years)	61 (28-88)	64 (25-84)	0.046
BMI (kg/m ²)	26.0 (16.7-50.0)	34.8 (18.7-64.1)	<0.001
Conversion to laparotomy	20 (7.0)	5 (1.9)	0.004
Intra-operative complications			0.617
No	283 (99.0)	260 (98.9)	
Yes	3 (1.0)	3 (1.1)	
Post-operative complications			0.057
No	281	251	
Yes	5 (1.7)	12 (4.6)	
Post-operative complications			0.261
Grade 1-2	5 (1.7)	8 (3.0)	
Grade 3-5	0	4 (1.5)	
Histology			0.115
Endometrioid	229 (80.1)	228 (86.7)	
Serous	30 (10.5)	19 (7.2)	
Clear cell	2 (0.7)	0	
Mixed	20 (7.0)	15 (5.7)	
Carcinosarcoma	4 (1.4)	0	
Indifferentiated	1 (0.3)	0	
Not reported	0	1 (0.4)	
Grade**			0.002
1	38 (13.9)	21 (8.1)	
2	162 (59.1)	190 (73.6)	
3	74 (27.0)	47 (18.2)	
LVI***			0.441
Negative	198 (72.0)	167 (68.7)	
Positive	77 (28.0)	76 (31.3)	
Maximum tumour diameter (mm)	30 (1-110)	30 (3-110)	0.070
FIGO Stage			0.989
IA	168 (58.7)	154 (58.5)	
IB	59 (20.6)	50 (19.0)	
II	19 (6.6)	20 (7.6)	
IIIA	3 (1.0)	3 (1.1)	
IIIB	2 (0.7)	1 (0.4)	
IIIC1	31 (10.8)	31 (11.8)	
IIIC2	1 (0.3)	2 (0.8)	
IVB	3 (1.0)	2 (0.8)	
SLN mapping			0.892
No	32 (11.2)	28 (10.6)	
Yes	254 (88.8)	235 (89.4)	
SLN detection*			0.507
Unilateral	56 (22.0)	46 (19.6)	
Bilateral	198 (78.0)	189 (80.4)	
Number of SLN			0.756
1	45 (15.7)	35 (13.3)	
2	128 (44.8)	114 (43.3)	
4	56 (19.6)	52 (19.8)	
6	2 (0.7)	1 (0.4)	
Median number of SLN	2 (1-6)	2 (1-6)	0.650
Site of mapping of first SLN****			0.057
Obturator	181 (33.5)	126 (26.3)	
Internal iliac	34 (6.3)	30 (6.3)	
External iliac	297 (55.0)	287 (59.9)	
Common iliac	18 (3.3)	30 (6.3)	
Pre-sacral	6 (1.1)	4 (0.8)	
Para-aortic	3 (0.5)	2 (0.4)	
Para-aortic (isolated)	1 (0.2)	0	
SLN metastasis			0.213
No	254 (88.8)	236 (89.7)	
ITC	6 (2.1)	6 (2.3)	
Micro	21 (7.3)	11 (4.2)	
Macro	5 (1.7)	10 (3.8)	



Abstract 377 Figure 1

Conclusions SLN mapping and bilateral SLN detection with ICG in endometrial cancer was not different in laparoscopic and robotic approach, even though patients undergoing robotic approach were older and more obese. Bilateral SLN detection was associated with improved 3-year DFS, but not with 3-year OS, compared to no and unilateral SLN detection.

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378 CERVICAL ADENOCARCINOMA. WHAT IS THE REASON FOR REFERRAL?

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Introduction The objective of this presentation is to evaluate the reason for referral of patients with a diagnosis of cervical adenocarcinoma treated in the Cervical Pathology Unit of the Hospital San Borja Arriaran.

Material and Method Retrospective analysis of records of patients treated for cervical adenocarcinoma, between the years 2008 to January 2019.

Results Of 5353 positive cytologies studied between January 2008 and January 2019, a total of 105 adenocarcinoma were found, with a median age of 47 years (between 20 to 85 years). Out of these 105 patients: 15% were referred due to clinical suspicion, of which 5 patients (30%) had a visible tumor; and 89 patients (85%) were referred due to altered cytology, corresponding to 2% of the total.

Analyzing the cytology that originated the referral of these 89 patients with abnormal results, 41.5% (37) had a PAP suggestive of adenocarcinoma, 6.7% (6) were suggestive of squamous carcinoma, 28% (25) had a PAP NIE II-III, and 23.5% (21) had an atypical in one of its three varieties [double non-specific atypical: 9.5% (2), glandular atypical: 47.6% (10) and atypical that does not exclude high-grade injury 42.8% (9)].

Conclusions Cervical adenocarcinoma is an emerging entity and it is difficult to diagnose. Screening programs do not necessarily decrease its incidence, on the contrary, they have

become the main source of referral for cervical adenocarcinoma. In our review, it corresponded to 85% of the cases. Despite the difficulty of investigating an adenocarcinoma through PAP, this was the main cause of referral. The referral for clinical suspicion corresponded to 15%.

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379 FREQUENCY AND MOLECULAR ASSOCIATIONS OF KRAS MUTATIONS IN GYNECOLOGIC MALIGNANCIES

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Introduction KRAS inhibitors have efficacy with non-small cell lung, pancreatic, and colon cancers. The therapeutic role in gynecologic malignancies remains investigational.

Methods Caris next-generation sequencing profiles of 859 gynecologic cancers from our institution were queried for KRAS- and BRCA-mutations, microsatellite instability (MSI), and tumor mutational burden (TMB). Wilcoxon and Fisher-Exact tests were used for comparison of molecular signatures and $p < 0.05$ was regarded significant.

Results KRAS-mutations were present in 12.7% (33/259) uterine [endometrial cancer (EC)] and 6.7% (27/404) ovarian cancers (OC). KRAS-mutations in Type I vs. Type II EC were 20.7% (19/92) and 9.4% (13/139), respectively, and 3.6% (1/28) sarcoma. KRAS-mt OC by histologies were: papillary serous (9/306, 2.9%), endometrioid (9/23, 39.1%), mucinous (4/5, 80%), MMMT (3/38, 7.9%), clear cell (2/17, 11.8%), granulosa (0/10, 0%), and other histology (0/5, 0%) (table 1). KRAS-mutations were limited to exon 2. (for subtypes, see figures 1A and 1B). BRCA1/2-mt and KRAS-mutations were mutually exclusive in both EC and OC. KRAS-mutated EC had a greater association with MSI-H (34.8% KRAS-mt vs 16.4% KRAS-wt, $p=0.0445$) and TMB (median=9 mt/MB vs 8 mt/MB, $p=0.0123$) than KRAS-wt. No difference in TMB and MSI status was seen between KRAS-mt vs KRAS-wt OC.