Introduction/Background* The high-dose-rate intra-cavity brachytherapy (HDR-ICBT) has an important and essential role for radiation therapy for uterus cervical cancer and rectal dose reduction is critical for determining the radiation dose for HDR-ICBT. In Asia, standard external beam radiation therapy combines whole pelvic radiation therapy (WPRT) and sequential WPRT with central shielding (WPRT-CS) for rectal dose reduction prior to HDR-ICBT. This study aimed to evaluate the treatment outcome and tolerance of the combination treatment strategy.

Methodology Forty-six cervical cancer patients treated from 8/2011 to 9/2020 were included in this retrospective analysis. All patients received combination therapy of HDR-ICBT and EBRT which is consisted of WPRT and WPRT-CS using IMRT/TomoTherapy.

Result(s)* Primary tumor stages (FIGO) were distributed as follows: IB: 6, IIA: 4, IIB: 12, IIIA: 1, IIIB: 3, IIIC1:17, IIIC2:3 (with Para-aortic lymph node metastasis), pelvic lymph node metastasis(N+): 21. Forty patients had squamous cell carcinoma (SCC) and the remaining six had adenocarcinoma. The median age of patients was 65.5 (range, 30–91) years. All patients completed treatment, and the median dose of WPRT and WPRT-CS was 36 (range, 20–43.2) and 14.4 (range, 7.2–28) Gy, respectively. Median HDR-ICBT dose/fractions to Point A was 25 Gy/5 Fr (range, 15–30 Gy/3–5 Fr). Thirty-five had weekly cisplatin concomitant with RT.

Median follow-up was 43.5 (range, 4–122) months, and 5-year local control, disease-free survival, and overall survival rates (OS) were 95.6%, 84.0%, and 83.1%, respectively. There was only two local failure and seven patients experienced distant metastasis (4 lung metastasis and 3 para-aortic metastasis). Four of seven patients with distant metastasis received salvage therapy and the disease got controlled. One patient who controlled cervical cancer, developed primary lung cancer and died of that. No acute or late $\geq$ Grade 3 radiation-induced genitourinary or gastrointestinal toxicities were observed.

Conclusion* In the present study, the combination of IMRT consisting of WPRT and WPRT-CS using TomoTherapy and HDR-ICBT show comparatively long-term great local disease control and tolerance rates for cervical cancer patients. This combination strategy is considered one of the effective and safe treatment options for cervical cancer.

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FALSE NEGATIVE RATE AT 18F-FDG PET/CT IN PARA-AORTIC LYMPHNODE INVOLVEMENT IN PATIENTS WITH LOCALLY ADVANCED CERVICAL CANCER: IMPACT OF PET TECHNOLOGY

S Gouy*, V Seebacher, C Chargari, M Terroir, A Maulard, C Genestie, P Pautier, A Leary, P Morice, D Deandreis. *Gustave Roussy, Surgery, Villejuif*

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Introduction/Background* The identification of factors responsible for false negative (FN) rate at 18F-Fluorodeoxyglucose (FDG) Positron Emission Tomography/Computed Tomography (PET/CT) in para-aortic (PA) lymph nodes in the presurgical staging of patients with locally advanced cervical cancer (LACC) is challenging. The aim of this study was to evaluate the impact of PET/CT technology.

Methodology A total of 240 consecutive patients with LACC (International Federation of Gynecology and Obstetrics, FIGO,

stage IB2-IVA) and negative Magnetic Resonance Imaging (MRI) and/or Computed Tomography (CT) and negative 18F-FDG PET/CT in the PA region, undergoing laparoscopic PA lymphadenectomy before chemoradiotherapy were included. The FN rate in patients studied with Time of flight (TOF) PET/CT (TOF PET) or non-Time of flight PET/CT (no-TOF PET) technology was retrospectively compared.

Result(s)* Patients presented with FIGO stage IB (n = 78), stage IIA-B (n = 134), stage III (n = 18) and stage IVa (n = 10), squamous cell carcinoma (n = 191) and adenocarcinoma (n = 49). 141/240 patients were evaluated with no-TOF PET/CT and 99/240 with TOF PET/CT. Twenty-two patients (9%) had PA nodal involvement at histological analysis and considered PET/CT FN findings. The FN rate was 8.5% for no-TOF PET and 10% for TOF PET subgroup respectively (p = 0.98). Ninety patients (38%) presented with pelvic node uptakes at PET/CT. The FN rate in the PA region was 18% (16/90) and 4% (6/150) in patients with and without pelvic node involvement at PET/CT respectively (19 vs 3% for no-TOF PET and 17 vs 5% for TOF PET subgroup).

Conclusion* In LACC, FN rate in PA lymph nodes detection is a clinical issue even for modern PET/CT, especially in patients with pelvic uptake. Surgical lymphadenectomy should be performed in case of negative PET/CT at PA level in these patients, while it could be discussed in the absence of pelvic uptake.

1040

A NEW SURGICAL ERA FOLLOWING THE LACC TRIAL – A TEN STEP SURGICAL APPROACH TO FERTILITY SPARING ABDOMINAL RADICAL TRACHELECTOMY

S Smyth, H Jiang*, C Pappa, M Abdalla, H Soleymani. *John Radcliffe Hospital, UK*

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Introduction/Background* Minimally invasive surgery in the management of cervical cancer was dealt a heavy blow in 2018, with the laparoscopic approach to cervical cancer trial (LACC) taking the gynaecology oncology world by storm; leading to a complete overhaul of surgical techniques involved.

Methodology We present a 34-year-old fit and well nulliparous female referred with grade two squamous cell carcinoma; 4.3mm invasion depth on loop histology, stage 1A2. There was no radiological evidence of residual tumour, lymphadenopathy or metastatic disease. Following counsel, the patient underwent midline laparotomy, bilateral pelvic lymph node dissection and radical trachelectomy with no residual and 37 lymph nodes negative and uncomplicated recovery.

Result(s)* We present a stepwise surgical approach:

1. Midline laparotomy and pelvic side wall opening to develop eight avascular retroperitoneal spaces of pelvis with slinging of round ligaments and ureters and preservation of fallopian tubes and ovaries
2. Bilateral pelvic lymph node dissection sent for frozen section examination
3. Full mobilisation of cervix with ureterolysis, dissection of parametrium, paracolpium and vaginal cuff. Skeletonisation to bifurcation, sacrifice and preservation of descending and ascending uterine artery branches respectively – ensuring artery pulsation and uterine body perfusion during procedure
4. Measurement of the vaginal cuff from the central tumour bed – identification of a 2cm clear margin

5. Anterior colpotomy and sling through retrograde posterior colpotomy to ensure clear margins and complete detachment of cervix, vaginal cuff, paracolpium and parametrium from distal vagina

6. Insertion of H8 Hagars dilator into uterine cavity through cervical os

7. En bloc retrograde resection of cervix, vaginal cuff, paracolpium and parametrium at level of isthmus

8. Insertion of cervical cerclage around distal uterus and dilator using #1 continuous prolene suture

9. Replacement of Hagars dilator with Foleys catheter – subsequently removed 48 hours post-operatively

10. Formation of neo-cervix using #1 vicryl interrupted suture between distal uterine body and proximal vaginal cuff

Conclusion* We highlight the importance of a systematic approach to this challenging technique, acknowledging specialist anatomical knowledge and surgical skills. We present a stepwise procedure, achieving en block radical excision with fertility sparing preservation of ascending uterine artery branch, round and infundibulopelvic ligaments.

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IMPACT OF CERVICAL CANCER SCREENING ON DIAGNOSIS AND MORTALITY OF CERVICAL CANCER IN OSAKIDETZA

¹C Blasco de Imaz Alonso*, ²S Huerta Martin, ³D Del Valle, ²A Lekuona Artola, ²R Ruiz, ¹P Cobas, ²AP Gurria De la Torre, ³M Gorostidi, ⁵I Jaunarena, ³J Céspedes Manterola, ³E Arenaza Lamo, ³A Dávila Expósito, ⁶A Arrainza Armendariz. ¹20014, Spain; ²20014, Spain; ³Donostia, Spain; ⁴20014; ⁵Donostia, Spain; ⁶

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Introduction/Background* Systematic cervical cancer screening covering 70% of population has shown a decrease in the incidence and mortality in northern Europe of over 80%.

In the Basque Country, we implemented cervical screening in 1985. Initially, unorganized opportunistic screening took place, moving on to an organized opportunistic screening. Since 2018 organized population screening has been carried out which will be completed in 2023.

Methodology Cervical cancer cases detected between 2018 and 2020 have been analysed, both inside and outside the screening. We centered our analysis on the stages of cancer at diagnosis and anterior prognosis

Result(s)* The total of cancers diagnosed was 294: 92 in 2018, 92 in 2019 and 110 in 2020.

The mean age at diagnosis was 54 years.

Regarding histology, we found squamous carcinoma in 71.2% of the cases, adenocarcinoma in 27.2%, endometrioid in 1.1% and clear cervical cell carcinoma in 0.5%.

Within our programme, 25.5% of the subjects were directly diagnosed after the performance of a VPH cytology and 10.33% during the follow up,

Outside screening, 51.63% were diagnosed after symptoms, 2.72% due to findings in imaging test and 9.78% of cases were detected in private clinics.

68.18% of cancers diagnosed by the programme were initial stages. However, only 13.95% of those diagnosed outside the screening were in an initial stage.

Taking into consideration all the cases, 37.5% of cases did not do any screening test before, 27.2% did, 26.1% did a correct it incorrectly and 9.2% did the follow-up in private clinics.

Finally, concerning mortality up to January 2021, 4.16% of women diagnosed in initial stages and 22.03% diagnosed in advance stages died (10.34% and 89.66% of total deaths, respectively).

Conclusion* FIGO staging is the main prognostic factor, 89.66% of deaths were diagnosed in an advanced stage. According to our study, 68.18% of the cancers diagnosed inside the screening were in initial stages, comparing to only a 13.95% outside the programme.

64.7% of women with cervical cancer had not previously performed a screening test or have it in an inappropriate way. The establishment of a systematic cervical cancer screening programme can reduce global mortality due to this disease.

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ONCOLOGICAL OUTCOMES OF LAPAROSCOPIC NERVE-SPARING RADICAL HYSTERECTOMY WITHOUT UTERINE MANIPULATOR

¹D Zygouris*, ¹A Gkoutzioulis, ²S Papadimitriou, ¹E Stergiannakou, ¹A Kavallaris. ¹St. Luke's hospital, Department of Gynecologic Oncology, Thessaloniki, Greece; ²University Hospital of Ioannina, Department of Blood Transfusion, Ioannina, Greece

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Introduction/Background* The aim of this study is to evaluate surgical data and oncological outcome of laparoscopic nerve-sparing radical hysterectomy without uterine manipulator for cervical cancer stage IB, over the last 10 years.

Methodology This retrospective study includes 39 patients with cervical cancer Figo stage (2009) IB who underwent laparoscopic nerve-sparing radical hysterectomy without using any kind of uterine manipulator. Patients were eligible if they had squamous cell carcinoma, adenocarcinoma, or adeno-squamous carcinoma, and no para-aortic lymph node involvement by imaging or after frozen section. The median value and range were assessed for operative outcomes and relapse rate and disease-free survival rate were evaluated using the Kaplan-Meier method.

Result(s)* In the study, 39 patients were included and among them 32 women were stage IB1 (21 cases with tumor size 2-4 cm) and 7 women stage IB2 (Figo stage 2009). The median age of patients was 49.6 years (range 31-68) and median body mass index (B.M.I) was 26.1 kg/m² (range 19-33.5 kg/m²). The average operating time was 226 min (range 147-310 min) and median hospital stay was 2.6 days (range 2-7 days). Approximate blood loss was 184 ml (range 120-300 ml). After a median follow-up of 48 months, we had 2 recurrences out of 32 cases and no death. Especially for patients with Figo stage (2009) IB1, the recurrence rate was 3.1% (1/32). The 3-year PFS was 93.7% and the number at risk 23 (71.8%) and especially for the IB1 stage (2009) women, the 3-year PFS was 96.1% and the number at risk 21 (77.7%). The 3-year OS was 100% with no. at risk 71.8%.

Conclusion* Laparoscopic nerve-sparing radical hysterectomy without uterine manipulator is feasible and safe surgical procedure for cervical cancer with acceptable surgical and oncological outcomes in the hands of well-trained and experienced laparoscopic surgeons. Our retrospective study reveals better oncological outcome compared to other studies on the minimally invasive approach, where uterine manipulator was routinely used and no vaginal sealing of the tumor was made.