Abstract #726 Figure 1  Forest plots assessing CIN2+ recurrence rates between HPV vaccinated and non-vaccinated group after local conservative treatment for CIN irrespective of HPV type

Disclosures The authors declare no conflict of interest with regards to the presented work; a number of authors are investigators of the NIHR EME funded NOVEL trial (MK, KSK, and IK); this trial is also supported by MSD who supplied the vaccines for the trial.

#729 PCNA IN CERVICAL INTRAEPITHELIAL NEOPLASIA AND CERVICAL CANCER: AN INTERACTION NETWORK ANALYSIS OF DIFFERENTIALLY EXPRESSED GENES
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Introduction/Background The investigation of differentially expressed genes (DEGs) and their interactome could provide valuable insights for the development of markers to optimize cervical intraepithelial neoplasia (CIN) screening and treatment. This study investigated patients with cervical disease to identify gene markers whose dysregulated expression and protein interaction interface were linked with CIN and cervical cancer (CC).

Methodology Literature search of microarray datasets containing cervical epithelial samples was conducted in Gene Expression Omnibus and Pubmed/Medline from inception until March 2021. Retrieved DEGs were used to construct two protein-protein interaction (PPI) networks. Module DEGs that overlapped between CIN and CC samples, were ranked based on 11 topological algorithms. The highest-ranked hub gene was retrieved and its correlation with prognosis, tissue expression and tumor purity in patients with CC, was evaluated.

Results Screening of the literature yielded 9 microarray datasets containing cervical epithelial samples. Two PPI networks from CIN and CC samples were constructed and consisted of 1704 and 3748 DEGs along 21393 and 79828 interactions, respectively. Two gene clusters were retrieved in the CIN network and three in the CC network. Multi-algorithmic topological analysis revealed PCNA as the highest ranked hub gene between the two networks, both in terms of expression and interactions. Further analysis revealed that while PCNA was overexpressed in CC tissues, it was correlated with favorable prognosis (log-rank P=0.022, HR=0.58) and tumor purity (P=9.86 × 10–4, partial rho=0.197) in CC patients. This study identified that cervical PCNA exhibited multi-algorithmic topological significance among DEGs from CIN and CC samples.

Conclusion Our study identified that cervical PCNA exhibited multi-algorithmic topological significance among DEGs from CIN and CC samples. Overall, PCNA may serve as a potential gene marker of CIN progression. Experimental validation is necessary to examine the screening, diagnostic and prognostic value of PCNA in patients with CIN and CC.

Disclosures n/a

#734 10 YEARS FOLLOW-UP OF POSTOPERATIVE QUALITY OF LIFE IN PATIENTS WITH EARLY STAGE CERVICAL CANCER – PROSPECTIVE STUDY
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Introduction/Background The survival in early stages of cervical cancer has improved dramatically. An issue of of quality of life after surgery has become relevant. The aim of this study is to evaluate the quality of life of patients who have undergone radical or less radical surgery of cervical cancer.

Methodology Between 2007 and 2011, 100 patients undergoing surgery for cervical cancer (stage IA2-B2) were included. Patients filled a quality of life questionnaires EORTC QLQ–C 30 and CX 24 before surgery, 6, 12 and 120 month after surgery. For final evaluation at follow-up at 120 months 54 patients were used. Of them 23 underwent conservative surgery (laparoscopic lymphadenectomy plus simple trachelectomy/simple hysterectomy, CONS group) and 31 radical surgery (abdominal radical hysterectomy type C1 - RAD group).

Results At 6 month post surgery RAD group exhibited more menopausal symptoms and worse Physical functioning compared to CONS. Compared to preoperative period patients in CONS group had more symptoms regarding lymphoedema and neuropathy and slightly worse Physical functioning while they had improved outcomes in Role, Emotional and Social functioning. In RAD group patients had more Sexual worries. At 120 month post surgery RAD group exhibited worse outcomes in Lymphoedema, Peripheral neuropathy, Postmenopausal symptoms, Fatigue, Pain and Physical functioning compared to CONS group.

Conclusion Cervical cancer treatment is associated with negative impact on quality of life, which can persist for years following treatment. Most of the women included in our sample reported worsening in the areas of role functioning, emotional functioning, pain, peripheral neuropathy, menopausal symptoms and sexual activity as a consequence of treatment for cervical cancer. Radical group suffered from more symptoms.

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#749 OPTIMIZING BRACHYTHERAPY APPLICATORS IMPLANTATION IN LOCALLY ADVANCED CERVICAL CANCER WITH TRANSRECTAL ULTRASOUND GUIDANCE
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Conclusion Our study identified that cervical PCNA exhibited multi-algorithmic topological significance among DEGs from CIN and CC samples. Overall, PCNA may serve as a potential gene marker of CIN progression. Experimental validation is necessary to examine the screening, diagnostic and prognostic value of PCNA in patients with CIN and CC.

Disclosures n/a