INNO-LiPA Extra-II kit (Fujirebio), based on PCR-reverse hybridization.

**Results** Among 110 women with CIN2/3 (n=19) and invasive cancer (n=91), early antibodies to any HPV early antigen were detected in 58(53%). The difference between CIN2/3 (47.4%) and cancer (53.8%) was not significant (p=0.62). All 58 were positive for antibodies to HPV16 CE2/NE6/E7. HPV18/31/45 E7 antibodies were detected additionally in 1.1 and 2 cases, respectively. Among 40 controls (normal cytology and negative HPV DNA on Hybrid Capture), any early HPV antibodies were detected in 8(20.0%) cases with HPV16 CE2/NE6/E7 in 3(7.5%), HPV18 E7 in 2(5%), HPV31 E7 in 5 (12.5%), and HPV45 E7 in 3(7.5%). On HPV genotyping, 88 (80.0%) cases had any high-risk (hr)HPV type, commonest being HPV16(99%), HPV18(5%), HPV31/33(3% each), HPV35/45/59(2% each). Single hrHPV infections were detected in 77 patients, 7 had single hrHPV infections other than HPV16. Multiple hrHPV infections were detected in 11 (10%) patients.

**Conclusions** The serological test detects a high proportion of cases detected by INNO-LiPA. Further development of this simple, affordable technology holds promise to facilitate cervical screening and triage in community settings.

**EP345/#758 BREAST CANCER SCREENING PROGRAM IN UZBEKISTAN: REPORT FROM A BUKHARA PILOT**

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**Objectives** The main purpose of the study is to organize population-based mammography screening.

**Methods** Bukhara region has 13 subdivisions with an overall population of about 2 million. Every subdivision was equipped with a digital mammograph (all together 13 fixed and 2 mobile units). The paramedical personnel were appropriately trained on the use of technology. A specialized uniquely designed registration process records all important data including ID, family status, history, menopausal status, hormonal usage, medical history including ovarian or other malignancies and more. The target group planned is women between age group of 45–65. With target women population estimated to be 200,000, it was decided to perform about 70,000 mammograms over a year.

**Results** Women were reached using state television, radio and other channels of communication. Data generated by mammography machine is directly sent to central reporting center (92.3%). The follow up plan is well lead out and is being executed.

**Conclusions** Establishment of national large level population-based mammography screening appears to be feasible. Women can be mobilized to attend. Substantial number of early cancers can be detected which would lead to cancer mortality reduction.

**EP346/#388 DEEP LEARNING BASED PREDICTION OF CERVICAL INTRAEPIHELIAL NEOPLASIA ON COLPOSCOPY**

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**Objectives** Deep learning is a type of machine learning that uses a neural network structure composed of multiple layers through data learning. Among artificial neural networks used for deep learning, convolutional neural networks show excellent performance in image recognition and classification, and are mainly used to analyze visual images. However, there have been few studies about CNN based prediction of cervical intraepithelial neoplasia yet. The purpose of this study is to examine whether the accuracy of CNN model to detect high grade squamous intraepithelial lesion (HSIL) on colposcopic image can be improved when segmentation information for acetowhite epithelium is added.

**Methods** We collected 3,699 images of colposcopy conducted at Jeju National University Hospital from 2008 to 2021. The images were labeled with negative (negative colposcopic findings without biopsy, chronic cervicitis and low grade squamous intraepithelial lesion on biopsy) and positive (HSIL on biopsy). We composed dataset with collected images and augmented dataset to 20,000 images, and using Resnet-18, -50, -101 model, we classified colposcopic images into negative and positive. Then, we segmented acetowhite epithelium on colposcopic images using SegNet, and add these segmented images for classification.

**Results** Using Resnet-18, -50, and -101 model, the sensitivity to detect HSIL was 0.66, 0.62, and 0.64, respectively, and the specificity was 0.75, 0.74, and 0.75 respectively. After adding segmentation information, the accuracy to detect HSIL was improved, which was consistent across all different types of Resnet.

**Conclusions** HSIL of cervix can be detected through convolutional neural network that learns colposcopic images with comparable accuracy by adding segmentation information for acetowhite.

**EP347/#879 DETECTION OF PROGRESSION OR REGRESSION OF GYNECOLOGIC CANCERS BY CIRCULATING TUMOR DNA (ctDNA)**

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**Objectives** The use of post-operative circulating tumor DNA (ctDNA) to detect cancer recurrence has been reported in various studies but the literature describing variable changes in ctDNA is limited. The objective of this study is to describe the utility of single and serial ctDNA values in detecting the progression or regression of gynecological cancers.