Methods This is a retrospective observational study including nineteen patients, aged >=18 years who had the ctDNA test completed at hematology/oncology clinic of William Beaumont – Royal Oak and Troy Hospitals, Michigan, USA.
Results Among the nineteen patients, fifteen had breast, three had ovarian, and one had endometrial cancer. The median age at diagnosis was 57 years, and 73.7% of patients had either stage III or IV disease. Our primary endpoint, the correlation of single ctDNA results with imaging showing either progression or residual disease, showed a sensitivity and specificity of 100% and 93.3%, respectively. Secondarily, serial ctDNA analysis in ten patients revealed both sensitivity and specificity of 100% for up-trending ctDNA to detect progression, down-trending to detect regression, and negative results to detect the absence of disease. The positive ctDNA results detected disease progression with a median lead-time of 36.5 days compared to imaging.
Conclusions Given the high sensitivity and specificity to detect disease progression and regression in gynecologic cancer by single and serial values in our study, we conclude that ctDNA can be a valid way to monitor for changes in disease status. Further clinical studies are required to prove the utility of ctDNA in detecting changes in disease status

EP348/#107 ROLE OF HPV IN PREDICTION OF RECURRENCE/ PERSISTENCE AFTER TREATMENT FOR CERVICAL PRECANCER

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Objectives 1. To determine the role of HPV testing after excisional treatment of cervical precancer. 2. To determine clinical factors associated with persistence of cervical precancer post-treatment.
Methods A retrospective chart review was conducted on patients who had a LEEP for cervical precancer (CIN3/AIS/HSIL) between 2016–2018 at a colposcopy unit in a university-affiliated centre in Toronto. Persistence/recurrence of disease was defined as a finding of high-grade cytology or pathology results during the time of follow-up. Univariate and multivariate regression models were run with persistence/recurrence and HPV positivity at exit testing as an outcome.
Results A total of 284 patients were included. The median follow-up time was 19 months. Of the LEEP specimens, 90.8% (n=258) demonstrated HSIL and 3.9% (n=11) had AIS. 28.5% (n=81) of the LEEP specimens had positive margins. In follow-up, 72.9% had negative cytology, 17.6% had ASCUS/LSIL, 1.8% had ASC-H/LSIL-H and 6.7% had HSIL. At the final follow-up, 27.8% (n=79) were HPV+. Overall rate of persistence/recurrence was 11.3% (n=32); median time to persistence/recurrence was 6.5 months. Multivariate regression models demonstrated that follow-up HPV positivity (OR=22.0) and positive margins (OR=3.7) were significant for predicting persistence/recurrence. Similarly, in univariate regression models, positive margins were significant (OR=2.2) for predicting HPV positivity in exit testing.
Conclusions Persistence/recurrence of precancer can occur due to incomplete treatment of lesions by local excision and by persistence of HPV infection. Surveillance strategies for women treated for cervical precancer require a risk-based approach such as that suggested in the ASCCP guidelines.

EP349/#554 LOGISTICS OF TIME REQUIRED TO IMPLEMENT A SCREEN-AND-TREAT STRATEGY USING POINT-OF-CARE HPV TESTING FOR THE PREVENTION OF CERVICAL CANCER

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Objectives We conducted a time-motion study to assess implementation feasibility of POC HPV testing within a SAT program.
Methods We recruited women from a primary health care facility in Khayelitsha, Cape Town between February 2015-May 2016. We identified the following critical steps necessary if POC HPV testing is to be integrated into a SAT protocol: consent, history and examination, and sample testing on-site. Since HPV Xpert was used, which requires 60 minute run time, we estimated that the total visit time until a treatment decision could be made, assuming no delays, would be 95 minutes. If treatment is indicated, an additional 30 minutes would be needed to complete the visit
Results We enrolled 715 women, 223 (31.2%) were HPV-positive. Women were aged 42.7 (SD 8.6) years on average. Median visit time until a treatment decision could be made was 2.93 hours (range: 0.58–6.73; IQR 1.38) overall, 3.13 hours (range: 1.71–6.73; IQR 1.23) for participants who stayed to receive their HPV results and 1.97 hours (range: 0.58–5.00; IQR 1.64) for those who did not (figure 1). The decision to stay for receipt of HPV results was associated with earlier arrival in the day (table 1).
Conclusions Staying to receive results adds almost an hour to the visit, but it enables treatment at the same visit as screening. Patients who arrived later in the day were less likely to stay for their results. The logistics of POC testing are complex and require careful consideration to ensure efficient visits with as little wait-times for patients as possible.

Abstract EP349/#554 Table 1

Characteristic	Receipt of Same Day HPV Results		p-value*
	Yes	No	
	N=531 (74.3%)	N=184 (25.7%)	
Arrival time			<0.001
Before 09:00	98 (89.0%)	12 (11.0%)	
09:00-09:59	183 (86.3%)	29 (13.6%)	
10:00-10:59	142 (72.4%)	54 (27.6%)	
11:00-11:59	66 (64.1%)	37 (35.9%)	
12:00-12:59	36 (59.0%)	25 (40.1%)	
After 13:00	6 (18.2%)	27 (81.8%)	