The Value of High-Risk HPV Testing in Cervical Cancer Surveillance

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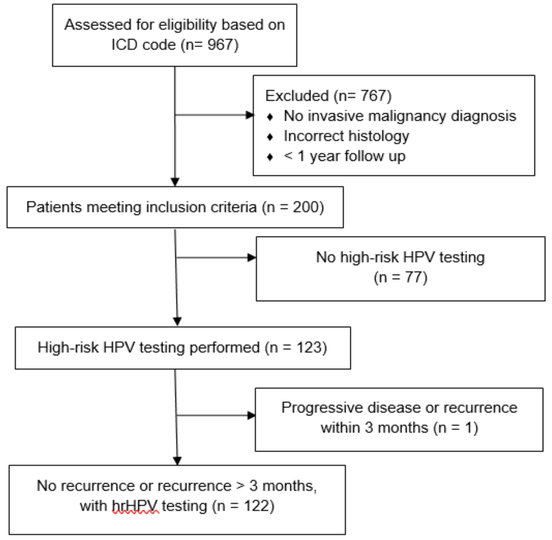
Background

- Molecular studies have found that up to 71% of invasive cervical cancers are positive for the high risk HPV (hrHPV) strains 16 and 18.[1]
- The role of post-treatment hrHPV testing in patients with invasive cervical cancer has not been completely studied.
- If hrHPV was present concurrently with cytologic abnormalities, the relative risk for recurrent cervical cancer was increased by four-fold, suggesting that persistent hrHPV is a risk factor for disease recurrence.[2]
- Screening for hrHPV DNA during cervical cancer surveillance led to early detection of recurrence after radiotherapy.[3]

Methods

- **Study population:**



- **Statistical analysis**: Chi-square univariate analysis

Objective

The significance of persistent high-risk HPV (hrHPV) infection after cervical cancer treatment is unclear. We sought to evaluate the role of cervicovaginal hrHPV testing in the surveillance of cervical cancer.

Results

Table 1. Characteristics of patients with and without cervical cancer recurrence in the high-risk HPV tested cohort, No. (%)

Characteristic	No Recurrence (N=102)	Recurrence (N=20)	P value
Mean age at diagnosis (yr ±SD)	46±13	54±13	0.009
Race			
White	49 (48)	8 (40)	n.s.
Non-white	52 (51)	10(50)	
Unknown	1 (1)	2 (10)	
History of smoking			
Yes	21 (20)	7 (35)	n.s.
No	81 (80)	13 (65)	
Histology			
Squamous	51 (50)	10 (50)	n.s.
Non-squamous	51 (50)	10 (50)	
Stage at diagnosis			
IA1-A2	17 (17)	1 (5)	0.0008
IB	57 (56)	7 (35)	
II	21 (20)	4 (20)	
III-IV	5 (5)	7 (35)	
Unknown	2 (2)	1 (5)	
High-risk HPV positive during surveillance	23 (23)	5 (25)	n.s.

Plus-minus value is mean ±standard deviation
n.s.: not significant

Conclusions

- Positive hrHPV testing in the surveillance setting was not associated with cervical cancer recurrence.
- Based upon our results, the additional cost of hrHPV testing, and the unclear follow up recommendations for a positive hrHPV test in the surveillance setting, we would not recommend hrHPV testing for early detection of cervical cancer recurrence.
- A prospective trial with consistent follow up strategies would best guide a formal recommendation on this practice.

References

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