



UTILITY OF BIOMARKERS TO DIFFERENTIATE ADENOCARCINOMA OF THE UTERINE CERVIX FROM ITS MIMICS

Adel Mikhail, Sheridan Mikhail, Alcina Nicol, Cecilia Andrade, Gerard J Nuovo

INTRODUCTION

- > Endometrial adenocarcinoma invading the endocervix is histologically equivalent to cervical adenocarcinoma
- > Several benign conditions of the cervix can mimic adenocarcinoma
- > Cervical adenocarcinoma requires HPV infection; endometrial cancer is HPV negative
- > Thus, we interrogated several biomarkers associated with HPV infection to determine if they could differentiate endocervical from endometrial adenocarcinoma

METHODS & MATERIALS

Patients and Tissue Samples

- > Data was generated from the Discovery Life Sciences cervical HPV tool kit which was created from a large series of formalin fixed, paraffin embedded tissues. Endometrial cancer cases were also from DLS files.

Testing

- > Each tumor was tested for HPV RNA by in situ hybridization
- > Immunohistochemistry was done on the automated Bond Max for p16, Ki67, Mcl1, importin-b, exportin-5, and PDL1
- > All analyses were done by a Pathologist (GJN) blinded to the clinical and other pathologic information
- > PDL1 was + if >10% of tumor or inflammatory cells were + ; other markers were + if >50% of tumor cells were +

RESULTS

HPV detection by PCR

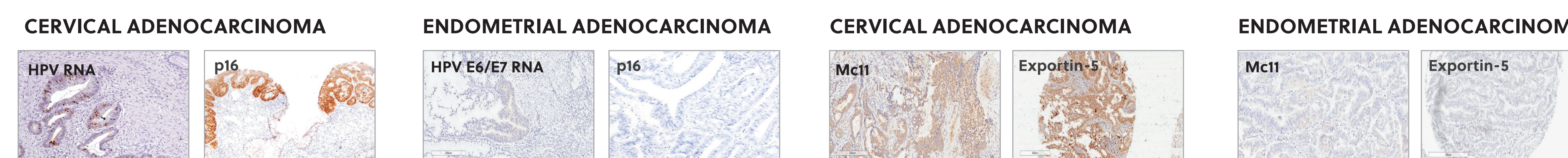
- > HPV RNA was detected in 28/30 cases of endocervical adenocarcinoma
- > HPV RNA was detected in 0/30 endometrial adenocarcinomas

Immunohistochemical testing (Table 1)

- > Note there was no significant difference with Ki67 or importin-b expression between endometrial and endocervical adenocarcinoma
- > Note highly significant increase in expression of p16, Mcl1, PDL1, and exportin-5 in adenocarcinoma of the cervix compared to the endometrial cancers

Table 1.

	P16+	PDL1+	Ki67 index	Mcl1+	Importin-b+	Exportin=5+
CERVICAL adenocarcinoma (n = 30)	27/30	26/30	70.1 (11.2)	27/30	22/30	22/30
ENDOMETRIAL adenocarcinoma (n = 30)	3/30	6/30	61.1 (13.5)	11/30	16/30	13/30
p value	< 0.001	< 0.001	–	< 0.001	–	< 0.003



CONCLUSIONS

- 1 Cervical adenocarcinoma, strongly associated with HPV infection, showed significantly increased expression of p16, as expected, which served as an internal + control
- 2 Cervical adenocarcinoma also showed significant increase in PDL1 expression compared to endometrial cancer, suggesting it may be amenable to anti PDL1 therapy
- 3 Adenocarcinoma of the cervix can be differentiated from endometrial adenocarcinoma invading the cervix by a panel of biomarkers including p16, Mcl1, PDL1, and exportin-5