J Cytol Histol 2015, 6:5
http://dx.doi.org/10.4172/2157-7099.C1.003

OMICS International
conferenceseries.com

Cytopathology of infectious diseases and autofluorescence on Papanicolaou stained smears as an ancillary test

Greta S Neethling
National Health Laboratory Services, South Africa

South Africa has a very high burden of HIV/AIDS and tuberculosis. With this high percentage of immuno-compromised patients, we see opportunistic and other infections on a frequent basis.I will be presenting various case studies which will include fungi, bacteria, protozoa, viruses and other parasites including the various cytological pictures seen in patients with *Mycobacterium tuberculosis*. Autofluorescence is an ideal ancillary test to perform on these conventional Papanicolaou stained smears from patients in whom pathogenic infections are suspected. A broad spectrum of organisms may be identified with this simple technique without destroying the original smear. Organisms were subjected to fluorescent microscopy which showed various degrees of green to yellow fluorescence highlighting the cell walls. The advent of inexpensive LED fluorescent microscopes makes this technology affordable in resource limited countries.

greta.neethling@nhls.ac.za

Use of HPV E6/E7 and hTERT mRNA RT-qPCR assays in combination for diagnosing high grade cervical lesions

Hyeyoung Lee
Yonsei University Wonju Campus, South Korea

Human Papilloma Virus (HPV) is a major cause of cervical cancer which is the third most common cancer in women. HPV E6 onco-protein initiates degradation of cellular tumor suppressor protein p53 and induces human telomerase reverse transcriptase (hTERT) activity. Activation of hTERT then leads to progressive cervical carcinogenesis. In this study, multiplex RT-qPCR assay which detects 16 HPV high-risk subtypes (HPV 16, 18, 31, 33, 35, 39, 45, 51, 52, 53, 56, 58, 59, 66, 68 and 69) and the RT-qPCR assay which detects hTERT mRNA were evaluated using 545 ThinPrep® Pap samples of Korea. The rates of positivity for the HPV E6/E7 mRNA RT-qPCR assay were 94.4%, 95.2%, 82.4%, 46.5%, 25.0% and 1.1% in SCC, HSIL, ASC-H, LSIL, ASC-US and normal cytology samples respectively. Five $CIN2^{+}$ samples were not detected by the HPV E6/E7 mRNA assay; however they exhibited positive signals in the hTERT mRNA assay. Notably, the hTERT mRNA expression level was increased in high grade cervical lesions but was very low in all 288 normal samples. These data suggest that the combination of HPV E6/E7 and hTERT mRNA expression levels could be used in a complementary manner in diagnosing high grade cervical lesions and might be useful as a predictive marker in monitoring low grade cervical lesions.

hyelee@yonsei.ac.kr