

## **Identification of proteins secreted into media of cultured oesophageal cancer cell lines**

**Widaad Zemanay**, MI Parker and DT Hendricks

Department of Clinical and Laboratory Sciences, Faculty of Health Sciences, University of Cape Town

Squamous cell oesophageal cancer occurs with a high frequency in South Africa with an ASR for males of 12.6 per 100 000 and an ASR for females of 5.58 per 100 000 [1]. Furthermore, it is one of the most common causes of cancer-related mortality of black males in South Africa. Cancer of the oesophagus is usually diagnosed in the late stage in the progression of the disease resulting in poor prognosis for patients. Currently, the five-year survival rate is less than ten percent [2]. One approach to increase the five-year survival rate includes identifying potential markers to diagnose the disease earlier. We are currently identifying proteins secreted into the media from cultured oesophageal cancer cell lines varying in differentiation status and also immortalised cultured squamous oesophageal cells. Proteins secreted into media after  $^{35}\text{S}$  methionine pulse labelling are separated by conventional 2-D gel electrophoresis. This is followed by visualisation of total protein in media by silver staining and labelled proteins by autoradiography. Protein spots of interest are excised and identified via mass spectrometry. We anticipate that this project will allow the identification of potential markers that could facilitate earlier diagnosis of oesophageal cancer.

### REFERENCES

- 1.Sitas F, Madhoo J, Kellet P and Mqoqi N. Incidence of histologically diagnosed cancer in South Africa, 1996-1997. National Cancer Registry of South Africa, National Health Laboratory Services, Johannesburg, 2003:35.
- 2.Max Parkin D, Pisani P and Ferlay J. Global cancer statistics. CA Cancer Journal Clinical 1999; 49:33-64.