

**P022** Confocal microscopy for the identification of glycosylation changes associated with metastatic colorectal cancer.

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Colorectal cancer development is accompanied by a range of genetic and molecular changes, many of which can be detected at the protein level. The modification of proteins in post-translational events such as glycosylation has also been shown to be associated with tumourigenesis and metastasis. Indeed, many research studies have elegantly shown the relationship between altered glycosylation and metastasis formation. In our study, we used confocal microscopy in conjunction with lectin staining to map the glycosylation pattern of two colorectal cancer cell lines: HT29 and SW480. The two cell lines have previously been described as very invasive and non invasive respectively when implanted into SCID mice. In this way we have been able to compare the glycosylation repertoire of the cells in relation to their ability to form metastases *in vivo*. The HT29 cells showed increased HPA and UEA-1 binding indicating an increase in N-acetylgalactosamine and fucose containing glycoconjugates compared with the SW480 cells. There was no difference in PNA binding in the two cell lines. This study is intended to form the basis for co-localisation studies to identify changes in glycosylation of cell membrane proteins involved in metastasis.