

Mucin 5B, carbonic anhydrase 9 and claudin 18 are potential theranostic markers of gallbladder carcinoma

Espinoza, Jaime A.

Riquelme, Ismael

Sagredo, Eduardo A.

Rosa, Lorena

García, Patricia

Bizama, Carolina

Apud-Bell, María

Leal, Pamela

Weber, Helga

Benavente, Felipe

Vargas, Sergio

Romero, Diego

Kalergis, Alexis M.

Roa, Juan Carlos

Aims: Gallbladder cancer (GBC) is an aggressive tumour that is usually diagnosed at advanced stages and is characterised by a poor prognosis. Using public data of normal human tissues, we found that mRNA and protein levels of mucin 5B (MUC5B) and carbonic anhydrase 9 (CA9) were highly increased in gallbladder tissues. In addition, previous evidence has shown that claudin 18 (CLDN18) protein expression is higher in GBC. The aim of this study was to perform an analysis of these cell surface proteins during the histological progression of GBC in order to identify their theranostic potential. **Methods and results:** MUC5B expression, CA9 expression and CLDN18 expression were examined by immunohistochemistry in a series of 179 chronic cholecystitis (including 16 metaplastic tissues), 15 dysplasia and 217 GBC samples by the use of tissue microarray analysis. A composite staining score was calculated from staining intensity and

percentage of positive cells. Immunohist