

Expression analysis of Wnt-5a in renal epithelial neoplasms: distinguishing renal oncocytoma from a wide spectrum of renal cell carcinomas

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ABSTRACT

Objective. To study the expression of a novel marker, Wnt-5a, in renal epithelial neoplasms and determine its clinicopathological significance.

Methods. Immunohistochemical analysis of Wnt-5a was carried out in normal human kidney samples as well as in 123 primary renal epithelial neoplasms including 37 clear cell renal cell carcinomas (RCCs), 24 papillary RCCs (15 type 1 and 9 type 2), 25 chromophobe RCCs, 11 Xp11 translocation carcinomas, 6 mucinous tubular and spindle cell carcinomas, and 20 oncocytomas.

Results. Wnt-5a was expressed in 18.9% (7/37) of clear cell RCCs, 12.5% (3/24) of papillary RCCs, 16% (4/25) of chromophobe RCCs, 18.2% (2/11) of Xp11 translocation carcinomas, 0% (0/6) of mucinous tubular and spindle cell carcinomas, and 100% (20/20) of oncocytomas. There was a significant difference in Wnt-5a immunohistochemistry between renal oncocytoma and the other subtypes of RCC ($P < 0.01$).

Conclusions. Our results indicate that Wnt-5a is a potentially useful immunohistochemical marker for the complex differential diagnosis between oncocytoma and other subtypes of RCC and also suggest that Wnt-5a may be a tumor suppressor gene in RCC. **Free full text available at www.tumorionline.it**

Key words: Wnt-5a, immunohistochemistry, renal cell carcinoma, differential diagnosis.

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