Stratifying ph mTOR and PD-L1 immunoexpression on carcinomas developing after kidney transplantation: Impact to drug dosage for both immunomodulation and anti-neoplastic therapies

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INTRODUCTION

Stratifying ph mTOR and PD-L1 immunoexpression on carcinomas developing after kidney transplantation may have impact to drug dosage to improve outcomes.

MATERIAL AND METHOD

We recruited carcinoma developing after solid organ transplantation during follow-up.

Paraffin blocks were reviewed and immunohistochemical evaluation was performed by using ph mTOR and PD-L1 (Cell Signaling) commercially available antibodies.

Per cent of neoplastic cells was used to interpret cases with positive findings.

RESULTS

Five de novo renal cell carcinoma arising after organ tranplantation and 5 hepatocarcinomas arising after liver transplantation were revisited (Fig. 1 and 2).

ph mTOR expression ranged from 40% to 100% of neoplastic cells (Fig. 3) in the 6 out of 10 cases with positive expression (60%).

PD-L1 was absent in 5 out of 10 cases. The remaining cases showed expression from 5% to 70% of neoplastis cells.
Fig. 1, 2, 3 and 4.

FIGURES

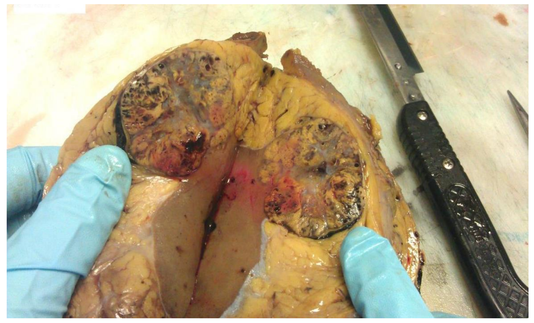


Fig 1. Gross renal tumour

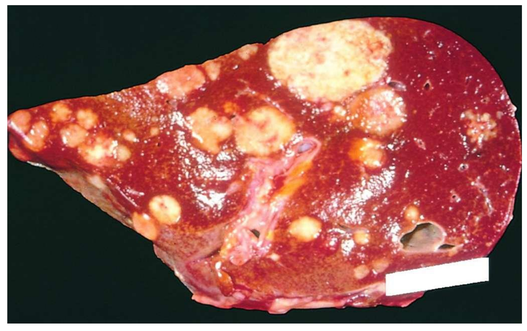


Fig 2. Gross liver tumour

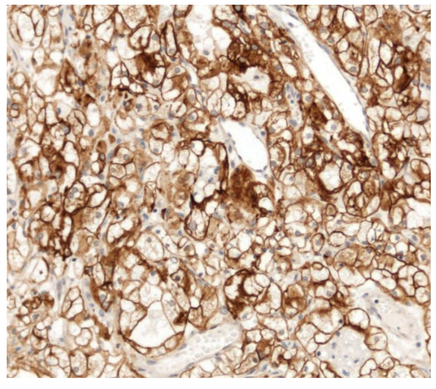


Fig 3. ph mTOR diffuse immunoexpression in a RCC tumour.

The authors have disclosed no conflict of interest

FIGURES

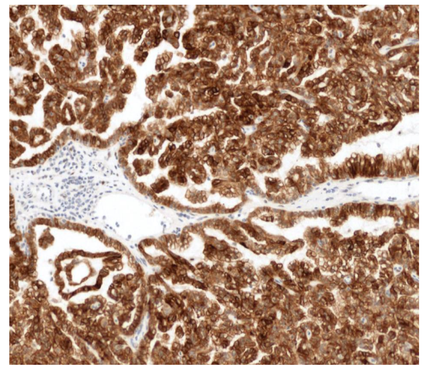
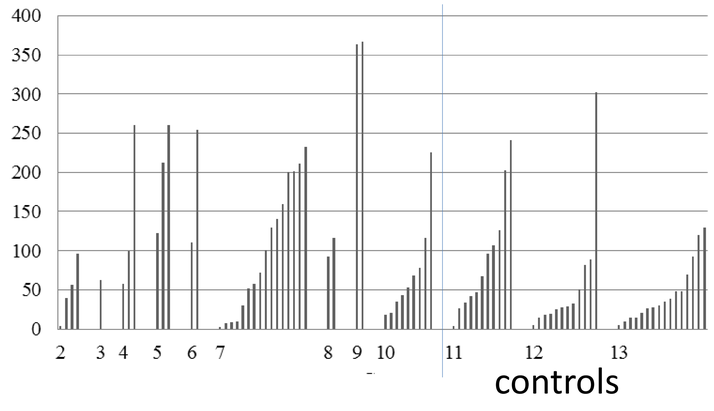


Fig 4. PD-L1 expression in RCC tumour

TABLE

Digital representation of the magnitude of immunostaining



DISCUSSION

Stratifying ph mTOR and PD-L1 expression on carcinomas developing after kidney transplantation is a tissue-based rationale to promote ad hoc drug dosage for both immunomodulation and anti-neoplastic therapies, according to the single magnitude of immunoexpression.