External validation of the novel prognostic Meet-URO score in Metastatic Renal Cell Carcinoma on First Line Immune-combination therapy [IUC20761-50]

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Background

First-line immune-combination therapy based on immune checkpoint inhibitors (ICIs) and tyrosine kinase inhibitors (TKIs) are the new mainstay in metastatic renal cell cancer (mRCC). In this setting, there is a dearth of standard prognostic/predictive parameters to guide treatment choice. The novel prognostic Meet-URO score (IMDC score + bone metastases and neutrophil-to-lymphocyte ratio - NLR) showed a higher prognostic accuracy than IMDC in 306 patients on first-line nivolumab + ipilimumab in the Italian Expanded Access Program (PMID: 36493602). Hence, the necessity to externally validate and expand to other first-line immune-combination settings.
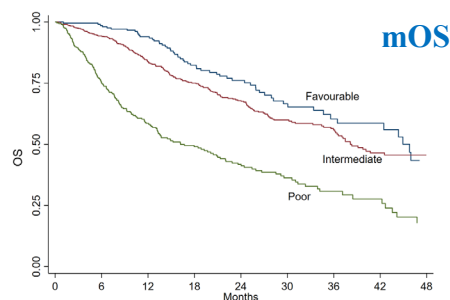
Methods

Twenty-seven European centres were included. Baseline patient and tumour characteristics were collected, including the IMDC score along with the presence of pre-treatment bone metastases, neutrophils, and lymphocytes for calculating the Meet-URO score. The prognostic performance of Meet-URO and IMDC scores were compared and defined by the Harrell's c-index.

Results

1174 mRCC patient data was retrospectively collected. The median age was 64. 72.8% were male, 54.2% received nephrectomy, 62% were metastatic at diagnosis and 86.7% had clear-cell histology. 35% had bone metastases and 51.6% had NLR ≥ 3.2. 672 (57.2%) patients received ICI-ICI (nivolumab + ipilimumab) whereas 502 (42.8%) an ICI-TKI combination, mainly avelumab + axitinib (27.1%) and pembrolizumab + lenvatinib (14.3%).

Overall, median overall survival (mOS) was 36.2 months (95% CI 31.1 – 38.5) with a median follow up of 15.5 months. The c-index of Meet-URO resulted higher than IMDC score (0.68 vs 0.65). In particular, the mOS resulted more distinctive within the Meet-URO prognostic groups: 45.8 months for group 1 (12.9% of patients), 55.0 for group 2 (25.7%), 38.1 for group 3 (23.5%), 20.9 months for group 4 (29.6%) and 10.4 for group 5 (8.2%). On the other hand, mOS was 45.8 months for IMDC favorable-risk (19.5% of patients), 38.2 for intermediate-risk (53.7%) and 16.2 for poor-risk (26.8%).

Conclusion

In this large-scale real-world external validation analysis on mRCC patients receiving first-line immune-combinations, Meet-URO confirmed higher prognostic accuracy compared to IMDC. A further validation is planned in the ongoing Italian prospective Meet-URO 33 (REGAL) study (PMID: 38914928).

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mOS

F- 46
I- 38
P- 16

Favourable
Intermediate
Poor

	0	6	12	18	24	30	36	42	48
F	223	210	172	117	83	54	34	24	12
I	618	541	398	291	213	134	98	55	38
P	309	215	140	96	70	44	26	15	7

IMDC (*c-index* = 0.65)

1- 46
2- 55
3- 38
4- 21
5- 10
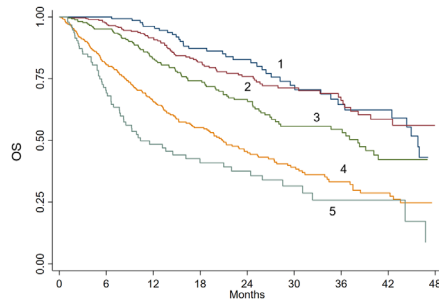
	0	6	12	18	24	30	36	42	48
1	148	143	119	84	63	43	30	21	9
2	295	270	212	154	111	69	47	26	17
3	272	237	171	124	90	54	41	22	17
4	341	255	173	117	81	41	32	22	13
5	94	61	35	25	21	11	8	3	1

Meet-URO (*c-index* = 0.68)