Results: Of the 1,763 patients, 1,552 (88%) were discussed in a MDTM. Performance status (WHO 1-2) and high age (>80 years) were significantly associated with not being discussed (p<0.0001). Of the patients discussed and not discussed, 68% and 28% received treatment with curative intent, respectively. Being discussed in a MDTM was significantly associated with a higher likelihood of undergoing a treatment with curative intent (OR: 3.9, 95% CI 2.5-6.0), as was the presence of a representative of hospital performing cystectomy in a MDTM (OR: 1.64, 95% CI 1.13-2.38). Presence of a representative of an academic center was associated with a higher receipt of chemoradiation (OR: 1.91, 95% CI 1.11-3.30), but not with other treatments with curative intent.

Conclusions: For patients with MIBC, age and performance status were associated with a patient's chance of being discussed in a MDTM. Patients who were discussed in a MDTM were more likely to receive treatment with curative intent, especially when a representative of hospital performing cystectomy was present. Therefore, we recommend to discuss every patient in a well-represented MDTM.

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764P Pre-clinical and clinical studies on the role of RBM3 in muscle-invasive bladder cancer: Longitudinal expression, transcriptome-level effects and modulation of chemosensitivity

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Background: Due to its relapsing and progressive nature, the treatment of patients with muscle invasive bladder carcinoma (MIBC) remains challenging. Neoadjuvant administration of cisplatin-containing chemotherapy (NAC) is recommended before cystectomy to lower the risk of recurrence, but the survival benefits are impaired in up to 50 % of the patients due to chemoresistance and patient fragility. RNA-binding motif protein 3 (RBM3), a RNA- and DNA-binding protein, has emerged as a candidate biomarker of survival and improved chemotherapy response. Herein, the role of RBM3 in MIBC was evaluated in the pre-clinical as well as the clinical setting.

Methods: The immunohistochemical expression of RBM3 was analyzed in tissue microarrays with paired transurethral (TURB) specimens, cystectomy specimens and lymph node metastases from 145 patients, out of whom 65 had received NAC. T24 bladder cancer cell lines were transfected with anti-RBM3 siRNA *in vitro* and the influence on cell viability following chemotherapy was assessed. Next generation RNA sequencing was performed to compare gene expression between T24 cells with siRNA-downregulated RBM3 and control cells.

Results: The expression of RBM3 was consistent between the different types of specimens and a high RBM3 expression correlated with a shorter time to recurrence, independently of NAC. siRNA-mediated suppression of RBM3 rendered the T24 cells less sensitive to chemotherapy *in vitro.* RNA sequencing revealed that RBM3 is linked to processes associated with cell cycle progression and cell division, including up- and downregulation of crucial cell cycle checkpoint proteins. New candidate biomarkers coupled to cellular proliferation were found, e.g. PDS5 cohesion associated factor A (PDS5A) and proline-rich protein 11 (PRR11). Interestingly, similar results were observed for pancreatic cancer cells, suggesting tumor agnostic mechanisms.

Conclusions: These findings highlight RBM3 as a potentially prognostic and predictive biomarker in the primary as well as the metastatic setting of MIBC.

Legal entity responsible for the study: The authors.

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765P Predicting survival in urothelial cancer patients after immunotherapy using real-world data

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Background: Metastatic urothelial cancer patients can be treated with immune checkpoint inhibitors (ICIs) in the first- and second-line settings. Real world data is limited. Although there is a survival benefit with second-line ICIs, only 1 in 5 patients experience a durable response. We conducted a multicentre analysis exploring prognostic clinical parameters and their impact on progression-free (PFS) and overall survival (OS).

Methods: Between March 2017 and February 2020, data for 208 metastatic urothelial patients treated with single-agent pembrolizumab or atezolizumab were collected retrospectively from 5 centres. PFS was defined as the time from the first date of immunotherapy to disease progression or death from any cause. Clinical parameters such as age, gender, performance status, smoking history, presence of visceral or liver metastasis, haemoglobin level(Hb), lymphocyte count, neutrophil count, lactate dehydrogenase levels (LDH) and PDL-1 status were collected. Kaplan—Meier and Cox hazard methods were used for survival analysis.

Results: Out of 208 patients, 26(12.5%) received first-line ICIs. Median PFS and OS were 4.5 (range 3.5- 5.7) and 9.2 (range 7.4-10.5) months, respectively. On univariable analysis for OS, liver metastasis, neutrophil count, neutrophil lymphocyte ratio, haemoglobin, and LDH levels were independent prognostic factors.

Table: 765P

Multivariable analyses for OS using Cox progression hazard model

Variable	Hazard ratio	P-value
Liver metastasis (Yes or No)	3.03(1.92-4.71)	<0.001
Haemoglobin	0.91(0.81-1.00)	0.05
Neutrophil count	2.58(1.19-5.55)	0.01
Lymphocyte count	0.33(0.13-0.76)	0.01

Conclusion: In this large real world data set, we have demonstrated a strong association between OS and known prognostic factors such as liver metastases and Hb level, but interestingly novel factors, neutrophil, and lymphocyte count also. These parameters could be used to create a stratification model, which, if independently validated, could help in selecting patients with urothelial cancer who benefit from ICIs.

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