

ABO blood groups and oncological and functional outcomes in bladder cancer patients treated with radical cystectomy

Alessandro Tafuri ^{1, 2*}, Andrea Panunzio ^{1, 3*}, Antonio Soldano ^{1*}, Giovanni Mazzucato ¹, Paola Irene Ornaghi ¹, Giacomo Di Filippo ⁴, Alessandra Gozzo ¹, Nicola De Maria ¹, Francesco Cianflone ¹, Aliasger Shakir ⁵, Zhe Tian ³, Matteo Brunelli ⁶, Antonio Benito Porcaro ¹, Vincenzo Pagliarulo ², Walter Artibani ¹, Pierre I. Karakiewicz ³, Alessandro Antonelli ¹, Maria Angela Cerruto ¹

¹ Department of Urology, University of Verona, Azienda Ospedaliera Universitaria Integrata di Verona, Verona, Italy;

² Department of Urology, "Vito Fazzi" Hospital, Lecce, Italy;

³ Cancer and Prognostics Health Outcomes Unit, Division of Urology, University of Montreal Health Center, Montreal, Quebec, Canada;

⁴ Department of General and Hepatobiliary Surgery, University of Verona, Azienda Ospedaliera Universitaria Integrata Verona, Verona, Italy;

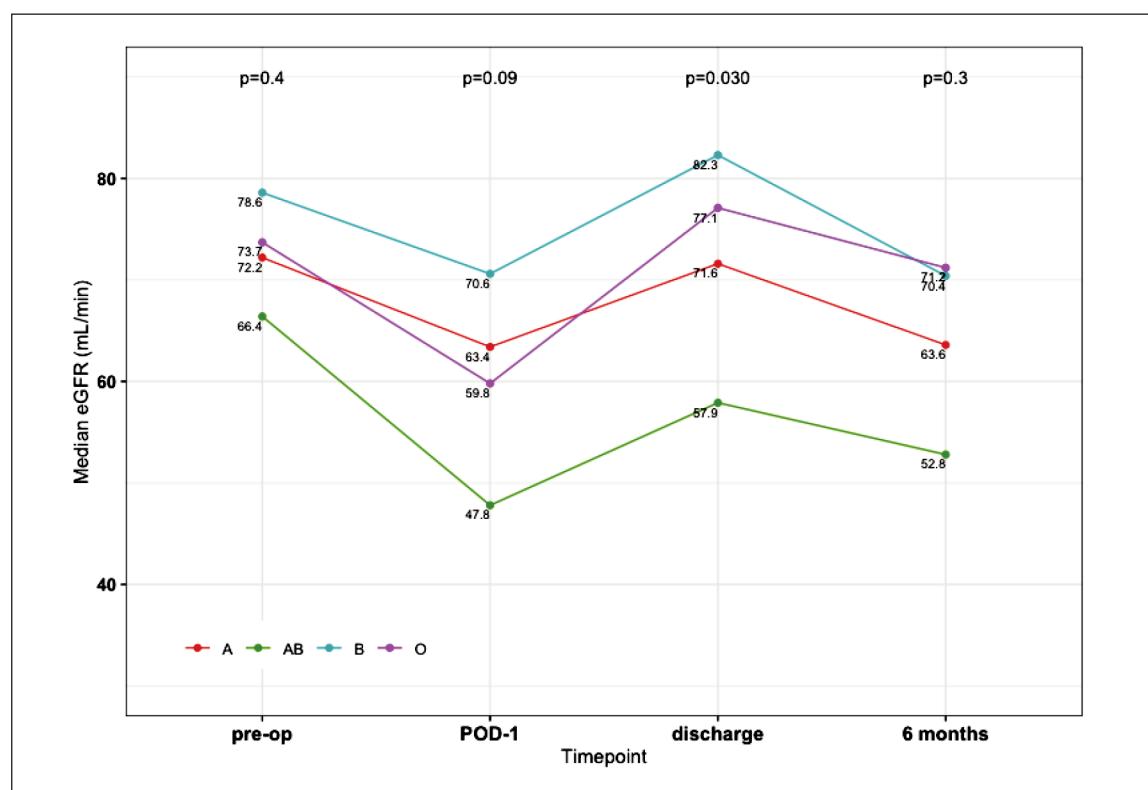
⁵ USC Institute of Urology, Catherine and Joseph Aresty Department of Urology, Keck School of Medicine, University of Southern California (USC), Los Angeles, CA;

⁶ Department of Pathology, University of Verona, Azienda Ospedaliera Universitaria Integrata di Verona, Verona, Italy.

* These Authors contributed equally to the manuscript.

Supplementary Figure 1.

Line plot illustrating median eGFR trend over time (pre-operative vs. post-operative day [POD] 1 vs. discharge vs. 6-months follow up) according to ABO-blood groups system.



Supplementary Table 1.

Univariable and multivariable logistic regression models addressing renal function decline (eGFR < 60 mL/min) at post operative day 1, at discharge and at 6-months follow up, according to ABO-blood groups system.

	UNIVARIABLE		MULTIVARIABLE *	
	Post-operative day 1 eGFR < 60 mL/min			
A vs. 0	OR (95% CI) ¹ 0.79 (0.48, 1.29)	p-value 0.3	OR (95% CI) ¹ 0.59 (0.31, 1.12)	p-value 0.1
B vs. 0	0.46 (0.19, 1.07)	0.08	0.44 (0.14, 1.32)	0.2
AB vs. 0	2.71 (0.97, 8.80)	0.07	2.89 (0.80, 11.64)	0.1
	Discharge eGFR < 60 mL/min			
A vs. 0	OR (95% CI) ¹ 1.30 (0.75, 2.27)	p-value 0.4	OR (95% CI) ¹ 1.26 (0.60, 2.70)	p-value 0.5
B vs. 0	0.63 (0.20, 1.69)	0.4	0.70 (0.16, 2.69)	0.6
AB vs. 0	3.27 (1.16, 9.42)	0.025	4.28 (1.04, 18.65)	0.047
	6 months eGFR < 60 mL/min			
A vs. 0	OR (95% CI) ¹ 1.02 (0.48, 2.13)	p-value 0.9	OR (95% CI) ¹ 0.86 (0.28, 2.54)	p-value 0.8
B vs. 0	0.50 (0.13, 1.63)	0.3	0.71 (0.12, 3.68)	0.7
AB vs. 0	2.25 (0.58, 9.61)	0.2	1.69 (0.28, 11.56)	0.6

¹ OR = Odds Ratio; CI = Confidence Interval.

* Models adjusted for age, Charlson Comorbidity Index, pre-operative eGFR, urinary derivation type, post-operative complications.