

Supplementary file 1

MOOSE Checklist

The prognostic value of pretreatment plasma fibrinogen in urological cancers: a systematic review and meta-analysis

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Criteria	Brief description of how the criteria were handled in the meta-analysis
Reporting of background should include	
√ Problem definition	Growing evidence suggests pretreatment fibrinogen can serve as a prognostic marker in various malignancies. However, the prognostic role of plasma fibrinogen in urological cancers remains to be evaluated quantitatively because of the contradictory results from different studies.
√ Hypothesis statement	Elevated pretreatment plasma fibrinogen can predict worse survival outcomes in urological cancers.
√ Description of study outcomes	overall survival and cancer-specific survival
√ Type of exposure or intervention used	Pretreatment plasma fibrinogen
√ Type of study designs used	Cohort studies
√ Study population	No restriction.
Reporting of search strategy should include	
√ Qualifications of searchers	The two investigators Haifeng Song and Guanyu Kuang are trained in systematic methods of literature searching during their doctor's studies.
√ Search strategy, including time	The detailed search strategy is shown in the supplement.

	period included in the synthesis and keywords	
√	Databases and registries searched	PubMed and EMBASE
√	Search software used, name and version, including special features	We did not employ a search software. EndNote was used to merge retrieved citations and eliminate duplications
√	Use of hand searching	We hand-searched bibliographies of retrieved papers for additional references,
√	List of citations located and those excluded, including justifications	Details of the literature search process are outlined in the flow chart. The citation list is available upon request
√	Method of addressing articles published in languages other than English	We only searched for papers in English.
√	Method of handling abstracts and unpublished studies	We included proceedings papers and assessed them for eligibility according to our inclusion and exclusion criteria.
√	Description of any contact with authors	All data we need was available in the full-text original article, so the authors were not contacted.
Reporting of methods should include		
√	Description of relevance or appropriateness of studies assembled for assessing the hypothesis to be tested	Detailed inclusion and exclusion criteria were described in the methods section.
√	Rationale for the selection and coding of data	Two reviewers independently extracted data from all eligible studies using a predesigned data-abstraction sheet. Data extracted from studies included the name of the first author, year of publication, country, tumor site, sample size, age, gender, cut-off value, follow-up duration, outcome measures (OS, CSS, HRs, 95%CI) and survival analysis (univariate/multivariate)
√	Assessment of confounding	Not applicable
√	Assessment of study quality, including blinding of quality assessors; stratification or regression on possible predictors of study results	The quality of studies was assessed according to the "Newcastle-Ottawa Scale (NOS)" for cohort studies. Studies with more than 5 stars were deemed as being of good quality. Quality assessment were applied independently by two investigators (Haifeng Song and Guanyu Kuang), disagreements were solved by the intervention of a third reviewer (Zhenan Zhang) and the discussion in the group.
√	Assessment of heterogeneity	Cochran's Q-test and Higgins I^2 statistics(I^2) were carried out to evaluate the heterogeneity of included studies. Statistical heterogeneity was considered to be existed if $I^2 > 50\%$ or $P < 0.05$.
√	Description of statistical methods in sufficient detail to be replicated	Description of methods of meta-analyses, subgroup analyses and assessment of publication bias are detailed in the methods.

√	Provision of appropriate tables and graphics	We included 1 flow chart, 1 summary table, 2 forest plot of all studies, 4 forest plot of subgroup analyses, 2 figures of publication bias.
Reporting of results should include		
√	Graph summarizing individual study estimates and overall estimate	Figure 2.A and Figure 3.A
√	Table giving descriptive information for each study included	Table 1
√	Results of sensitivity testing	A study using univariate analysis for the calculation of HR was excluded and the final result of meta-analysis had no significant difference. Subgroup analyses by race and cancer type were also performed.
√	Indication of statistical uncertainty of findings	95% confidence intervals were presented with all summary estimates
Reporting of discussion should include		
√	Quantitative assessment of bias	No significant publication bias was observed when assessed using Begg's and Egger's tests
√	Justification for exclusion	Papers were excluded on the basis of exclusion criteria listed. We did not systematically exclude any studies on the basis of language or study population size
√	Assessment of quality of included studies	Our study was referring to 14 eligible studies of good quality assessed by NOS score system.
Reporting of conclusions should include		
√	Consideration of alternative explanations for observed results	Fibrinogen can be endogenously synthesized and secreted by cancer cells. It can also regulate the proliferation and angiogenesis of cancer cells and facilitate tumor metastasis.
√	Generalization of the conclusions	High level of pretreatment plasma fibrinogen can predict worse overall survival and cancer-specific survival in patients with urological cancers.
√	Guidelines for future research	More clinical studies are needed to further prove this relationship.
√	Disclosure of funding source	None

Supplementary file 2

Search Strategy

Pubmed

#1 (((((((((((((((((((Kidney Neoplasms[MeSH Terms]) OR Carcinoma, Renal Cell[MeSH Terms]) OR Kidney Neoplasm) OR Neoplasm, Kidney) OR Neoplasm, Renal) OR Renal Neoplasm) OR Cancer of Kidney) OR Renal Cancer) OR Cancer, Renal) OR Cancer of the Kidney) OR Kidney Cancer) OR Cancer, Kidney) OR Carcinoma, Renal Cell) OR Renal Cell Carcinoma) OR Renal Cell Carcinoma, Papillary) OR Renal Cell Cancer) OR Cancer, Renal Cell) OR Clear Cell Renal Cell Carcinoma) OR kidney carcinoma) OR renal carcinoma)

#2 (((((((Carcinoma, Transitional Cell[MeSH Terms]) OR ((urothelial carcinoma) AND ((upper tract) OR (upper urinary tract)))) OR ((transitional cell carcinoma) AND ((upper tract) OR (upper urinary tract)))) OR ureteral cancer) OR ureter cancer) OR ureter carcinoma) OR ureteral carcinoma) OR ureteral neoplasm) OR Ureteral Neoplasms[MeSH Terms]

#3 ((((((Urinary Bladder Neoplasms[MeSH Terms]) OR bladder cancer) OR bladder tumor) OR bladder carcinoma) OR carcinoma of bladder) OR bladder carcinoma) OR cancer of bladder

#4 (((((((Prostatic Neoplasms[MeSH Terms]) OR prostate cancer) OR prostate tumor) OR prostate carcinoma) OR prostate neoplasm) OR prostatic cancer) OR prostatic carcinoma) OR cancer of prostate) OR carcinoma of prostate

#5 ((((((Urogenital Neoplasms[MeSH Terms]) OR Urologic Neoplasms[MeSH Terms]) OR urologic cancer) OR urological cancer) OR urogenital cancer) OR urologic carcinoma) OR urogenital carcinoma

#6 = #1 OR #2 OR #3 OR #4 OR #5 (((((((((((((((((((Kidney Neoplasms[MeSH Terms]) OR Carcinoma, Renal Cell[MeSH Terms]) OR Kidney Neoplasm) OR Neoplasm, Kidney) OR Neoplasm, Renal) OR Renal Neoplasm) OR Cancer of Kidney) OR Renal Cancer) OR Cancer, Renal) OR Cancer of the Kidney) OR Kidney Cancer) OR Cancer, Kidney) OR Carcinoma, Renal Cell) OR Renal Cell Carcinoma) OR Renal Cell Carcinoma, Papillary) OR Renal Cell Cancer) OR Cancer, Renal Cell) OR Clear Cell Renal Cell Carcinoma) OR kidney carcinoma) OR renal carcinoma))) OR (((((((Carcinoma, Transitional Cell[MeSH Terms]) OR ((urothelial carcinoma) AND ((upper tract) OR (upper urinary tract)))) OR ((transitional cell carcinoma) AND ((upper tract) OR (upper urinary tract)))) OR ureteral cancer) OR ureter cancer) OR ureter carcinoma) OR ureteral carcinoma) OR ureteral neoplasm) OR Ureteral Neoplasms[MeSH Terms])) OR ((((((Urinary Bladder Neoplasms[MeSH Terms]) OR bladder cancer) OR bladder tumor) OR bladder carcinoma) OR carcinoma of bladder) OR bladder carcinoma) OR cancer of bladder)) OR (((((((Prostatic Neoplasms[MeSH Terms]) OR prostate cancer) OR prostate tumor) OR prostate carcinoma) OR prostate neoplasm) OR prostatic cancer) OR prostatic carcinoma) OR cancer of prostate) OR carcinoma of prostate))) OR ((((((Urogenital Neoplasms[MeSH Terms]) OR Urologic Neoplasms[MeSH Terms]) OR urologic cancer) OR urological cancer) OR urogenital cancer) OR urologic carcinoma) OR urogenital carcinoma)

#7 fibrinogen

#8 = #6 AND #7 (((((((((((((((((((((((Kidney Neoplasms[MeSH Terms]) OR Carcinoma, Renal Cell[MeSH Terms]) OR Kidney Neoplasm) OR Neoplasm, Kidney) OR Neoplasm, Renal) OR Renal Neoplasm) OR Cancer of Kidney) OR Renal Cancer) OR Cancer, Renal) OR Cancer of the Kidney) OR Kidney Cancer) OR Cancer, Kidney) OR Carcinoma, Renal Cell) OR Renal Cell Carcinoma) OR Renal Cell Carcinoma, Papillary) OR Renal Cell Cancer) OR Cancer, Renal Cell) OR Clear Cell Renal Cell Carcinoma) OR kidney carcinoma) OR renal carcinoma))) OR (((((((Carcinoma, Transitional Cell[MeSH Terms]) OR ((urothelial carcinoma) AND ((upper tract) OR (upper urinary tract)))) OR ((transitional cell carcinoma) AND ((upper tract) OR (upper urinary tract)))) OR ureteral cancer) OR ureter cancer) OR ureter carcinoma) OR ureteral carcinoma) OR ureteral neoplasm) OR Ureteral Neoplasms[MeSH Terms])) OR (((((((Urinary Bladder Neoplasms[MeSH Terms]) OR bladder cancer) OR bladder tumor) OR bladder carcinoma) OR carcinoma of bladder) OR bladder carcinoma) OR cancer of bladder)) OR (((((((Prostatic Neoplasms[MeSH Terms]) OR prostate cancer) OR prostate tumor) OR prostate carcinoma) OR prostate neoplasm) OR prostatic cancer) OR prostatic carcinoma) OR cancer of prostate) OR carcinoma of prostate))) OR (((((((Urogenital Neoplasms[MeSH Terms]) OR Urologic Neoplasms[MeSH Terms]) OR urologic cancer) OR urological cancer) OR urogenital cancer) OR urologic carcinoma) OR urogenital carcinoma) AND (fibrinogen)

Filter: Human;

Embase

#1 'kidney cancer'/exp OR 'kidney carcinoma'/exp OR 'renal cancer' OR 'renal cell carcinoma' OR 'renal carcinoma'
#2 'ureter tumor'/exp OR 'ureter cancer'/exp OR 'ureteral cancer' OR 'ureter cancer' OR 'ureter carcinoma' OR 'ureteral carcinoma' OR 'ureter tumor' OR ('urothelial carcinoma' OR 'transitional cell carcinoma' AND ('upper tract' OR 'upper urinary tract'))
#3 'bladder cancer'/exp OR 'bladder cancer' OR 'bladder carcinoma' OR 'bladder tumor'
#4 'prostate cancer'/exp OR 'prostate carcinoma'/exp OR 'prostate cancer' OR 'prostate tumor'
#5 'urologic' OR 'urological' OR 'urinary' OR 'urogenital' AND ('neoplasm'/exp OR 'carcinoma'/exp OR 'cancer' OR 'carcinoma' OR 'tumor') OR 'urinary tract cancer'/exp
#6 'fibrinogen'/exp

#7 = #6 AND (#1 OR #2 OR #3 OR #4 OR #5) 'fibrinogen'/exp AND ('kidney cancer'/exp OR 'kidney carcinoma'/exp OR 'renal cancer' OR 'renal cell carcinoma' OR 'renal carcinoma' OR 'ureter tumor'/exp OR 'ureter cancer'/exp OR 'ureteral cancer' OR 'ureter cancer' OR 'ureter carcinoma' OR 'ureteral carcinoma' OR 'ureter tumor' OR ('urothelial carcinoma' OR 'transitional cell carcinoma' AND ('upper tract' OR 'upper urinary tract')) OR 'bladder cancer'/exp OR 'bladder cancer' OR 'bladder carcinoma' OR 'bladder tumor' OR 'prostate cancer'/exp OR 'prostate carcinoma'/exp OR 'prostate cancer' OR 'prostate tumor' OR ('urologic' OR 'urological' OR 'urinary' OR 'urogenital' AND ('neoplasm'/exp OR 'carcinoma'/exp OR 'cancer' OR 'carcinoma' OR 'tumor')) OR 'urinary tract cancer'/exp) AND [humans]/lim AND [embase]/lim