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REVIEW - SUPPLEMENTARY MATERIAL

Diagnostic accuracy of MRI and PSMA PET/CT for detection of histologically confirmed lymph node metastasis in prostate cancer: A systematic review

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Supplementary Table S1.
Full-text articles excluded after eligibility assessment.

Study	Year	Study type	Reason for exclusion
Evangelista et al.[26]	2021	Systematic review and meta-analysis	Not an original diagnostic accuracy study; no independent patient cohort; risk of double-counting patients.
Li et al.[27]	2024	Radiomics prediction study	Evaluated MRI-based predictive modelling rather than diagnostic accuracy of MRI or PSMA PET; no extractable TP/FP/FN/TN data.
Chikatamarla et al.[29]	2021	Retrospective cohort	Used ^18F-PSMA-1007 PET/CT as the reference standard rather than histopathology; diagnostic accuracy could not be assessed.
Barbosa et al.[30]	2022	Retrospective cohort	Histopathology not available for all patients; mixed reference standard and insufficient data to reconstruct TP/FP/FN/TN.
Lin et al.[31]	2024	Narrative review	Review article; no original patient data.

Studies were excluded if they lacked histopathological confirmation of lymph node status, did not provide sufficient data to derive TP, FP, FN and TN values, evaluated predictive models rather than imaging diagnostic accuracy, or were review articles without original patient-level data.

Supplementary Table S2.
Search strategy.

Data base	Database-specific search strings
Cochrane Library	((Prostate neoplasm OR prostate cancer) AND (prostate specific membrane antigen PET scan OR 68Ga-PSMA OR 18F-PSMA OR 18F-DCFPyL OR 18F-PSMA-1007) AND (lymph node metastasis OR pelvic lymph node OR nodal staging) AND (magnetic resonance imaging OR mpMRI OR multiparametric MRI))
Pubmed/Medline	((prostate neoplasm or prostate cancer) AND (nodal metastasis or lymph node metastasis)) AND (PET scan OR PSMA PET OR PSMA PET/CT OR 68Ga-PSMA OR 18F-PSMA OR 18F-DCFPyL OR 18F-PSMA-1007) ((prostate cancer or prostate neoplasm) AND (nodal metastasis or lymph node metastasis)) AND (Magnetic Resonance Imaging"[Mesh] OR multiparametric MRI OR mpMRI))
Embase	((prostate neoplasm or prostate cancer) and ('psma pet or 68ga psma or '18f psma' or '18f dcfpyl' or '18f psma 1007') and ('magnetic resonance imaging' exp or mpMRI or multiparametric MRI) nd ('lymph node metastasis' exp or pelvic lymph node or nodal staging)).af.

Supplementary Table S3.
PRISMA checklist.

Section and topic	Item	PRISMA 2020 checklist item	Location in manuscript	Status
TITLE	1	Identify the report as a systematic review.	Title (Page 1)	Met
ABSTRACT	2	See PRISMA 2020 for Abstracts checklist.	Abstract (Pages 1-2)	Met
INTRODUCTION	3	Describe the rationale for the review in the context of existing knowledge.	Introduction (Pages 2-3)	Met
	4	Provide an explicit statement of the objectives or questions addressed.	End of Introduction (Page 3)	Met
METHODS	5	Specify the inclusion and exclusion criteria and how studies were grouped.	Eligibility Criteria (Pages 3-4)	Met
	6	Specify all information sources and the date last searched.	Literature Search Strategy (Page 4-5)	Met
	7	Present the complete search strategies for all databases, including filters and limits used.	Supplementary Tables S2-S4- referenced on page 5	Met
	8	Specify the selection process, reviewers, independence, and software used.	Study Selection (Page 5)	Met
	9	Specify data collection methods and reviewers involved.	Data Extraction (Pages 5-6)	Met
	10a	List and define all outcomes for which data were sought.	Outcomes (Page 4)	Met
	10b	List and define all other variables collected.	Data Extraction (Pages 5-6)	Met
	11	Specify methods used to assess risk of bias.	QUADAS-2 Assessment (Pages 7-8)	Met
	12	Specify effect measures used for each outcome.	Statistical Analysis (Pages 7-9)	Met
	13a	Describe how studies were selected for each synthesis.	Eligibility Criteria and Statistical Analysis (pages 3-9)	Met
	13b	Describe methods used to prepare data for synthesis.	Data Extraction (Page 6)	Met
	13c	Describe methods used to tabulate and display results.	Tables 1-4; Figures 1-5 (Pages 10-20)	Met
	13d	Describe synthesis methods and statistical models.	Statistical Analysis (Pages 7-9)	Met
	13e	Describe methods used to explore heterogeneity.	Subgroup Analysis (Page 8)	Met
	13f	Describe sensitivity analyses.	Not performed	sensitivity analyses were not performed because of the limited number of studies.
	14	Describe methods used to assess reporting bias.	Assessment of Publication Bias (Page 9)	Met
	15	Describe methods used to assess certainty of evidence.	Not applicable	GRADE was not performed
RESULTS	16a	Describe the search and selection process using a flow diagram.	Results; Figure 1 (pages 9-10)	Met
	16b	Cite excluded studies and reasons for exclusion.	Figure 1(pages 10)	Met
	17	Present characteristics of included studies.	Table 1 (pages 11-12)	Met
	18	Present risk-of-bias assessments for each study.	Figures 4-5 (pages 17-19)	Met
	19	Present results of individual studies.	Tables 2-4	Met
	20a	Summarise characteristics and risk of bias among contributing studies.	Results (Pages 12-17)	Met
	20b	Present summary estimates, confidence intervals, and heterogeneity.	Results (Pages 12-17)	Met
	20c	Present investigations of heterogeneity.	Subgroup Analysis (Page 16-17)	Met
	20d	Present sensitivity analyses.	Not performed	Not applicable
	21	Present assessment of reporting bias.	Publication Bias (Page 9)	Met
	22	Present certainty of evidence.	Not performed	GRADE not performed
DISCUSSION	23a	Interpret results in the context of existing evidence.	Discussion (pages 20-23)	Met
	23b	Discuss limitations of included evidence.	Discussion (page 23-24)	Met
	23c	Discuss limitations of the review process.	Discussion (pages 24)	Met
	23d	Discuss implications for practice and future research.	Discussion and Conclusion (pages 24)	Met
OTHER INFORMATION	24a	Provide registration information.	PROSPERO (Page 3)	Met
	24b	Indicate where the protocol can be accessed.	Pages 30	Met
	24c	Describe amendments to the protocol.	Pages 30	No amendments were made after registration.
	25	Describe funding sources and role of funders.	Page 29	Met
	26	Declare competing interests.	Page 30	Met
	27	Report availability of data, code, and other materials.	Page 29	Met