Supplementary Table S1 Search Strategies and Evidence Table Selection

Scope. Structured narrative review of urinary extracellular vesicle-associated miRNAs, lncRNAs and circRNAs in bladder cancer, with NMIBC surveillance as the principal clinical focus. Searches covered database inception to 17 July 2026. Targeted guideline and bibliographic checks were performed during revision.

Database	Complete reproducible search strategy	Limits
PubMed/MEDLINE	(("Urinary Bladder Neoplasms"[MeSH Terms] OR "bladder cancer"[Title/Abstract] OR "urothelial carcinoma"[Title/Abstract] OR NMIBC[Title/Abstract]) AND ("Extracellular Vesicles"[MeSH Terms] OR "extracellular vesicle"[Title/Abstract] OR "extracellular vesicles"[Title/Abstract] OR exosome*[Title/Abstract]) AND (microRNA*[Title/Abstract] OR miRNA*[Title/Abstract] OR "long non-coding RNA"[Title/Abstract] OR "long noncoding RNA"[Title/Abstract] OR lncRNA*[Title/Abstract] OR "circular RNA"[Title/Abstract] OR circRNA*[Title/Abstract] OR "non-coding RNA"[Title/Abstract] OR "noncoding RNA"[Title/Abstract] OR "extracellular RNA"[Title/Abstract]) AND (urine[Title/Abstract] OR urinary[Title/Abstract]))	Inception to 17 July 2026; no language filter at search stage
Web of Science Core Collection	TS=(("bladder cancer" OR "urothelial carcinoma" OR NMIBC) AND ("extracellular vesicle*" OR exosome*) AND (microRNA* OR miRNA* OR "long non-coding RNA" OR "long noncoding RNA" OR lncRNA* OR "circular RNA" OR circRNA* OR "non-coding RNA" OR "noncoding RNA" OR "extracellular RNA") AND (urine OR urinary))	Inception to 17 July 2026; all document types screened; no language filter at search stage
Targeted searches	Core concepts were combined with: surveillance; recurrence; progression; BCG; cytology; Cxbladder; Xpert Bladder Cancer Monitor; Bladder EpiCheck; MISEV; EV-TRACK; normalization; QUADAS-2; STARD; REMARK; TRIPOD; PROBAST; microfluidic; artificial intelligence; machine learning.	Used to identify methodological standards, comparator studies and original articles missed by the core syntax

Study Selection for Tables 3 and 4

- Primary human study measuring miRNA, lncRNA or circRNA in a urinary EV, exosome-labeled or EV-enriched fraction.
- Sufficient cohort and endpoint information to classify intended-use applicability and validation maturity.
- Priority to NMIBC-specific data, multistage validation, longitudinal follow-up, clinically relevant controls or direct surveillance relevance.
- Mechanistic, non-urinary or non-ncRNA evidence included only when explicitly labeled supportive or contextual.
- Validation labels: internal validation = resampling/split from the same source cohort; independent within-setting validation = new participants from the same clinical environment; external validation = locked model tested in a genuinely different institution or health system; prospective utility = management guided by the test with outcomes measured.

Narrative Review Boundary

The review was not prospectively registered and did not use formal dual-reviewer screening of every retrieved record, a PRISMA flow diagram, pooled analysis or a numerical risk-of-bias score. Database exports were deduplicated by DOI, PMID and title. Contemporaneous record-level screening counts were not retained; they are not reconstructed retrospectively because doing so would imply a systematic-review workflow that was not performed.