Supplementary Table S1 PubMed search strategy and stepwise query combinations (January 2020 – September 2025).

Search number	Query	Sort By	Filters	Results
1	donor-derived cell-free DNA			506
2	donor derived cfDNA			449
3	dd-cfDNA			291
4	cell-free DNA			65,573
5	(((#1) OR (#2)) OR (#3)) OR (#4)			65,584
6	kidney transplantation			163,429
7	renal transplant			193,024
8	(#6) OR (#7)			193,024
9	acute rejection			32,792
10	allograft rejection			45,305
11	(#9) OR (#10)			63,373
12	diagnostic			12,614,026
13	diagnostic performance			2,236,525
14	prognostic			495,455
15	predict*			2,637,869
16	outcome			3,942,450
17	((((#12) OR (#13)) OR (#14)) OR (#15)) OR (#16)			15,456,054
18	(((#5) AND (#8)) AND (#11)) AND (#17)			206
19	(((#5) AND (#8)) AND (#11)) AND (#17)		from 2020/01/01-2025/09/30	166