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Supplementary appendix

This appendix formed part of the original submission and has been peer reviewed.
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Supplement to: Di Tanna GL, Khaki AR, Theron G, et al. Effect of Xpert MTB/RIF on clinical outcomes in routine care settings: individual patient data meta-analysis. *Lancet Glob Health* 2019; **7**: e191–99.

Appendix

Figure S1. Risk of bias assessment

	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding of participants and personnel (performance bias)	Blinding of outcome assessment (detection bias)	Incomplete outcome data (attrition bias)	Selective reporting (reporting bias)	Other bias
Cox et al.	+	-	-	+	?	-	+
Durovni et al, Trajman et al.	+	-	-	+	+	-	+
Mupfumi et al	+	+	-	+	+	+	+
TB-NEAT	+	+	-	+	+	+	+
XTEND	+	+	-	+	+	+	+

Table S1. Sensitivity analyses employing random effects and additional covariate adjustment

Adults investigated for TB	Studies*	Number of adults	OR/HR	95% CI		p (test of effect)	I ²	p (test of homogeneity)
6-month mortality risk [†]								
HIV-positive	[15, 17, 18]	4,066	0.83	0.64	1.08	0.24	14.8%	0.31
Time to death								
Overall, adjusted for age, gender, weight, TB symptoms	[15, 16, 18]	6,568	0.84	0.65	1.09	0.20	0.00%	0.41
HIV-positive, adjusted for age, gender, weight, TB symptoms	[15, 16, 18]	3,511	0.73	0.56	0.96	0.02	0.00%	0.64
Time to TB diagnosis								
Overall	[15, 16]	1,924	0.992	0.763	1.290	0.953	47.50%	0.167
HIV-positive	[15, 16]	1,317	0.977	0.790	1.208	0.827	25.20%	0.248
3-month mortality risk								
Overall, adjusted for age, gender, weight, TB symptoms [§]	[15, 16, 18]	6, 225	0.90	0.66	1.21	0.50	9.3%	0.33
Overall, adjusted for age, gender, weight, TB symptoms	[15, 16, 18]	6, 225	0.89	0.64	1.23	0.46	9.3%	0.33
Time to TB treatment								
Overall, adjusted for age, gender, weight, TB symptoms [§]	[15, 16, 18]	6,287	0.90	0.78	1.02	0.10	58.10%	0.09
Overall, adjusted for age, gender, weight, TB symptoms	[15, 16, 18]	6,287	0.89	0.71	1.12	0.32	58.10%	0.09
Adults initiated on TB treatment	Studies*	Number of adults	OR/HR	95% CI		p (test of effect)	I²	p (test of homogeneity)
Time to death								

HIV-positive	[15, 16, 17, 18, 19]	1,445	0.85	0.52	1.39	0.46	18.00%	0.30
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All estimates are adjusted for age and gender (unless additional covariates noted), and were combined using random effects regardless of heterogeneity (I^2) estimate (unless fixed effects are noted).

* References refer to the primary studies: [15] TB-NEAT; [16] Mupfumi et al.; [17] Cox et al.; [18] XTEND; [19] Durovni et al

† 6-month mortality risk was the primary outcome.

§ Analysed using fixed effects.

Definition of Abbreviations: OR, odds ratio; HR, hazard ratio; CI, confidence interval.

Table S2. Sensitivity analyses using the one-stage approach

Adults investigated for TB	Studies*	Number of adults	OR/HR	95% CI		p (test of effect)
6-month mortality risk †						
Overall	[15, 17, 18]	8,142	0.89	0.70	1.13	0.34
HIV negative	[15, 17, 18]	2,538	0.80	0.47	1.35	0.40
HIV positive	[15, 17, 18]	4,066	0.83	0.63	1.1	0.2
Time to Death						
Overall	[15, 16, 17, 18]	8,561	0.86	0.68	1.09	0.22
Overall, adjusted for age, gender, weight, TB symptoms	[15, 16, 18]	6,568	0.86	0.661	1.11	0.24
HIV negative	[15, 17, 18]	2,583	0.80	0.48	1.35	0.41
HIV positive	[15, 16, 17, 18]	4,486	0.81	0.63	1.05	0.11
HIV positive, adjusted for age, gender, weight, TB symptoms	[15, 16, 18]	3,511	0.76	0.57	1.01	0.06
No history of prior TB	[15, 16, 17, 18]	6,887	0.90	0.69	1.16	0.40
History of prior TB	[15, 16, 17, 18]	1,674	0.75	0.47	1.20	0.06
3-month mortality risk						
Overall	[15, 16, 17, 18]	8,566	0.92	0.71	1.20	0.53
Overall, adjusted for age, gender, weight, TB symptoms	[15, 16, 18]	6,572	0.90	0.68	1.19	0.46
HIV negative	[15, 17, 18]	2,583	0.76	0.43	1.35	0.35
HIV positive	[15, 16, 17, 18]	4,490	0.87	0.65	1.16	0.33
No history of prior TB	[15, 16, 17, 18]	6,891	1.02	0.77	1.37	0.88
History of prior TB	[15, 16, 17, 18]	1,675	0.59	0.34	1.02	0.06
Time to TB diagnosis						
Overall	[15, 16]	1,924	1.03	0.87	1.22	0.73

HIV positive	[15, 16]	1,317	0.98	0.80	1.20	0.87
Time to TB treatment						
Overall	[15, 16, 17, 18]	8,208	1.04	0.91	1.17	0.60
Overall, adjusted for age, gender, weight, TB symptoms	[15, 16, 18]	6,287	0.84	0.70	0.99	0.04
HIV negative	[15, 17, 18]	2,482	0.86	0.67	1.09	0.21
HIV positive	[15, 16, 17, 18]	4,251	1.07	0.92	1.25	0.39
No history of prior TB	[15, 16, 17, 18]	6,666	0.86	0.71	1.03	0.10
History of prior TB	[15, 16, 17, 18]	1,542	0.79	0.53	1.16	0.22

All pooled estimates are adjusted for age and gender, and are reported using a one-stage analytic approach.

* References refer to the primary studies: [15] TB-NEAT; [16] Mupfumi et al.; [17] Cox et al.; [18] XTEND; [19] Durovni et al

† 6-month mortality risk was the primary outcome.

Definition of Abbreviations: OR, odds ratio; HR, hazard ratio; CI, confidence interval.

Table S3. Summary of the trials contributing to the primary and secondary outcomes

	Theron et al. (TB-NEAT) ¹⁵	Mupfumi et al. ¹⁶ *	Cox et al. ¹⁷	Churchyard et al. (XTEND) ¹⁸	Durovni et al., Trajman et al. ^{19,22}
Adults investigated for TB					
6-month mortality risk	X		X	X	
Time to death	X	X	X	X	
3-month mortality risk	X	X	X	X	
Time to TB diagnosis	X	X			
Time to starting TB treatment	X	X	X	X	
Adults initiated on TB treatment					
Time to death	X	X	X	X	X

* Contributed HIV-positive adults only.

