Supplementary material to *'High rates of mortality during drug-resistant tuberculosis treatment among individuals with diabetes mellitus and low body mass index'*

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S1. Definitions of drug resistance

In January 2021, a WHO meeting report was published with an updated classification of drug-resistant TB, which disregard the injectable agents because their role in treatment of drug-resistant TB diminished (in our cohort the last treatment regimen including an injectable was received on 10 November 2020*)* (Supplementary Table S1) [1]. This classification changed the criteria for pre-XDR and XDR during our study period, as the new definitions had to be applied from January 2021 (Supplementary Table S2).

Supplementary Table S1. WHO drug-resistant classifications

	2006 classification	**Updated-2021 classification**
Pre-XDR	Resistance to any fluoroquinolone, or one of three second-line injectable drugs (capreomycin, kanamycin and amikacin), in addition to multidrug resistance.	Multidrug resistant and rifampicin-resistant TB (MDR/RR-TB) and which are also resistant to any fluoroquinolone.
XDR	Resistance to any fluoroquinolone, and at least one of three second-line injectable drugs (capreomycin, kanamycin and amikacin), in addition to multidrug resistance.	MDR/RR-TB and which are also resistant to any fluoroquinolone and at least one additional Group A drug (levofloxacin, moxifloxacin, bedaquiline and linezolid).

In this cohort, pDST results available in >50% of individuals were used for classification of drug resistance profiles. These were low-level isoniazid (0.1 µg/ml) (57.7%); high-level isoniazid (0.4 µg/ml) (79.7%); low-level moxifloxacin (0.25 µg/ml) (58.0%); high-level moxifloxacin (1.0 µg/ml) (80.0%); ofloxacin (56.8%); capreomycin (51.0%); kanamycin (57.4%).

If ≥1 of the pDST results necessary for classification was missing (in 106/346 individuals), it was determined whether the patient was rifampicin monoresistant or MDR, based on the pDST result of isoniazid (as all patients with pDST done had at least a low-level isoniazid or high-level isoniazid pDST result).

Supplementary Table S2. Classification of drug resistance based on available pDST results

		Isoniazid	**Fluoroquinolone**	**Injectable**
		Isoniazid (0.1 µg/ml**) OR Isoniazid (0.4* µg/ml†*)*	*Moxifloxacin (0.25* µg/ml**) OR Moxifloxacin (1.0* µg/ml†*) OR Ofloxacin*	*Capreomycin OR Kanamycin*
Rifampicin monoresistance	Pre-2021	None resistant	None resistant	None resistant
	2021 update	None resistant	None resistant	None resistant
MDR	Pre-2021	One or both resistant	None resistant	None resistant
	2021 onwards	One or both resistant	None resistant	N/A
Pre-XDR	Pre-2021	One or both resistant	One or more resistant	None resistant
	Pre-2021	One or both resistant	None resistant	One or both resistant
	2021 onwards	None, one or both resistant	One or more resistant	N/A
XDR	Pre-2021	One or both resistant	One or more resistant	One or more resistant
	2021 onwards	N/A		

Footnotes:
*Recommended critical concentration (low-level resistance)
†Higher concentration (high-level resistance)

Pre-2021 = classification used for patients that started treatment before January 1st 2021,
2021 onwards = classification used for patients that started treatment on or after January 1st 2021
Abbreviations: MDR – multidrug-resistant, XDR – extensively drug-resistant

S2. Methods

DR-TB care and testing in Bandung City

At the time of data collection, RSHS, a provincial-level tertiary hospital, was the main referral site for individuals with rifampicin-resistant TB in West Java (population: 49.9 million), where confirmed rifampicin-resistant TB cases are treated and have a monthly follow-up. Before 2021, GeneXpert MTB/RIF was used as a front-line test for presumptive drug-resistant TB cases only, but since then, it has been expanded to all presumptive TB cases. Presumptive drug-resistant TB was assumed if an individual presented with symptoms of TB and one or more of the nine high risk criteria, as reported by Lestari, Nijman and Larasmanah *et al.* [2]. RSHS uses Indonesian guidelines for second-line treatment, with Bedaquiline introduced in early 2020. Rifampicin resistance detected by Xpert MTB/RIF is used to guide empiric therapy, supported by line probe assay (LPA), while awaiting phenotypic drug susceptibility testing (pDST) results [3, 4]. Sputum culture and pDST, using Mycobacterium Growth Indicator Tube (MGIT), were performed at the provincial reference laboratories in Bandung.

Classifications

Other classifications were according to the Asia Pacific Criteria for BMI [5], the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure for blood pressure [6], WHO for Anaemia [7], the 2009 CKD-EPI Creatinine Equation for the estimated glomerular filtration rate (eGFR) [8] and the National Kidney Foundation guidelines for chronic kidney disease (CKD) [9].

Calculation attributable fraction

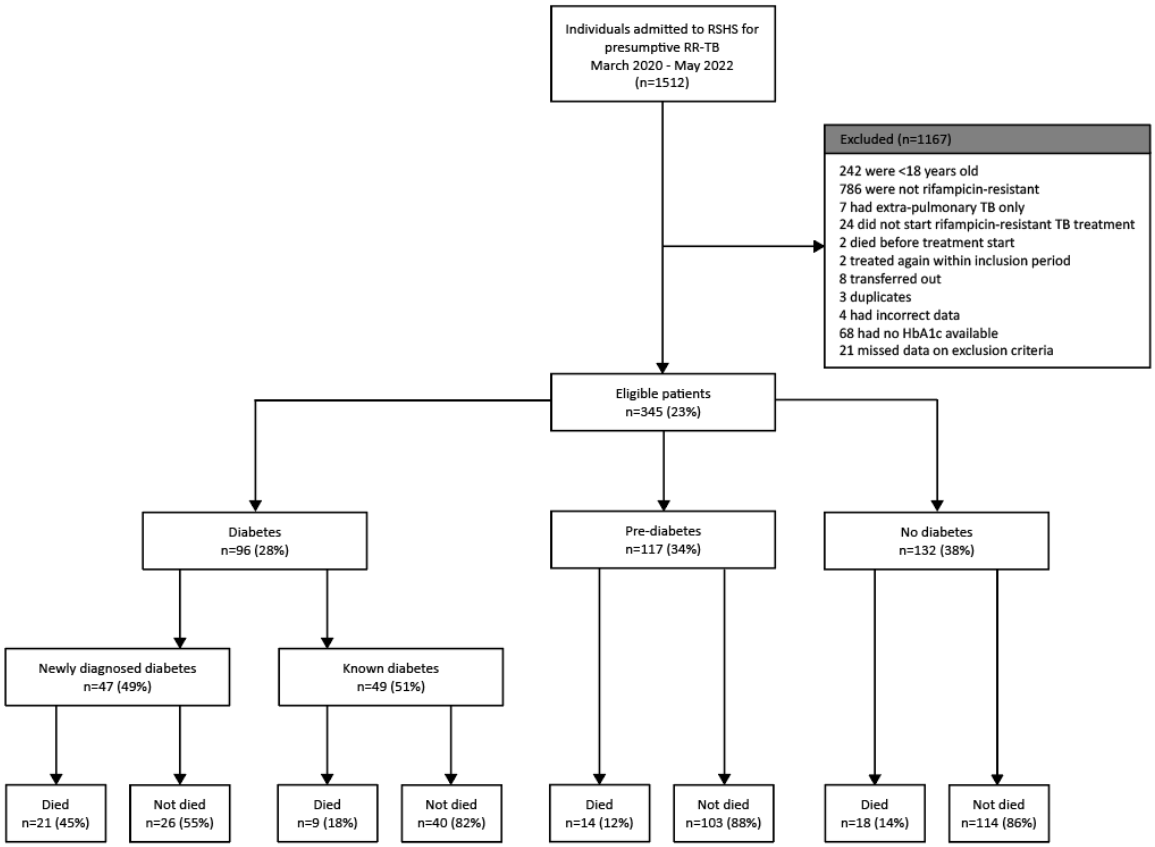
The attributable fraction of diabetes (dichotomous definition) to all-cause mortality adjusted for age and sex in this cohort was estimated by "the proportion of died individuals exposed to diabetes as defined by the dichotomous definition*((adjusted relative risk of all-cause mortality-1)/adjusted relative risk of all-cause mortality)" [10].

$$pd(\frac{RR-1}{RR})$$

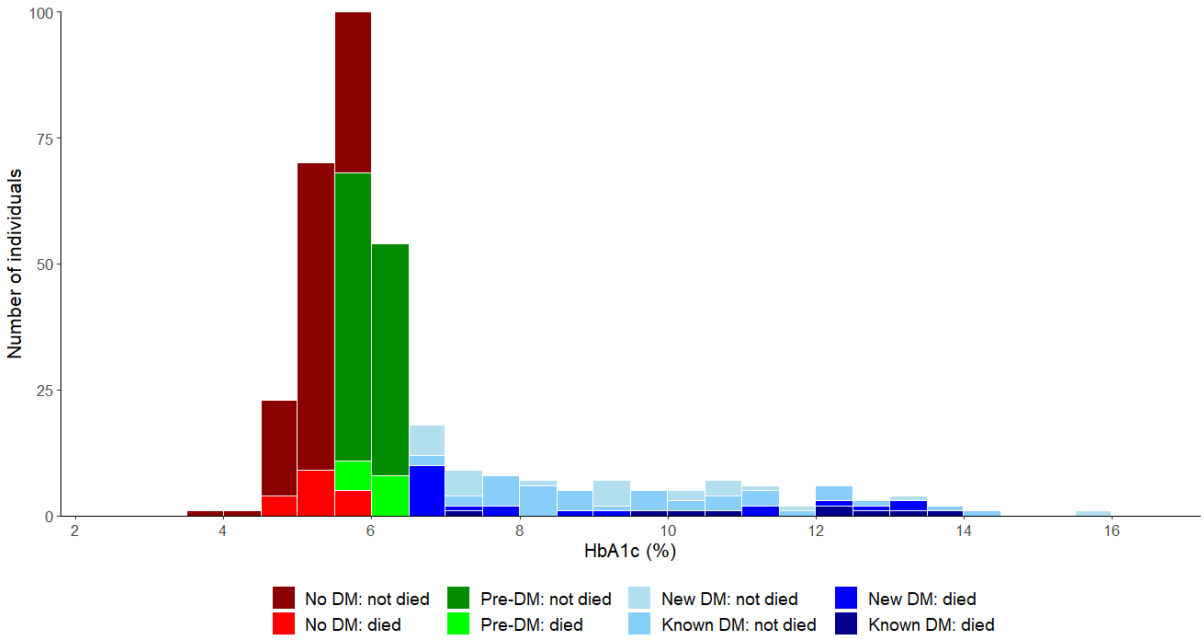
Sub-group and sensitivity analyses

For the sub-group analyses we also characterized diabetes according to: a) diabetes history, classified as "newly diagnosed diabetes" (HbA1c ≥6.5% with no prior diabetes diagnosis) and "known diabetes" (any indication of prior diabetes diagnosis); and b) blood glucose control, classified as "good glycemic control" (HbA1c<8.0%) and "poor glycemic control" (HbA1c≥8.0%). This was based on the international diabetes federation guidelines [11] and cut-off values previous used in our setting [12]. For the sensitivity analyses, A) we used descriptive test statistics to compare characteristics between individuals included and excluded in our study based according to HbA1c availability. B) To quantify biases from misclassification on diabetes status due to plausible TB-induced hyperglycemia, we ran additional models with a stricter cut-off to define diabetes (i.e., "diabetes": HbA1c≥7.0% or self-reported prior diabetes diagnosis; "pre-diabetes": HbA1c of 5.7-6.9% with no history of diabetes diagnosis; and "no diabetes": HbA1c<5.7% with no history of diabetes diagnosis). C) We performed univariate and multivariable log-binominal logistic regressions to determine if our points estimates are significantly different when estimated using log-binomial distributions. D) To quantify biases due to covariate misspecification, we compared the estimated hazard rate ratios produced with different sets of covariates.

S3. Results



Supplementary Figure S1. Flowchart of inclusion



Supplementary Figure S2. Distribution of HbA1c (%) by mortality and diabetes status

Supplementary Table S3. Characteristics of individuals with rifampicin-resistant tuberculosis who initiated treatment at Hasan Sadikin Referral Hospital by HbA1c availability, Bandung, 2020-2022

Patient characteristics	Total **N= 413**	**HbA1c availability** **No HbA1c** **N (%) = 68 (16)**	 **HbA1c** **N (%) = 345 (84)**
Demographics			
Male, sex	237 (57.4)	41 (60.3)	196 (56.6)
Age, year, median, (IQR)	39 (28-50)	39 (28-50)	38 (28-50)
BMI (n=381) kg/m^2, median (IQR)	18.0 (15.8-20.1)	18.2 (15.5-19.6)	17.8 (15.8-20.5)
Smoking (n=303)			
Current smoker	30 (9.9)	4 (8.0)	26 (10.3)
Former smoker	119 (39.3)	18 (36.0)	101 (39.9)
Never smoked	154 50.8)	28 (56.0)	126 (49.8)

Footnotes:
* p-value ≤0.05
** p-value ≤0.001

Abbreviations: BMI – Body Mass Index

Supplementary Table S4. Covariate selection sensitivity analyses of multivariable Cox proportional hazard regression models

Models	Hazard rate ratios (95% CI)	BIC	Covariates included in the model
Crude		667.04	N/A
No diabetes or pre-diabetes	Reference		
Diabetes	**2.89 (1.75-4.76)**		
Model 1*		672.72	Age and sex
No diabetes or pre-diabetes	Reference		
Diabetes	**2.05 (1.17 – 3.58)**		
Model 2		684.08	Age, sex and smoking status[1]
No diabetes or pre-diabetes	Reference		
Diabetes	**2.16 (1.23-3.79)**		
Model 3		692.93	Age, sex and blood pressure[2]
No diabetes or pre-diabetes	Reference		
Diabetes	**1.93 (1.10-3.41)**		
Model 4		703.62	Age, sex, smoking status[1] and blood pressure[2]
No diabetes or pre-diabetes	Reference		
Diabetes	**2.06 (1.16-3.66)**		
Model 5**			Age, sex and treatment regimen
No diabetes or pre-diabetes	Reference		
Diabetes	**1.96 (1.13-3.48)**		

Footnotes:
***** Model used in the manuscript
**Difference in treatment regimen by diabetes status is more likely to be a cohort effect/bias by indication rather than a possible confounder

[1]Smoking status defined as current smoker (n=26); former smoker (n=101); never (n=126); missing status (n=92)
[2]Blood pressure categorized as normal (n=111); pre-hypertension (n=147); hypertension I (n=27); hypertension II (n=8), missing status (n=52)

Bold indicates that the finding is statistically significant with α=0.05

Supplementary Table S5. Crude and adjusted hazard rate ratios of all-cause mortality during rifampicin-resistant tuberculosis treatment

Characteristics	Died/Total (%) 62/345 (18.0)	Median time to death, days (IQR) 75 (33 – 178)	Hazard Rate Ratios (HR)	
			Crude (95% CI)	Adjusted (95% CI)*
Sex				
Female	24/149 (16.1)	101 (36-196)	Reference	-
Male	38/196 19.4)	65 (35-171)	1.20 (0.72-2.01)	-
Age group				
18-44	29/217 (13.4)	95 (37-228)	Reference	-
45-64	26/110 (23.6)	53 (30-181)	**1.98 (1.16-3.36)**	-
≥65	7/18 (38.9)	81 (48-136)	**4.44 (1.93-10.21)**	-
BMI (n=325), kg/m^2				
BMI ≥18.5	15/134 (11.2)	81 (35-265)	Reference	Reference
BMI <18.5	41/191 (21.5)	89 (38-172)	**2.10 (1.16-3.80)**	**2.33 (1.28-4.21)**
HIV				
Non reactive	59/339 (17.4)	63 (30-176)	Reference	Reference
Reactive	3/6 (50.0)	110 (92-194)	**1.15 (1.05-1.26)**	**1.15 (1.07-1.24)**
Chronic kidney disease (n=318)				
Stage 1 (eGFR ≥90)	38/265 (14.3)	102 (44-182)	Reference	Reference
Stage ≥ 2 (eGFR <90)	9/53 (17.0)	180 (41-530)	1.41 (0.68-2.92)	0.75 (0.33-1.71)
Anaemia[1] (n=344)				
No	16/163 (9.8)	116 (41-400)	Reference	Reference
Mild	21/94 (22.3)	55 (29-171)	**2.63 (1.37-5.05)**	**2.76 (1.43-5.33)**
Moderate/severe	24/87 (27.6)	75 (36-165)	**3.27 (1.74-6.16)**	**3.46 (1.83-6.54)**
Smoking (n=253)				
Current smoker	3/26 (11.5)	81 (65-166)	Reference	Reference
Former smoker	17/101 (16.8)	157 (42-244)	1.59 (0.47-5.44)	1.24 (0.36-4.31)
Never	18/126 (14.3)	123 (33-266)	1.36 (0.40-4.63)	1.31 (0.30-5.74)
Hypertension, mmHg (n=293)				
No (<139/89)	50/258 (19.4)	69 (37-178)	Reference	Reference
Yes (≥140/90)	8/35 (22.9)	144 (71-208)	1.21 (0.57-2.55)	0.87 (0.40-1.87)
History of TB treatment (n=328)				
No	11/98 (11.2)	136 (65-200)	Reference	Reference
Yes	42/230 (18.3)	92 (38-217)	1.60 (0.82-3.10)	1.50 (0.77-2.91)

Type of resistance[2]				
Rifampicin monoresistance	16/96 (16.7)	40 (29-173)	Reference	Reference
No phenotypic DST	14/69 (20.3)	96 (41-230)	1.15 (0.56-2.37)	1.09 (0.53-2.25)
MDR/pre-XDR	32/180 (17.8)	82 (35-186)	1.08 (0.59-1.97)	1.12 (0.61-2.04)
Sputum microscopy (n=338)				
Negative	19/128 (14.8)	76 (27-154)	Reference	Reference
Scanty (AFB 1-9)	4/28 (14.3)	151 (71-232)	0.90 (0.31-2.65)	0.88 (0.30-2.60)
1+	7/71 (9.9)	180 (166-378)	0.61 (0.25-1.44)	0.55 (0.23-1.32)
2+	11/44 (25.0)	48 (15-85)	1.89 (0.90-3.97)	1.78 (0.85-3.75)
3+	19/67 (28.4)	55 (33-164)	2.21 (1.17-4.18)	1.86 (0.98-3.52)
Mycobacterium tuberculosis culture				
Negative	8/40 (20.0)	93 (43-213)	Reference	Reference
Positive	51/289 (17.6)	74 (34-182)	0.95 (0.45-1.99)	1.12 (0.52-2.38)
NTM/contaminated/missing	3/16 (18.8)	38 (22-101)	0.92 (0.25-3.48)	1.31 (0.34-5.02)
Tuberculosis site				
Pulmonary	61/341 (17.9)	74 (31-180)	Reference	Reference
Pulmonary and extrapulmonary	1/4 (25.0)	110 (110-110)	1.22 (0.17-8.83)	1.61 (0.22-11.73)
Culture conversion[3] (n=223)				
Conversion occurred	20/177 (11.3)	206 (156-301)	Reference	Reference
Conversion did not occur	10/46 (21.7)	96 (55-157)	**3.19 (1.47-6.92)**	**3.76 (1.69-8.37)**
Time to conversion[4] (n = 167)				
1 month	10/102 (9.8)	236 (165-272)	Reference	Reference
2 months	6/43 (14.0)	176 (145-184)	0.98 (0.95-1.01)	1.00 (0.99-1.01)
≥3 months	3/22 (13.6)	384 (378-457)	1.00 (0.95-1.05)	0.99 (0.91-1.08)
Empirical treatment regimen				
LTR injectable	2/5 (40.0)	509 (441-577)	Reference	Reference
Oral LTR	34/133 (25.6)	164 (61-250)	0.81 (0.19-3.83)	0.68 (0.16-2.88)
STR injectable	8/45 (17.8)	32 (21-66)	0.84 (0.18-4.05)	0.75 (0.15-3.68)
Oral STR	18/162 (11.1)	35 (8-59)	0.52 (0.12-2.29)	0.40 (0.09-1.81)

Footnotes:

* Adjusted hazard rate ratios were estimated using stand alone models where the effect of each characteristic was controlled for age and sex

[1]No if Hb ≥13 for men and ≥12 for women; mild if Hb≥11 and <13 for men, and Hb≥11 and <12 for women; moderate/severe if Hb<11 for both men and women
[22]No individuals were diagnosed with extensively drug-resistant tuberculosis based on available pDST results
[3]Culture conversion is defined as conversion of the monthly culture result from positive to negative during treatment
[4] The time between the date of treatment start and the date of the follow-up visit when sample showing conversion was taken

Abbreviations:
AFB – acid-fast bacillus; BMI – body mass index; DST – drug susceptibility test; eGFR – estimated glomerular filtration rate; HbA1c – glycated hemoglobin; HIV – human immunodeficiency virus; LTR – long term regimen; MDR – multidrug-resistant; NTM – non-mycobacterium tuberculosis; STR – short term regimen; TB – tuberculosis; XDR – extensively drug-resistant.

Bold indicates that the finding is statistically significant with α=0.05

Supplementary Table S6. Crude and adjusted hazard rate ratios of all-cause mortality during rifampicin-resistant tuberculosis treatment according to alternative diabetes cut-off

Characteristics	Died/Total (%) 62/345 (18.0)	Median time to death, days (IQR) 75 (33 – 178)	Hazard Rate Ratios (HR)	
			Crude (95% CI)	Adjusted (95% CI)*
Dichotomous diabetes status[a]				
No diabetes or pre-diabetes	42/265 (16.8)	85 (40-229)	Reference	Reference
Diabetes	20/80 (25.0)	40 (28-141)	**1.84 (1.08-3.13)**	1.25 (0.71-2.19)
Trichotomous diabetes status[b]				
No diabetes	18/132 (13.6)	172 (79 – 371)	Reference	Reference
Pre-diabetes	24/133 (18.0)	58 (36 – 165)	1.42 (0.77 –2.62)	1.18 (0.63 – 2.23)
Diabetes	20/80 (25.0)	40 (28 – 141)	**2.21 (1.17 – 4.18)**	1.34 (0.70 – 2.72)

*Models were adjusted for age and sex

[a]Diabetes if self-reported diabetes at baseline or no self-reported diabetes at baseline but HbA1c ≥ 7.0%, no diabetes or pre-diabetes if no self-reported diabetes at baseline with HbA1c<7.0%

[b]Diabetes if self-reported diabetes at baseline or no self-reported diabetes at baseline but HbA1c ≥ 7.0%, pre-diabetes if no self-reported diabetes at baseline with HbA1c of 5.7% to <7.0%, no diabetes if no self-reported diabetes at baseline with HbA1c<5.7%

Bold indicates that the finding is statistically significant with α=0.05

Supplementary Table S7. Crude and adjusted relative risks of all-cause mortality during rifampicin-resistant tuberculosis treatment

Characteristics	Total N =345	Died during RR-TB treatment		Relative Risk	
		Yes N (%) = 62 (18)	No N (%) = 283 (82)	Crude (95% CI)	Adjusted* (95% CI)
Sex, male	196 (56.8)	38 (61.3)	158 (55.8)	1.20 (0.76-1.92)	-
Age, year, median (IQR)	38 (28 – 50)	45 (34-56)	36 (27-48)	**1.03 (1.01-1.04)**	-
Age group					
18-44	217 (62.9)	29 (46.8)	188 (66.4)	Reference	-
45-64	110 (31.9)	26 (41.9)	84 (29.7)	**1.77 (1.10-2.85)**	-
≥65	18 (5.2)	7 (11.3)	11 (3.9)	**2.91 (1.49-5.69)**	-
HbA1c (%), median (IQR)*	5.8 (5.4–6.6)	6.2 (5.6-8.5)	5.8 (5.4-6.4)	**1.14 (1.06-1.23)**	**1.10 (1.01-1.19)**
Dichotomous diabetes status					
No diabetes or pre-diabetes	249 (72.2)	32 (51.6)	217 (76.7)	Reference	Reference
Diabetes	96 (27.8)	30 (48.4)	66 (23.3)	**2.43 (1.57-3.77)**	**1.89 (1.15-3.08)**
Trichotomous diabetes status					
No diabetes	132 (38.3)	18 (29.0)	114 40.3)	Reference	Reference
Pre-diabetes	117 (33.9)	14 (22.6)	103 (36.4)	0.88 (0.46-1.69)	0.80 (0.42-1.55)
Diabetes	96 (27.8)	30 (48.4)	66 (23.3)	**2.29 (1.36-3.86)**	1.70 (0.96-3.03)
Known diabetes	49/96 (51.0)	9 (30.0)	40 (60.6)	Reference	Reference
Newly diagnosed diabetes	47/96 (49.0)	21 (70.0)	26 (39.4)	**2.43 (1.24-4.76)**	**2.40 (1.22-4.71)**
HbA1c <8.0%	61/96 (63.5)	16 (53.3)	45 (68.2)	1.53 (0.85-2.74)	1.44 (0.81-2.57)
HbA1c ≥8.0%	35/96 (36.5)	14 (46.7)	21 (31.8)	Reference	Reference
BMI (n=325), kg/m^2					
Normal (18.5-22.9)	99 (30.5)	11 (19.7)	88 (32.7)	Reference	Reference
Underweight (<18.5)	191 (58.8)	41 (73.2)	150 (55.8)	**1.93 (1.04-3.59)**	**2.04 (1.10-3.76)**
Overweight (≥23)	35 (10.8)	4 (7.1)	31 (11.5)	1.03 (0.35-3.02)	1.04 (0.37-2.96)
HIV, reactive	6 (1.7)	3 (4.8)	3 (1.1)	**2.87 (1.25-6.61)**	2.18 (0.62-7.71)
Chronic kidney disease (n=318)					
Stage 1 (eGFR ≥90)	265 (83.4)	38 (80.9)	227 (83.8)	Reference	Reference
Stage ≥ 2 (eGFR <90)	53 (16.6)	9 (19.1)	44 (16.2)	1.18 (0.61-2.30)	0.67 (0.32-1.41)
Anaemia[1] (n=344)					
No	163 (47.4)	16 (26.2)	147 (51.9)	Reference	Reference
Mild	94 (27.3)	21 (34.4)	73 (25.8)	**2.28 (1.25-4.14)**	**2.32 (1.28-4.21)**
Moderate	79 (23.0)	21 (34.4)	58 (20.5)	**2.71 (1.50-4.90)**	**2.64 (1.48-4.72)**
Severe	8 (2.3)	3 (5.0)	5 (1.8)	**3.82 (1.39-10.47)**	**3.53 (1.17-10.68)**

Characteristics	Total N =345	Died during RR-TB treatment		Relative Risk	
		Yes N (%) = 62 (18)	No N (%) = 283 (82)	Crude (95% CI)	Adjusted* (95% CI)
Smoking (n=253)					
Current smoker	26 (10.3)	3 (7.9)	23 (10.7)	Reference	Reference
Former smoker	101 (39.9)	17 (44.7)	84 (39.1)	1.46 (0.46-4.60)	1.08 (0.35-3.33)
Never	126 (49.8)	18 (47.4)	108 (50.2)	1.24 (0.39-3.90)	0.86 (0.23-3.27)
Hypertension, mmHg (n=293)					
No (<139/89)	258 (88.1)	50 (86.2)	208 (88.5)	Reference	Reference
Yes (≥140/90)	34 (11.9)	8 (13.8)	27 (11.5)	1.18 (0.61-2.28)	0.91 (0.47-1.75)
History of TB treatment (n=328)	230 (70.1)	42 (79.2)	188 (68.4)	1.63 (0.87-3.03)	1.55 (0.84-2.87)
Type of resistance[2]					
Rifampicin monoresistance	96 (27.8)	16 (25.8)	80 (28.3)	Reference	Reference
No phenotypic DST	69 (20.0)	14 (22.6)	55 (19.4)	1.22 (0.64-2.33)	1.10 (0.58-2.08)
MDR/pre-XDR	180 (52.2)	32 (51.6)	148 (52.3)	1.07 (0.62-1.84)	1.09 (0.64-1.85)
Sputum microscopy (n=338)					
Negative	128 (37.9)	19 (31.7)	109 (39.2)	Reference	Reference
Scanty (AFB 1-9)	28 (8.3)	4 (6.7)	24 (8.6)	0.96 (0.35-2.61)	0.94 (0.35-2.52)
1+	71 (21.0)	7 (11.6)	64 (23.0)	0.66 (0.29-1.50)	0.65 (0.29-1.46)
2+	44 (13.0)	11 (18.3)	33 (11.9)	1.68 (0.87-3.25)	1.71 (0.91-3.21)
3+	67 (19.8)	19 (31.7)	48 (17.3)	**1.91 (1.09-3.35)**	**1.75 (1.01-3.03)**
Mycobacterium tuberculosis culture					
Negative	40 (11.6)	8 (12.9)	32 (11.3)	Reference	Reference
Positive	289 (83.8)	51 (82.3)	238 (84.1)	0.88 (0.45-1.72)	1.09 (0.55-2.13)
NTM/Contaminated/missing	16 (4.6)	3 (4.8)	13 (4.6)	0.94 (0.28-3.10)	1.34 (0.40-4.53)
Tuberculosis site					
Pulmonary	341 (98.8)	61 (98.4)	280 (98.9)	Reference	Reference
Pulmonary and extrapulmonary	4 (1.2)	1 (1.6)	3 (1.1)	1.40 (0.25-7.75)	1.62 (0.27-9.76)
Culture conversion[3] (n=304)					
Conversion occurred	177 (79.4))	20 (66.7)	157 (81.3)	Reference	Reference
Conversion did not occur	46 (20.6)	10 (33.3)	36 (18.7)	1.92 (0.97-3.82)	**3.76 (1.69-8.37)**
Time to conversion[4] (n = 167)					
1 month	102 (61.1)	10 (52.6)	92 (62.2)	Reference	Reference
2 months	43 (25.7)	6 (31.6)	37 (25.0)	1.42 (0.55-3.67)	1.42 (0.58-3.54)
≥3 months	22 (13.2)	3 (15.8)	19 (12.8)	1.39 (0.42-4.64)	1.42 (0.42-4.78)

Characteristics	Total N =345	Died during RR-TB treatment		Relative Risk	
		Yes N (%) = 62 (18)	No N (%) = 283 (82)	Crude (95% CI)	Adjusted* (95% CI)
Empirical treatment regimen					
LTR injectable	5 (1.4)	2 (3.2)	3 (1.1)	Reference	Reference
Oral LTR	133 (38.6)	34 (54.8)	99 (35.0)	0.64 (0.21-1.94)	0.74 (0.19-2.91)
STR injectable	45 (13.0)	8 (13.0)	37 (13.0)	0.44 (0.13-1.54)	0.55 (0.12-2.39)
Oral STR	162 (47.0)	18 (29.0)	144 (50.9)	0.28 (0.09-0.88)	0.30 (0.07-1.24)

Footnotes:

* Adjusted hazard rate ratios were estimated using stand alone models where the effect of each characteristic was controlled for age and sex

[1]No if Hb ≥13 for men and ≥12 for women; mild if Hb≥11 and <13 for men, and Hb≥11 and <12 for women; moderate/severe if Hb<11 for both men and women

[2]No individuals were diagnosed with extensively drug-resistant tuberculosis based on available pDST results

[3]Culture conversion is defined as conversion of the monthly culture result from positive to negative during treatment

[4] The time between the date of treatment start and the date of the follow-up visit when sample showing conversion was taken

Abbreviations:

AFB – acid-fast bacillus; BMI – body mass index; DST – drug susceptibility test; eGFR – estimated glomerular filtration rate; HbA1c – glycated hemoglobin; HIV – human immunodeficiency virus; LTR – long term regimen; MDR – multidrug-resistant; NTM – non-mycobacterium tuberculosis; STR – short term regimen; TB – tuberculosis; XDR – extensively drug-resistant.

Bold indicates that the finding is statistically significant with α=0.05

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