

# Risk for Prison-to-Community Tuberculosis Transmission, Thailand

## Appendix

**Appendix Table 1.** Characteristics of pulmonary TB patients in Chiang Rai province

Variable	Category	Total	Unclustered		Small cluster (2-9)		Large cluster (over10)	
			Cutoff 5	Cutoff 12	Cutoff 5	Cutoff 12	Cutoff 5	Cutoff 12
SNP differences								
Total		592	559	442	22	100	11	50
Lineage	1	271 (45.8)	271 (48.5)	253 (57.2)	0	18 (18.0)	0	0
	2	236 (39.9)	203 (36.3)	127 (28.7)	22 (100)	59 (59.0)	11 (100)	50 (100)
	3	7 (1.2)	7 (1.3)	7 (1.6)	0	0	0	0
	4	78 (13.2)	78 (14.0)	55 (12.4)	0	23 (23.0)	0	0
Age	18-39	114 (19.3)	97 (17.4)	74 (16.7)	10 (45.5)	27 (27.0)	7 (63.6)	13 (26.0)
	40-49	117 (19.8)	113 (20.2)	82 (18.6)	2 (9.1)	22 (22.0)	2 (18.2)	13 (26.0)
	50-59	156 (26.4)	147 (26.3)	123 (27.8)	8 (36.4)	25 (25.0)	1 (9.1)	8 (16.0)
	≥60	205 (34.6)	202 (36.1)	163 (36.9)	2 (9.1)	26 (26.0)	1 (9.1)	16 (32.0)
Ethnicity	Thai	445 (75.2)	425 (76.0)	352 (79.6)	14 (63.6)	62 (62.0)	6 (54.6)	31 (62.0)
	Hill-tribe	137 (23.1)	125 (22.4)	85 (19.2)	7 (31.8)	34 (34.0)	5 (45.5)	18 (36.0)
	Others	10 (1.7)	9 (1.6)	5 (1.1)	1 (4.6)	4 (4.0)	0	1 (2.0)
Sex	Male	427 (72.1)	409 (73.2)	326 (73.8)	12 (54.6)	67 (67.0)	6 (54.6)	34 (68.0)
	Female	165 (27.9)	150 (26.8)	116 (26.2)	10 (45.5)	33 (33.0)	5 (45.5)	16 (32.0)
TB history	No	561 (94.8)	533 (95.4)	422 (95.5)	18 (81.8)	92 (92.0)	10 (90.9)	47 (94.0)
	Yes	30 (5.1)	25 (4.5)	19 (4.3)	4 (18.2)	8 (8.0)	1 (9.1)	3 (6.0)
Incarceration	No	532 (89.9)	508 (90.9)	407 (92.1)	18 (81.8)	89 (89.0)	6 (54.6)	36 (72.0)
	Yes	60 (10.1)	51 (9.1)	35 (7.9)	4 (18.2)	11 (11.0)	5 (45.5)	14 (28.0)
Prison year (n=60)	Before 1999	11 (18.3)	11 (4.8)	7 (20.0)	0	2 (18.2)	0	2 (14.3)
	2000-2004	5 (8.3)	3 (1.3)	2 (5.7)	0	0 (0)	2 (18.2)	3 (21.4)
	2005-2009	15 (25.0)	14 (6.1)	12 (34.3)	0	2 (18.2)	1 (9.1)	1 (7.1)
	2010-2014	16 (26.7)	12 (5.3)	6 (17.1)	2 (9.1)	3 (27.3)	2 (18.2)	7 (50.0)
	After 2015	12 (20.0)	10 (4.4)	8 (22.9)	2 (9.1)	3 (27.3)	0	1 (7.1)
	Unknown	1 (1.7)		0		1 (9.1)		0 (0)
Prison days (n=60)	<1 year	35 (58.3)	29 (5.2)	18 (51.4)	4 (18.2)	10 (90.9)	2 (18.2)	7 (50.0)
	1-2year	5 (8.3)	3 (0.5)	3 (8.6)	0	0 (0)	2 (18.2)	2 (14.3)
	≥2years	20 (33.3)	19 (3.4)	14 (40.0)	0	1 (9.1)	1 (9.1)	5 (35.7)

**Appendix Table 2.** Association between formerly incarcerated TB patients and clusters, restricted to lineage 2 isolates\*

Variable	Total	Unclustered	Small cluster (2-6)	Large cluster (≥10)	Unadjusted OR (95%CI)†	Adjusted OR (95%CI)‡
<b>Cutoff 5</b>						
Total	236	203	22	11		
No history of incarceration	201(85.2)	177 (87.2)	18 (81.8)	6 (54.6)	Reference	Reference
Formerly incarcerated	35 (14.8)	26 (12.8)	4 (18.2)	5 (45.5)	5.42 (1.56-18.86)	7.34 (1.64-32.92)
<b>Cutoff 12</b>						
Total	236	127	59	50		
No history of incarceration	201 (85.2)	114 (89.8)	51 (86.4)	36 (72.0)	Reference	Reference
Formerly incarcerated	35 (14.8)	13 (10.2)	8 (13.6)	14 (28.0)	3.06(1.42-6.58)	3.57 (1.56-8.15)

\*OR, odds ratio; TB, tuberculosis.

†ORs for the history of incarceration comparing those in large clusters with those unclustered or in small clusters.

‡ORs adjusted for age, ethnicity, sex, and history of TB treatment.

**Appendix Table 3.** Characteristics of formerly incarcerated TB patients in four large clusters using 12 SNP cutoff\*

Cluster	#	$\Delta$ SNP $\leq$ 5	Age/sex	-2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Cluster1†</b> 5/17, 29.4%	1	○	40/M																					
	2	○	30/M																					
	3	○	30/F																					
	4	○	40/M																					
	5	○	30/M																					
<b>Cluster2</b> 3/13, 23.1%	6		60/M																					
	7		40/M																					
	8		40/M																					
<b>Cluster3</b> 4/10, 40.0%	9		60/M																					
	10		30/M																					
	11		60/M																					
	12		30/M																					
<b>Cluster4</b> 2/10, 20.0%	13		40/M																					
	14		40/F																					

\*Dark gray: incarcerated, light gray: possibly incarcerated, yellow: year of TB diagnosis,  $\Delta$ SNP $\leq$ 5: Isolates linked at least one other isolate by no more than 5 pairwise SNP distances.

†Number of incarcerated TB patients/total number of TB patients, percentage of incarcerated people.