Figure 1: Graphical representation of the rules to classify M. tuberculosis strains into lineages. The legend alongside explains the representation. Presence or absence of a spacer is indicated by white and black blocks respectively. MIRU24¡=1 is represented by a block with vertical lines, MIRU24¿1 as a white block with a dot. A grey block is used to represent cases where MIRU24 is not used in the rule. Loci not used by rules are in grey.

Table 1: Positive and negative advice for each classification task

Class	Positive Advice	Negative Advice
East-Asian	Spacers (1-34) absent	At least one of spacers (1-34) present
East-African Indian	Spacers (4-7) absent ∧ spacers (23-24) absent ∧ MIRU24≤1 ∧ spacers (29-32) absent	At least one of spacers (4-7) present
	Spacers (4-7) absent ∧ spacers (23-24) absent ∧ MIRU24≤1 ∧ at least one spacer of (29-32) present and at least one spacer of (33-36) present	At least one of spacers (23-24) present
		MIRU24 >1
		[Rule out Euro-American] Spacers (33-36) absent
Euro-American	Spacers (33-36) absent ∧ MIRU24≤1 ∧ spacers (29-32) absent	At least one of spacers (33-36) present
	Spacers (33-36) absent ∧ at least one spacer of(29-32) present	MIRU24>1
Indo-Oceanic	At least one spacer of (25-28) present ∧ spacer 34 absent ∧ spacers (29-32) absent ∧ spacers (33-36) absent ∧ MIRU24>1	[Rule out East-African Indian] Spacers (4-7) absent ∧ spacers (23-24) absent ∧ MIRU24≤1 ∧ spacers (29-32) absent
	At least one spacer of (25-28) present ∧ spacer 34 absent ∧ spacers (29-32) absent ∧ at least one spacer of (33-36) present	[Rule out East-African Indian] Spacers (4-7) absent ∧ spacers (23-24) absent ∧ MIRU24≤1 ∧ at least one spacer of (29-32) present and at least one spacer of (33-36) present
	MIRU24>1 ∧ at least one spacer of(29-32) present ∧ one of spacers (33-36) present	[Rule out Euro-American]Spacers (33-36) absent ∧ MIRU24≤1 ∧ spacers (29-32) absent
	MIRU24>1 ∧ spacers (29-36) absent	[Rule out Euro-American] Spacers (33-36) absent ∧ at least one spacer of spacers (29-32) present
		[Rule out *M. bovis*] Spacers (3,9,16) absent ∧ spacer 38 present ∧ spacers (39-43) absent
M. africanum	Spacers (8,9,39) absent ∧ MIRU24	At least one of spacers (8,9,39) is present
		MIRU24 ≤ 1
		[Rule out *M. bovis*] Spacers (3,9,16) absent ∧ spacer 38 present ∧ spacers (39-43) absent
M. bovis	Spacers (3,9,16) absent ∧ spacer 38 present ∧ spacers (39-43) absent	at least one of spacers (3, 9, 16) are present
		At least one of spacers (39-43) are present
		Spacer 38 is absent