

M. tuberculosis Pekin Genotipinin Türkiye’de Yaygınlığı

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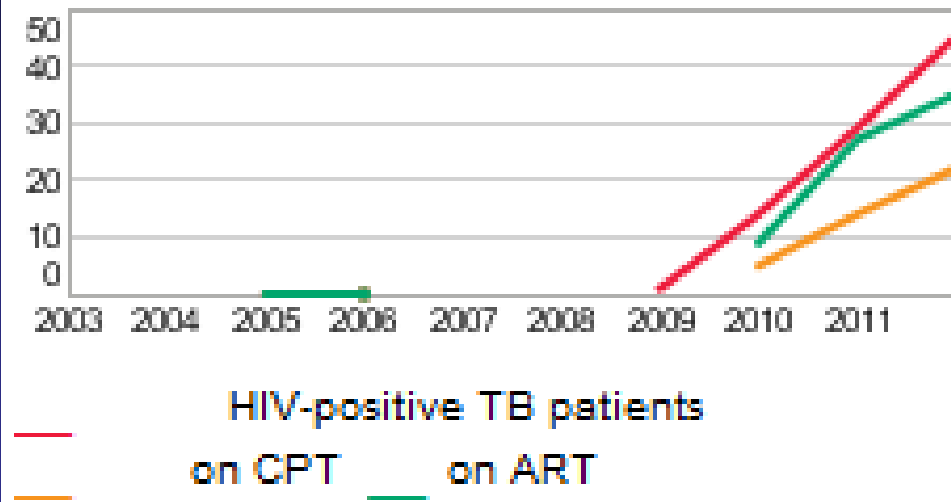
	HIV	AIDS	Toplam
2002	136	41	177
2007	345	24 ?	369
2012	973	95	1068
2013 (ilk 6 ay)	545	42	587

T.C. Sağlık Bakanlığı HIV/AIDS Veri Tabloları

HIV / AIDS: Her 5 yılda ~3 kat artış!

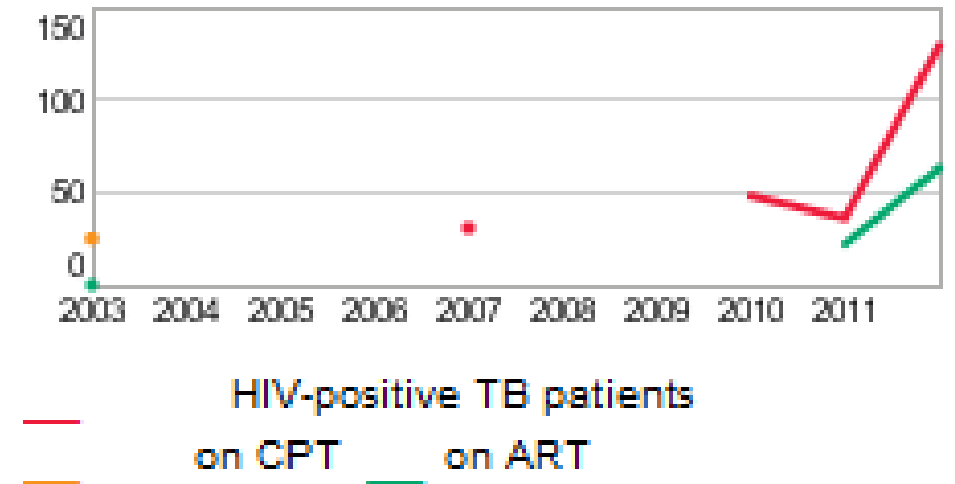


(Number of patients)



Turkey

(Number of patients)



Azerbaijan

https://extranet.who.int/sree/Reports?op=Replet&name=/WHO_HQ_Reports/G2/PROD/EXT/TBCountryProfile&ISO2=TR&outtype=html
https://extranet.who.int/sree/Reports?op=Replet&name=/WHO_HQ_Reports/G2/PROD/EXT/TBCountryProfile&ISO2=AZ&outtype=html

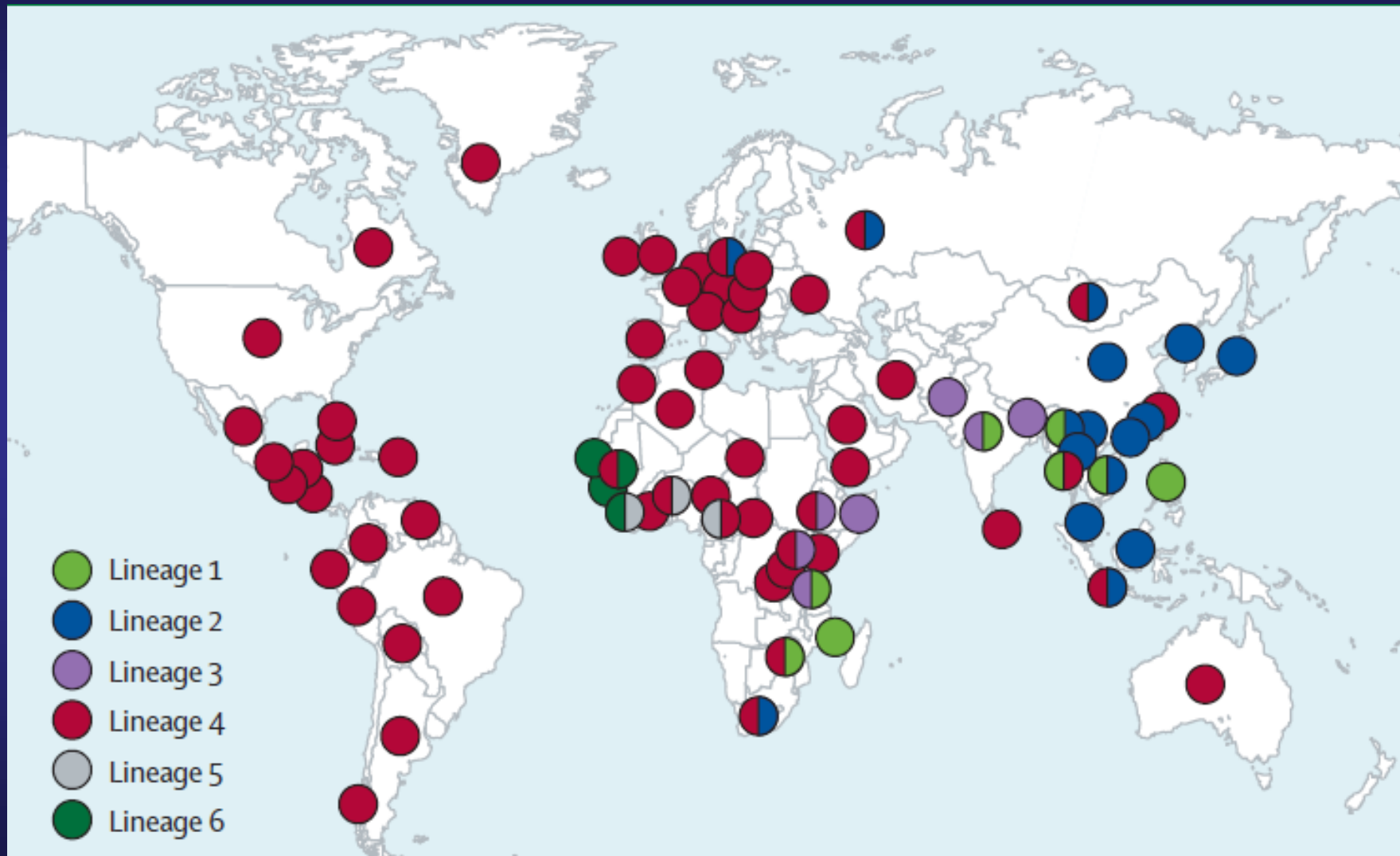


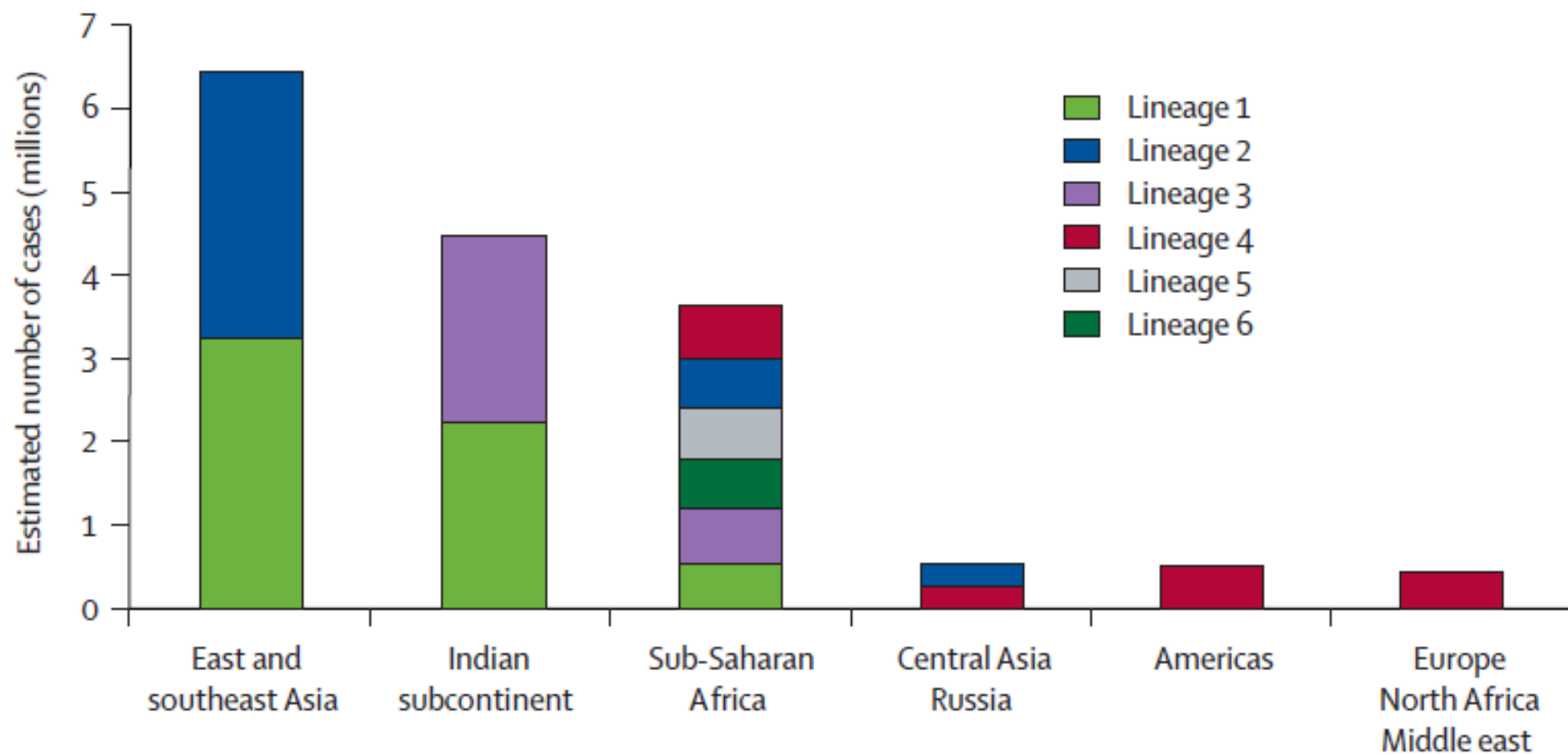
TB Populasyon Genetiği

- klonal yapı
- 6 adet majör coğrafik ile ilişki gösteren soy



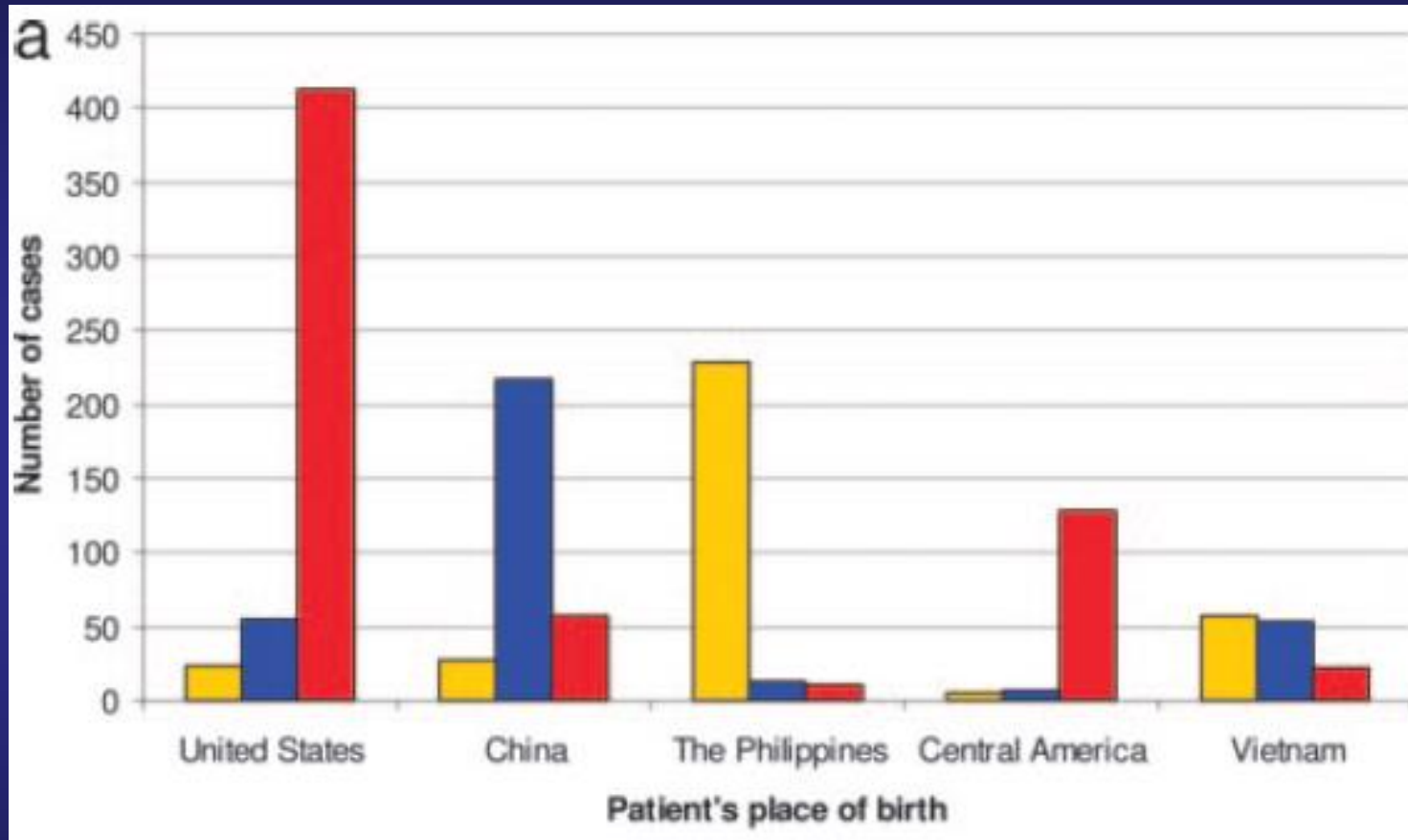
Global phylogeography of *M. tuberculosis*





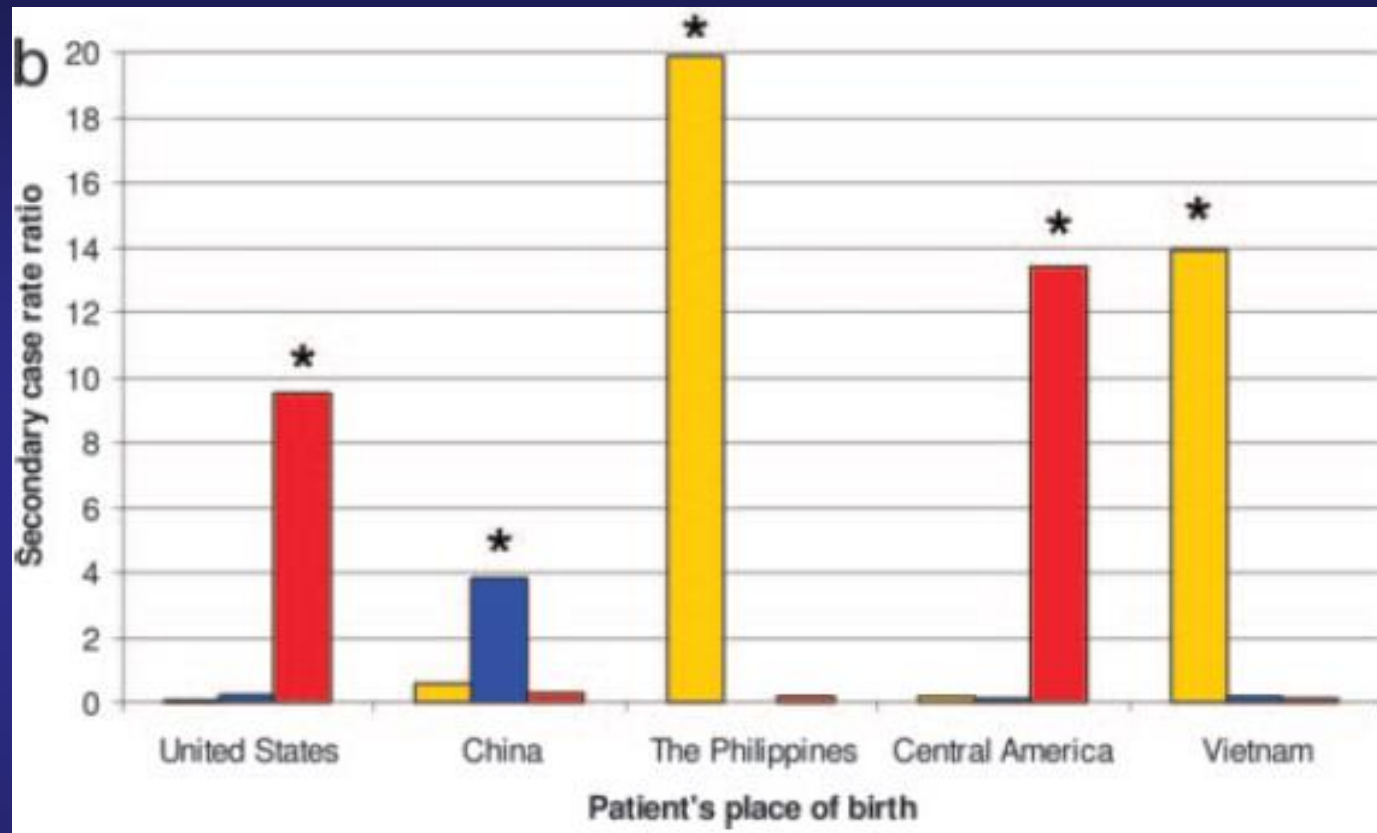
Gagneux S, Small PM. Lancet Infect Dis 2007; 7:328–37

San Francisco 1991-2001 Lineage-specific prevalence



Gagneux S et al 2006 PNAS 103:2869-73

San Francisco, 1991-2001 Lineage-specific transmission



Significantly higher transmission in sympatric compared with allopatric patient populations

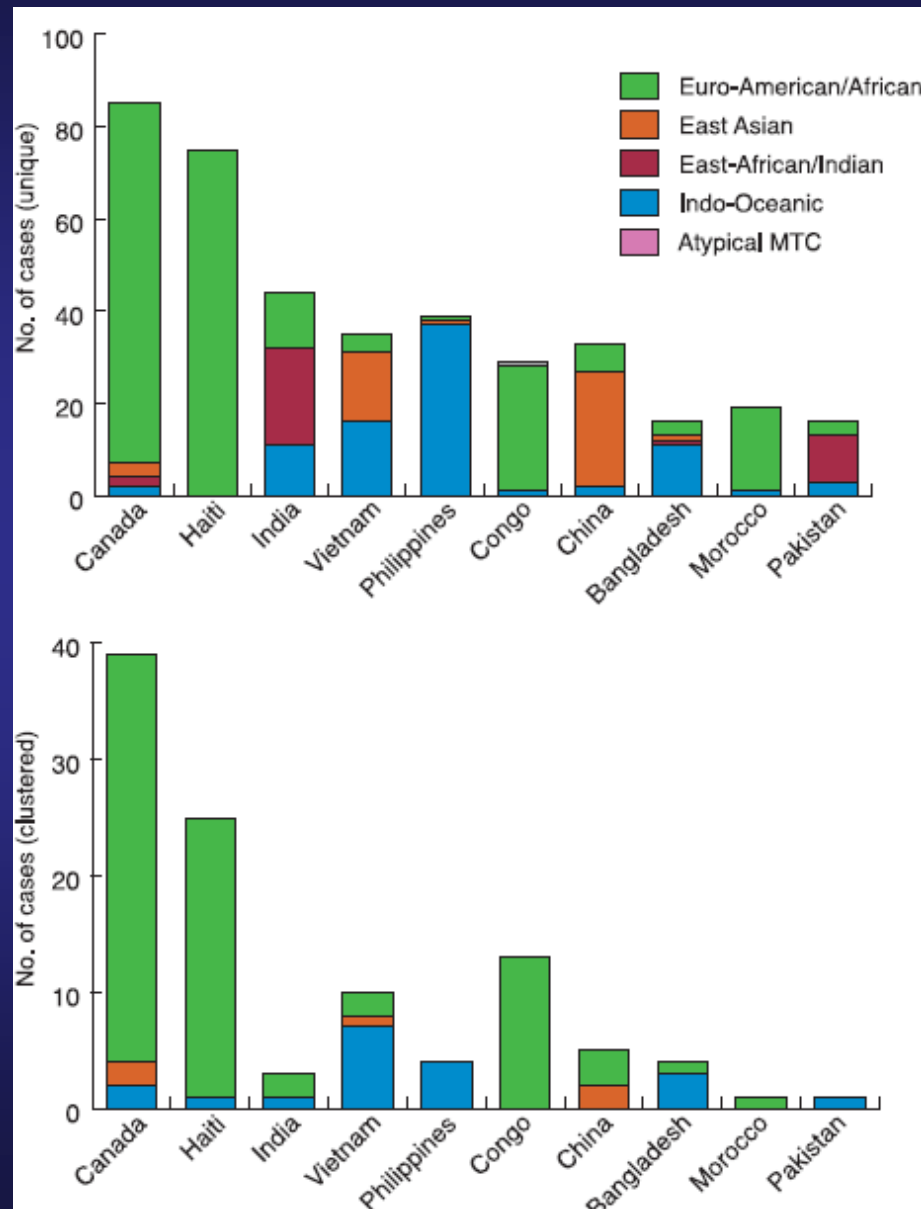
Gagneux S et al 2006 PNAS 103:2869-73

such longstanding human–pathogen associations. Here, we demonstrate that the global population structure of *M. tuberculosis* is defined by six phylogeographical lineages, each associated with specific, sympatric human populations. In an urban cosmopolitan environment, mycobacterial lineages were much more likely to spread in sympatric than in allopatric patient populations. Tuberculosis cases that did occur in allopatric hosts disproportionately involved high-risk individuals with impaired host resistance. These observations suggest that mycobacterial lineages are adapted to particular human populations. If confirmed, our findings have important implications for tuberculosis control and vaccine development.

Gagneux S et al 2006 PNAS 103:2869-73



Montreal 2001-2007 Lineage specific prevalence & transmission



Reed MB et al. 2009. JCM 47:1119-28

Başka* populasyonlara bulaş

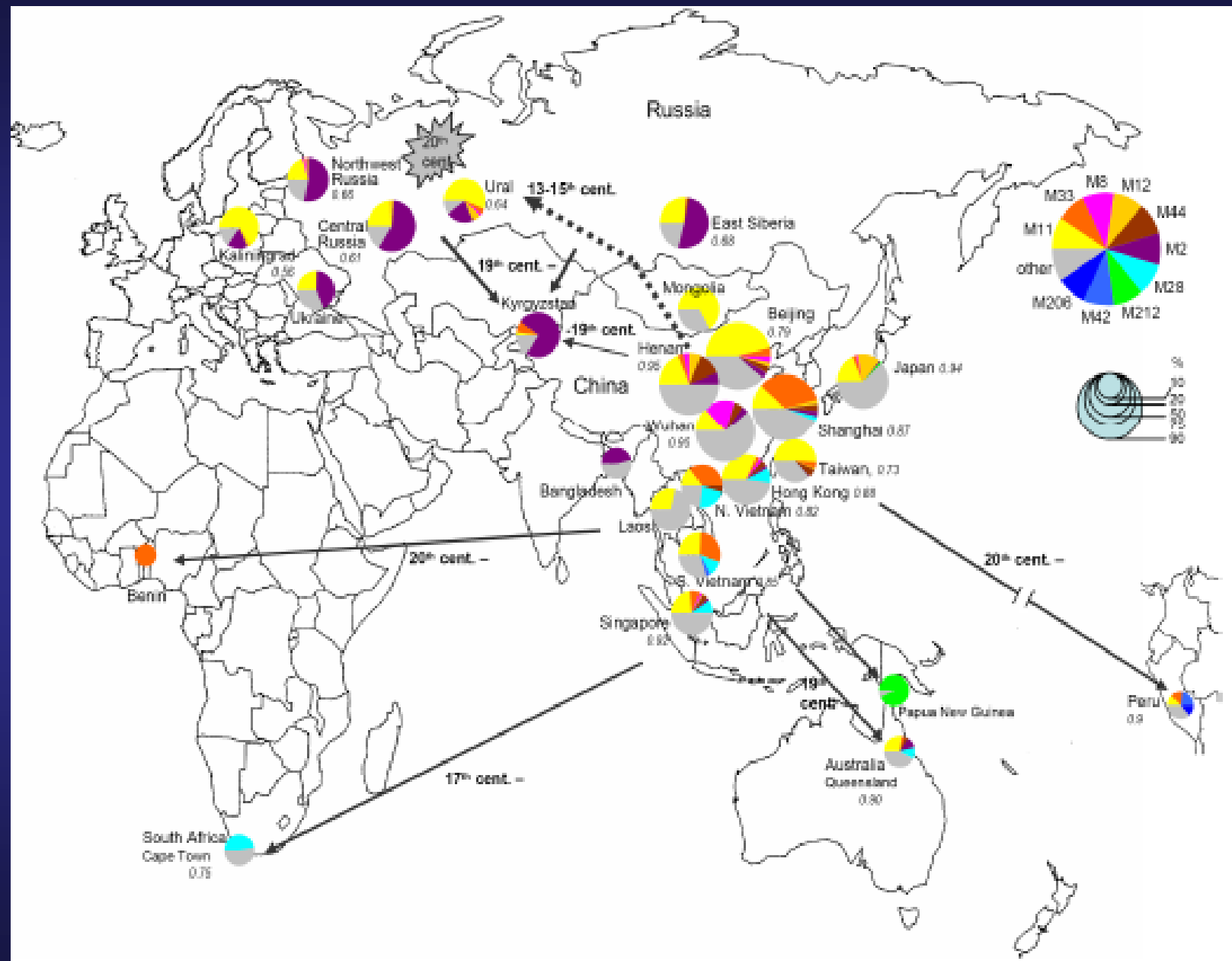
- Göçler
- Sosyokültürel kaynaşma

* allopatrik

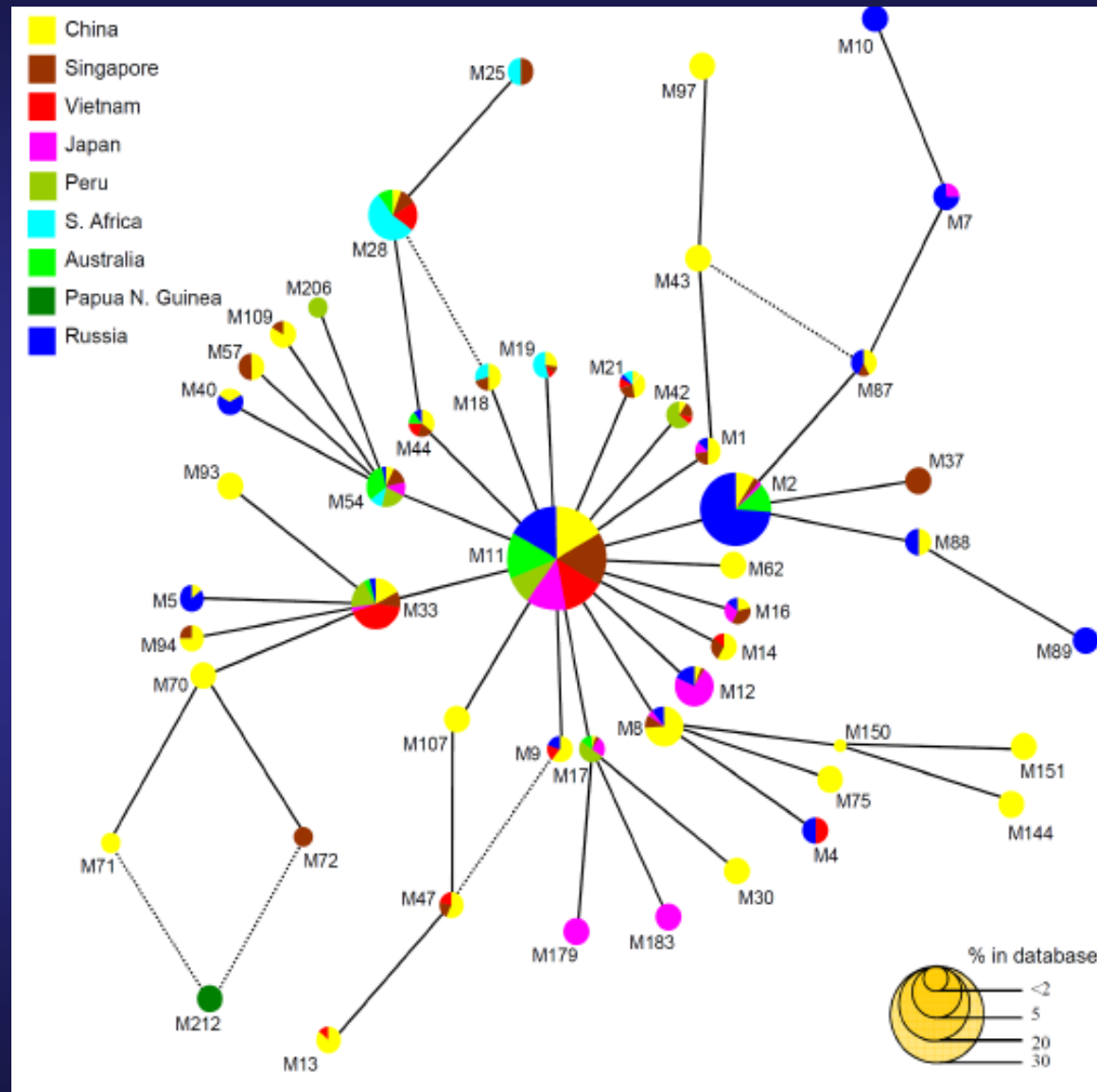
Mokrousov I. Ch16 Human Migratory History: Through the looking-glass of genetic geography of *M. tuberculosis* in “Causes and Consequences of Human Migration”, ed. Crawford MH, Campbell BC. Cambridge Univ Press, 2012



Geo. distribution routes of main Beijing MIRU types



MST of Major Beijing MIRU types



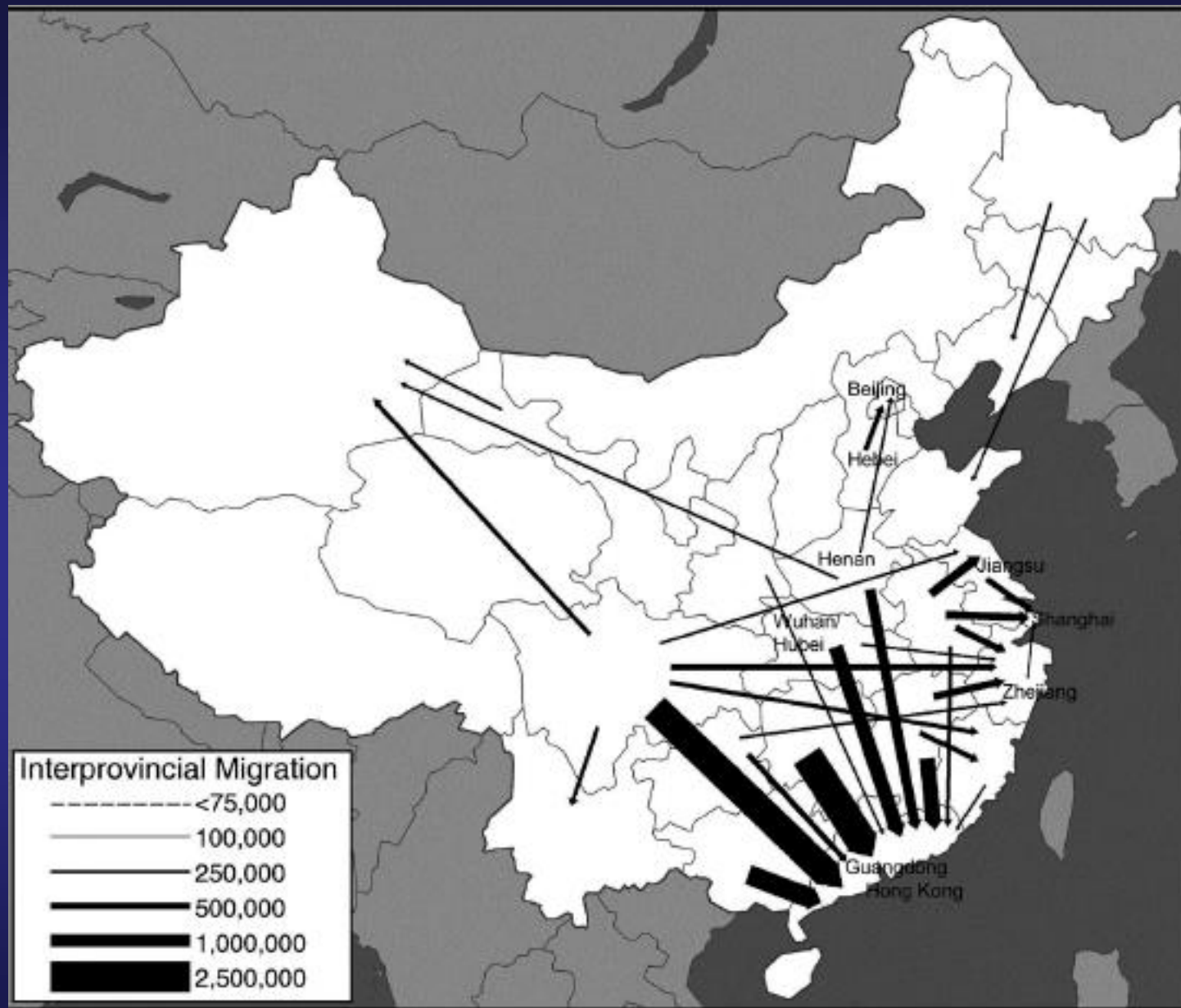
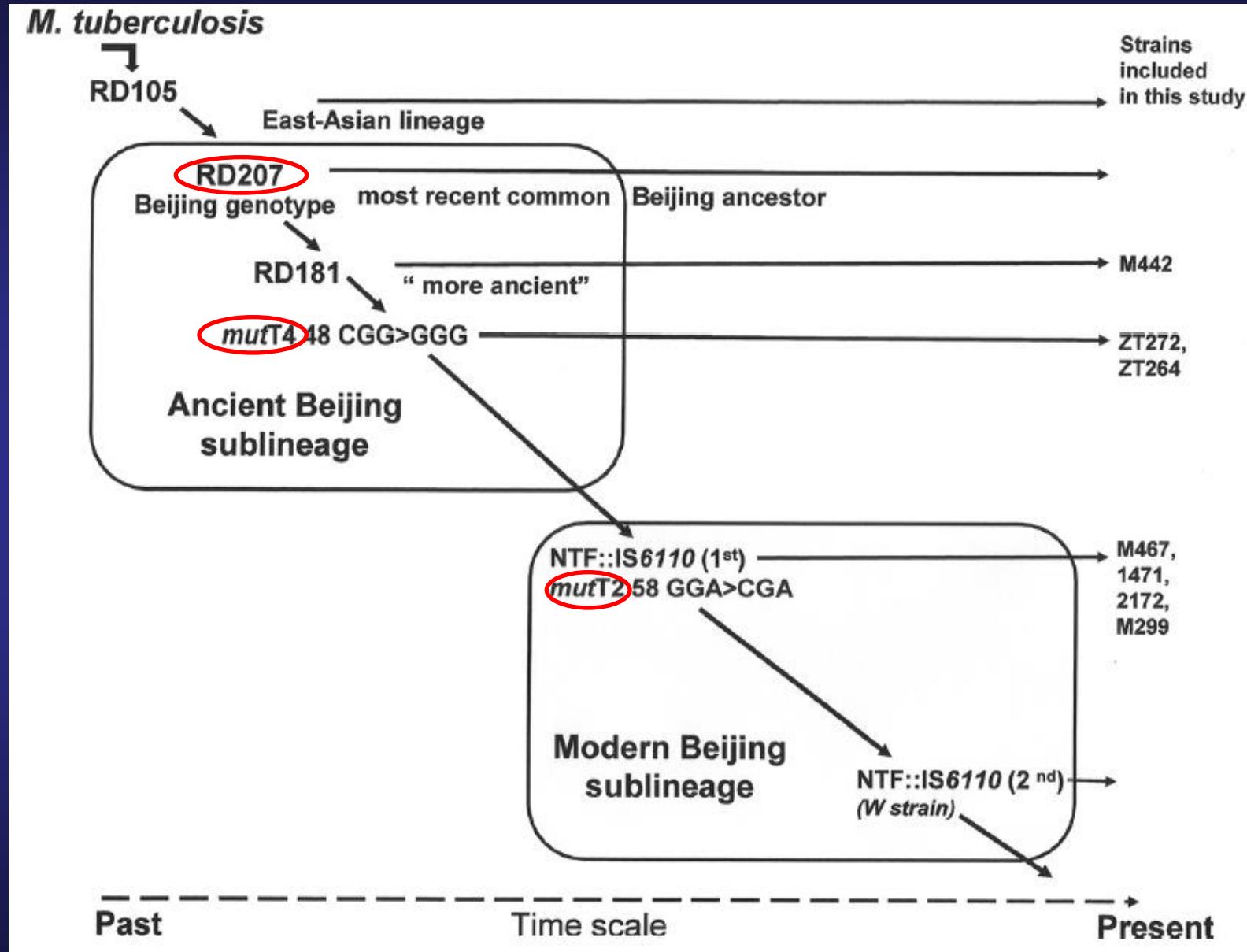
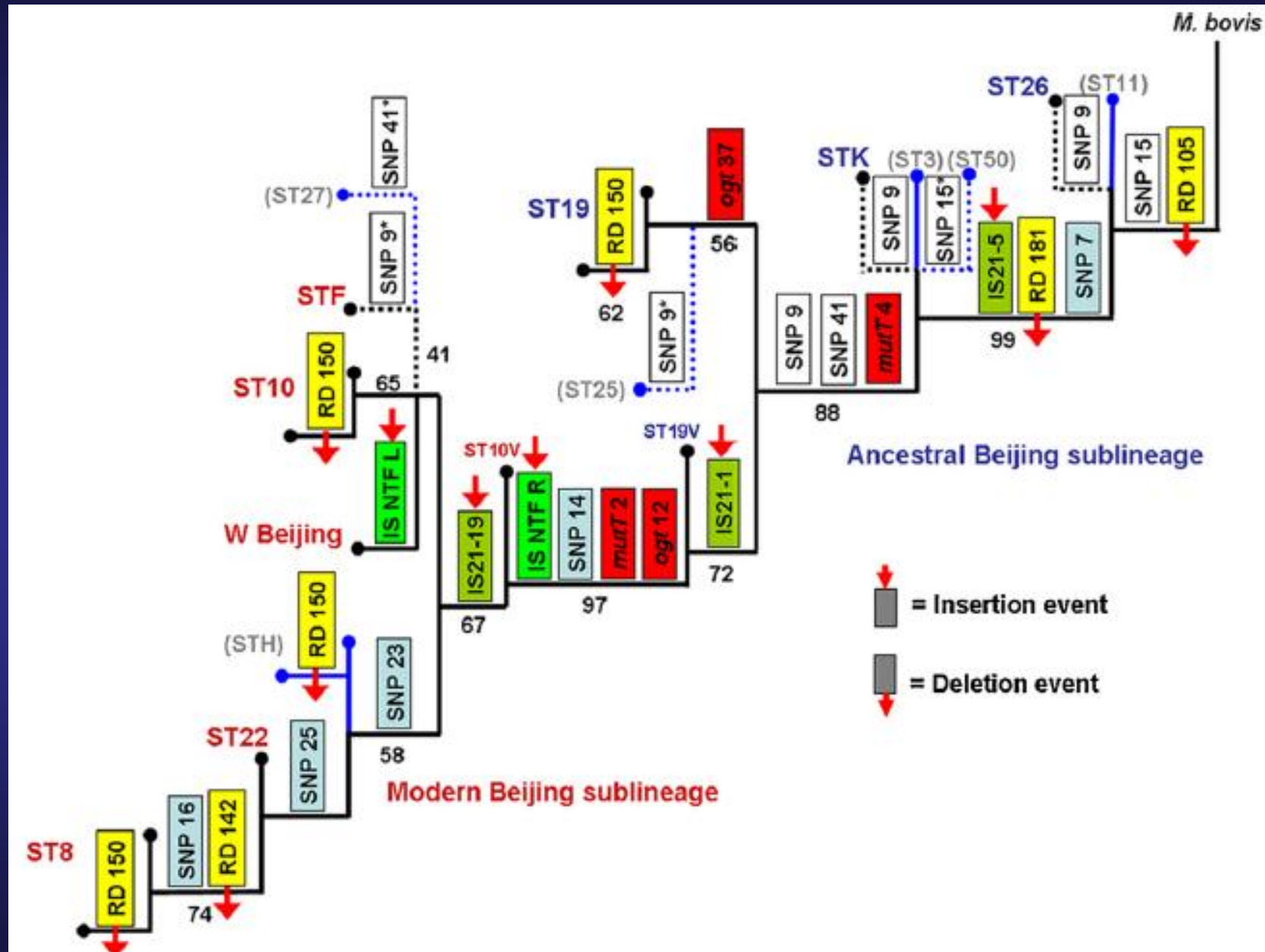


Figure 16.5 The 30 largest interprovincial migration flows in China,

Modern, eski, daha eski !



Modern, eski, daha eski !



Beijing Genotype: Introduction to Russia

- Stalin's GULAG Labour Camp System,
Transsiberian Railway 1930's

Sinkov VV et al. 2011. Mol. Gen. Mikrobiol. Virusol. 3:25–29

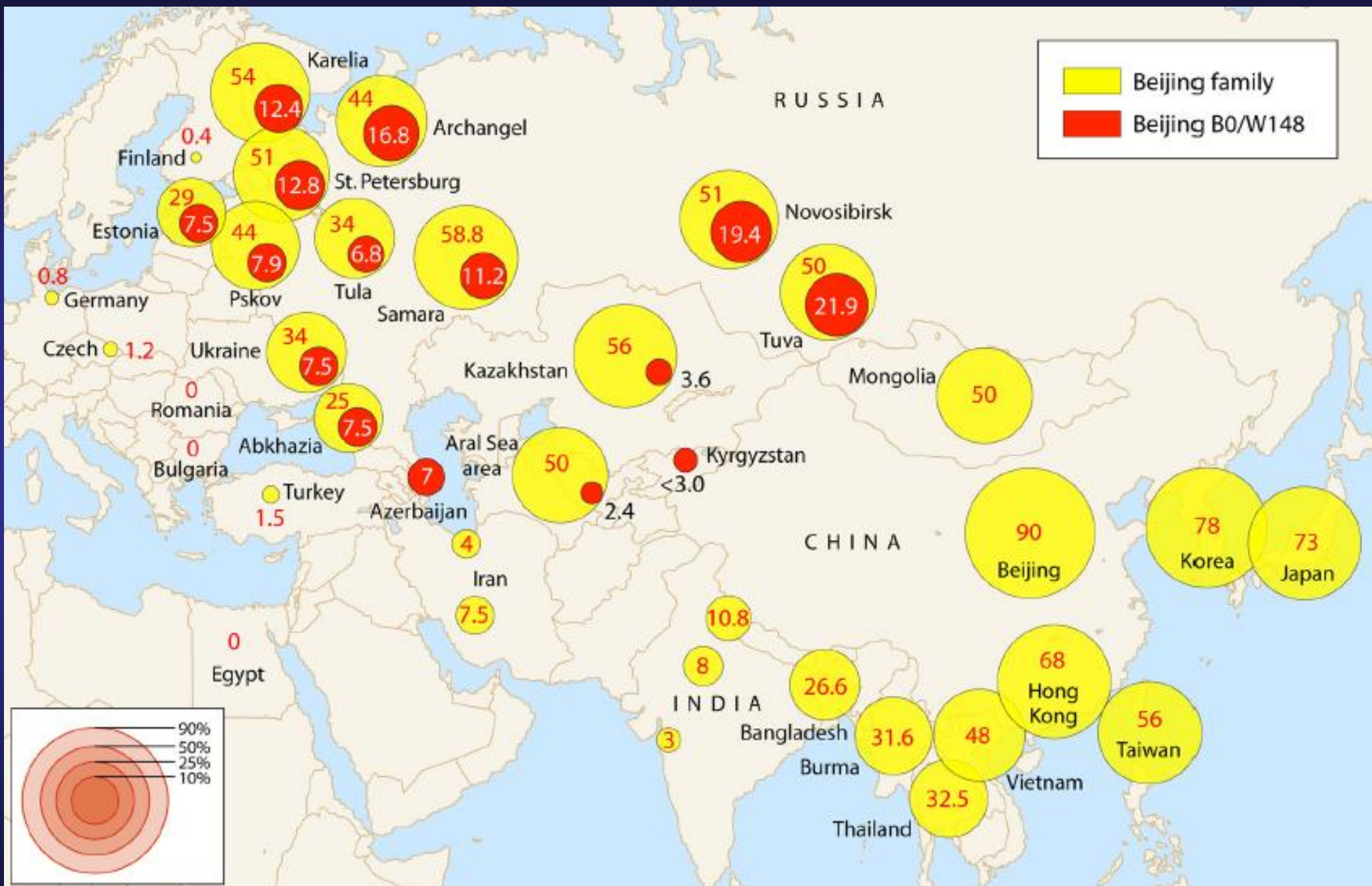
- Mongolian invasion 13-15th centuries (Genghis Khan)
 - economic and cultural system embracing the Eurasia
 - ethnic mixingby incorporating the armies of different nations

Mokrousov I et al. 2005 Genome Research 15:1357–1364

Pekin B0/W148

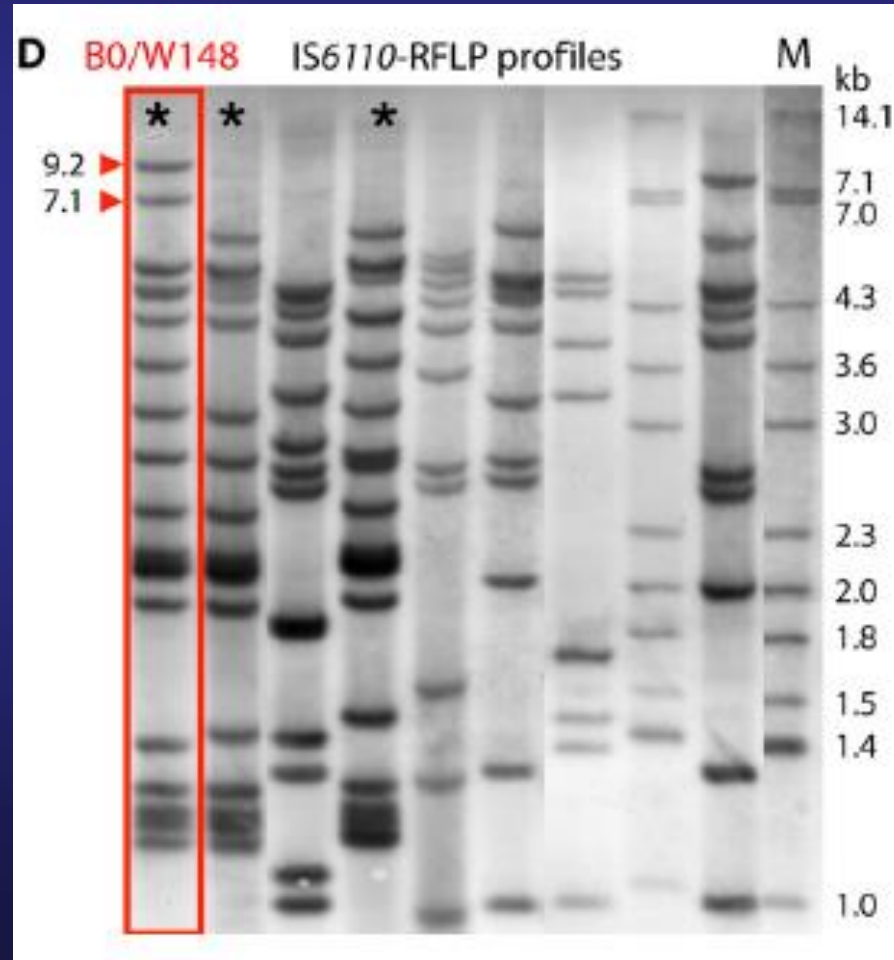
- Sibirya
- Rusya'nın Avrupa kısmı
- Orta Asya'da az
- 1960 -1980 Sibirya'dan Rusya'nın Avrupa bölümüne yaşanan göç
- Modern TB Tedavi çağı
1960'lar EMB, 70'ler INH ve RMP, 80'ler PZA
- İlaç direnci ile ilişkili
- Virölans ?





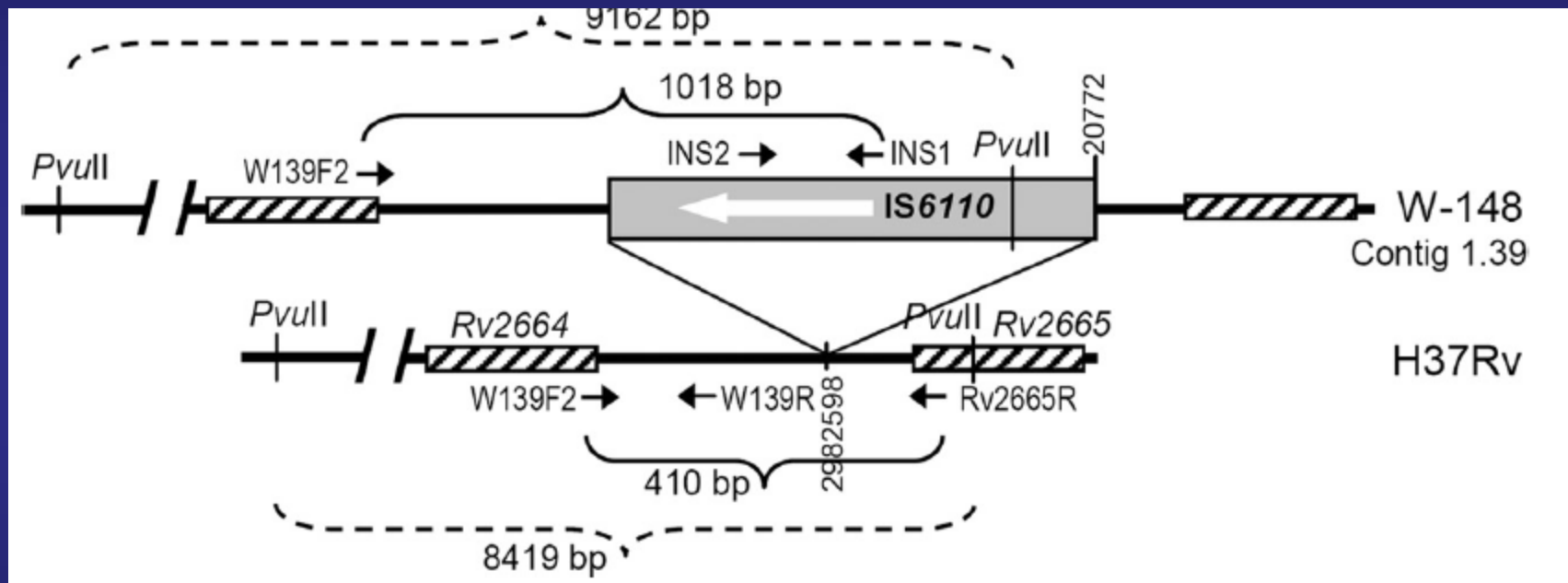
B0 / W148 Tanısı

■ *IS6110*-RFLP



B0 / W148 Tanısı

■ Multiplex PCR



Mokrousov I. JCM 2012;50:3757–59.

İstanbul 2002-2005 $n=4069$

Pekin genotipi prevalansı % 1.1 (46/4069)

Koksalan OK et al. JIUATLD 2006;10:469-72

İstanbul 2002-2005 MDR $n=510$

Pekin 19/510 (%3.72)

B0/W148 suşu 3/19 (%15.8)

19 suşun 10'u eski Sovyetler Birliği ülke vatandaşı



İstanbul 2002-2005 MDR $n=510$

- Pekin 19/510 (%3.72)
- B0/W148 suşu 3/19 (%15.8)
- 19 suşun 10'u (%52) eski Sovyetler Birliği ülke vatandaşı

İstanbul 2011-2014 MDR $n=510$

- Pekin 29/119 (%23.9)
- B0/W148 suşu 7/22 (%31.8)
- 20/29 suş(%69) eski Sovyetler Birliği ülke vatandaşı



Almanya 1995 MDR

- Pekin % 19.2 %700 eski Sovyetler Birliği ülke vatandaşı

Almanya 2001 MDR

- Pekin % 58.3
- Alman popülasyona bulaş yok

Kubica T, Rüsch-Gerdes S, Niemann S. 2004. Int. J. Tuberc. Lung Dis. 8:1107–1113



TB Kontrol Programımıza Gelecekteki Potansiyel Tehditler

- HIV
- Göçler

