

A: Datasheet

Algorithm: idemia_013

Developer: Idemia

Submission Date: 2026_07_01

Template size: 716 bytes

Template time (2.5 percentile): 2019 msec

Template time (median): 2022 msec

Template time (97.5 percentile): 2033 msec

Investigation:

Frontal mugshot ranking 2 (out of 664) -- FNIR(1600000, 0, 1) = 0.0004 vs. lowest 0.0004 from qazsmartvisionai_002

Mugshot webcam ranking 6 (out of 626) -- FNIR(1600000, 0, 1) = 0.0052 vs. lowest 0.0050 from qazsmartvisionai_003

Mugshot profile ranking 2 (out of 595) -- FNIR(1600000, 0, 1) = 0.0391 vs. lowest 0.0390 from qazsmartvisionai_002

Immigration visa-border ranking 9 (out of 546) -- FNIR(1600000, 0, 1) = 0.0008 vs. lowest 0.0008 from qazsmartvisionai_002

Immigration visa-kiosk ranking 10 (out of 497) -- FNIR(1600000, 0, 1) = 0.0376 vs. lowest 0.0334 from viante_003

Identification:

Frontal mugshot ranking 1 (out of 664) -- FNIR(1600000, T, L+1) = 0.0005, FPIR=0.003007

Mugshot webcam ranking 2 (out of 624) -- FNIR(1600000, T, L+1) = 0.0055, FPIR=0.002998 vs. lowest 0.0054 from nec_012

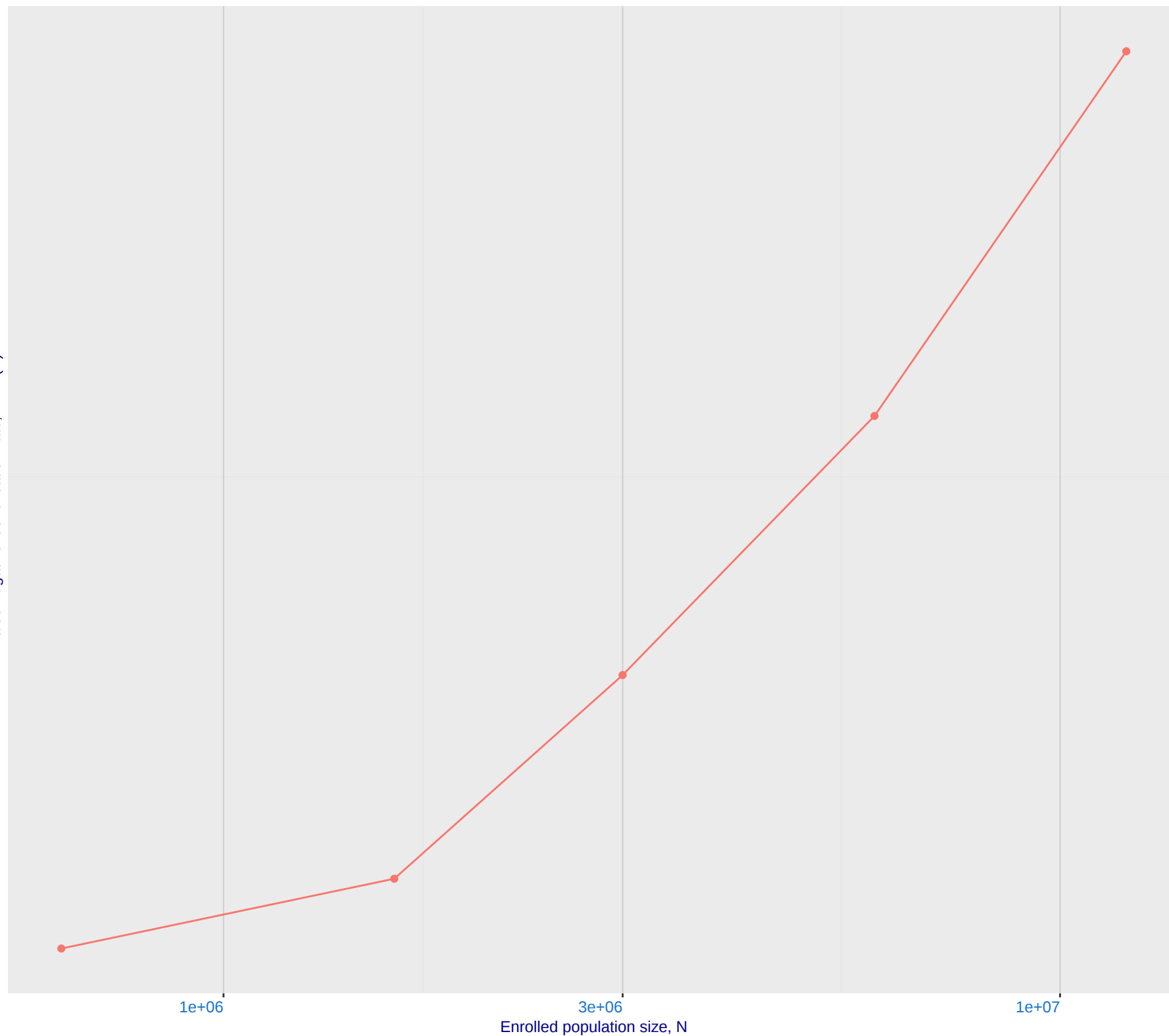
Mugshot profile ranking 26 (out of 594) -- FNIR(1600000, T, L+1) = 0.0750, FPIR=0.002990 vs. lowest 0.0458 from nec_012

Immigration visa-border ranking 3 (out of 545) -- FNIR(1600000, T, L+1) = 0.0013, FPIR=0.002988 vs. lowest 0.0012 from nec_012

Immigration visa-kiosk ranking 9 (out of 497) -- FNIR(1600000, T, L+1) = 0.0474, FPIR=0.002992 vs. lowest 0.0427 from nec_011

B: Mugshot natural images, identification mode: FNIR(N, L+1, T) vs. most accurate (idemia_013)

False negative identification rate, FNIR(N)



enrolment_style

— recent

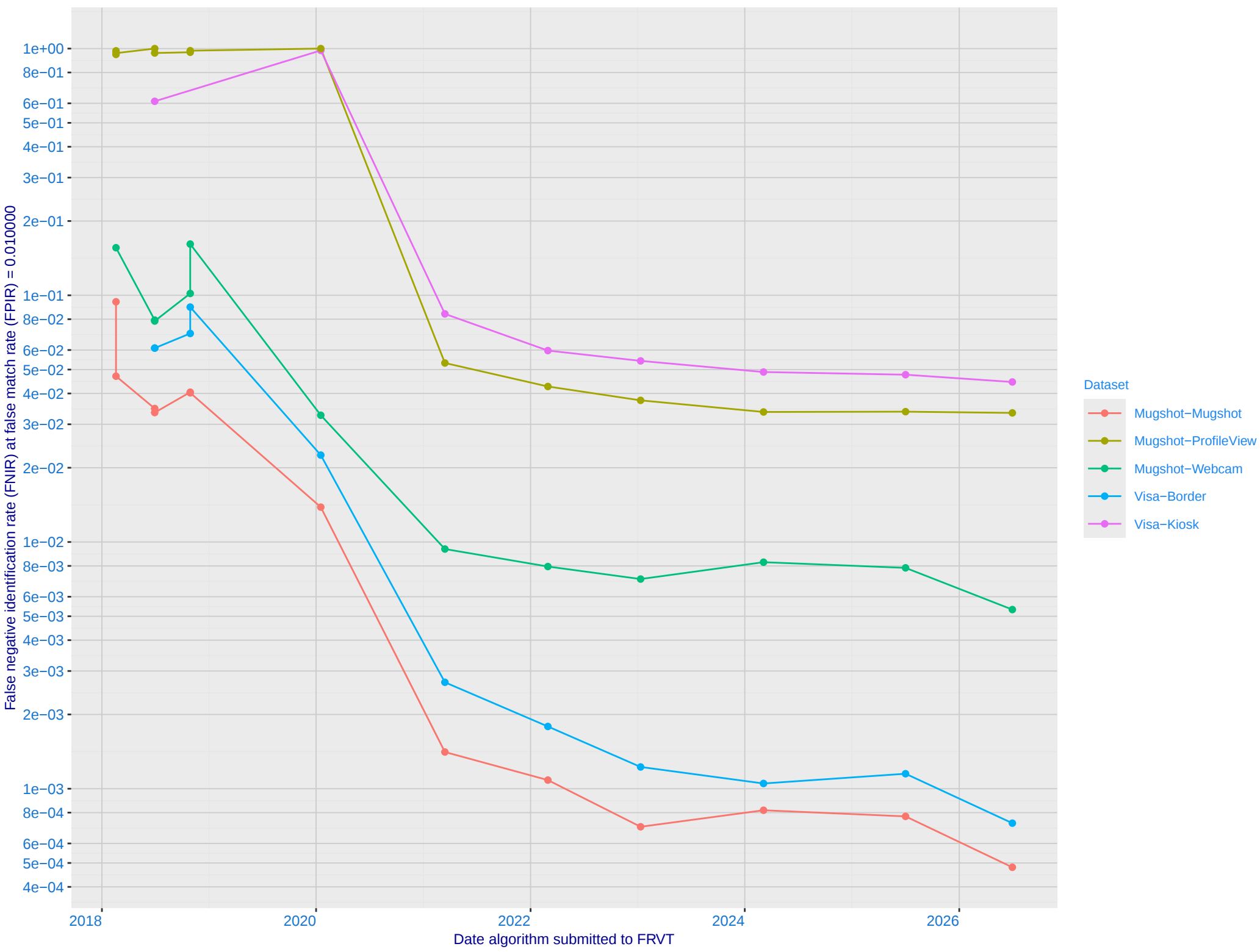
Dataset:

2018 Mugshot

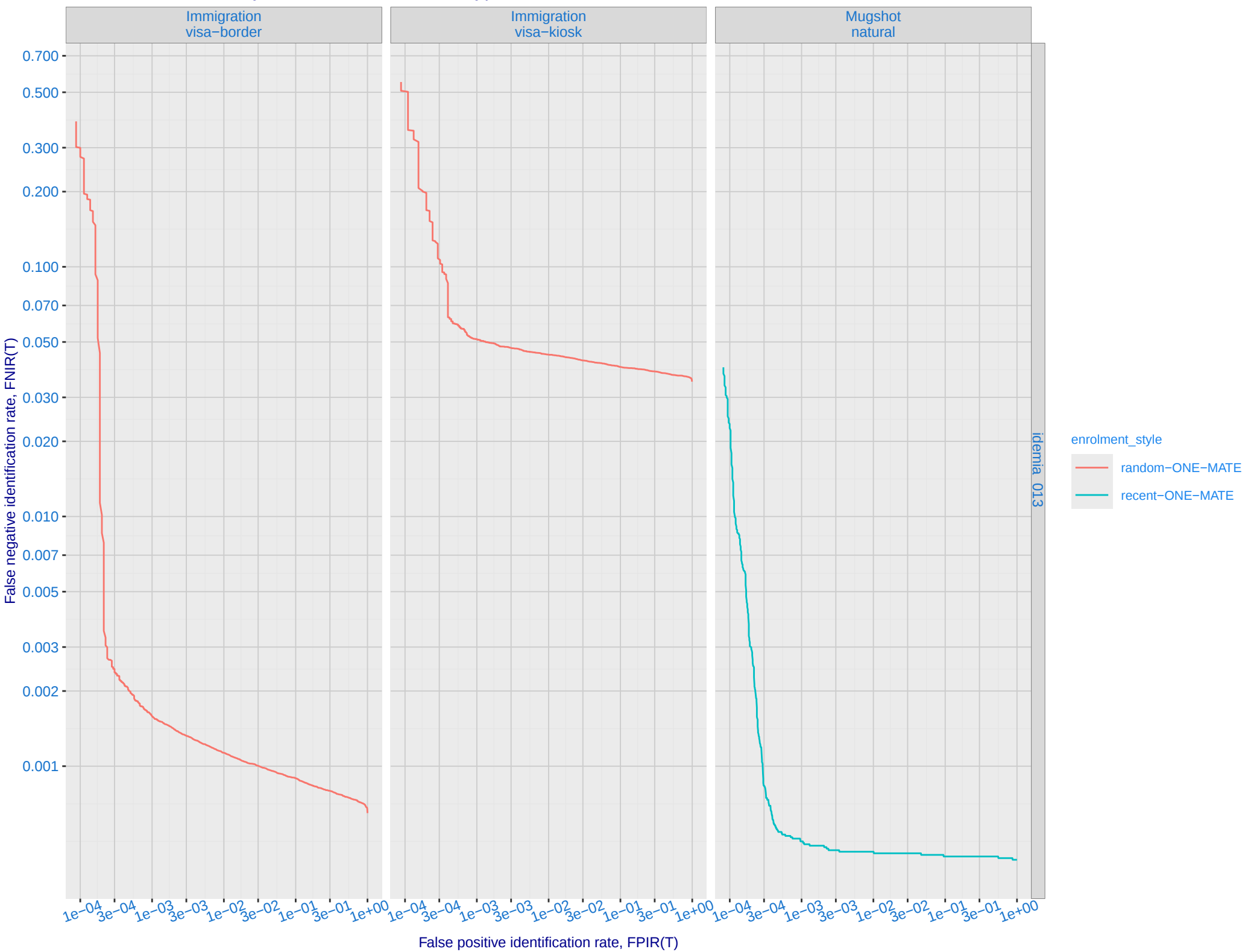
FNIR@FPIR = 0.003

—● idemia_013

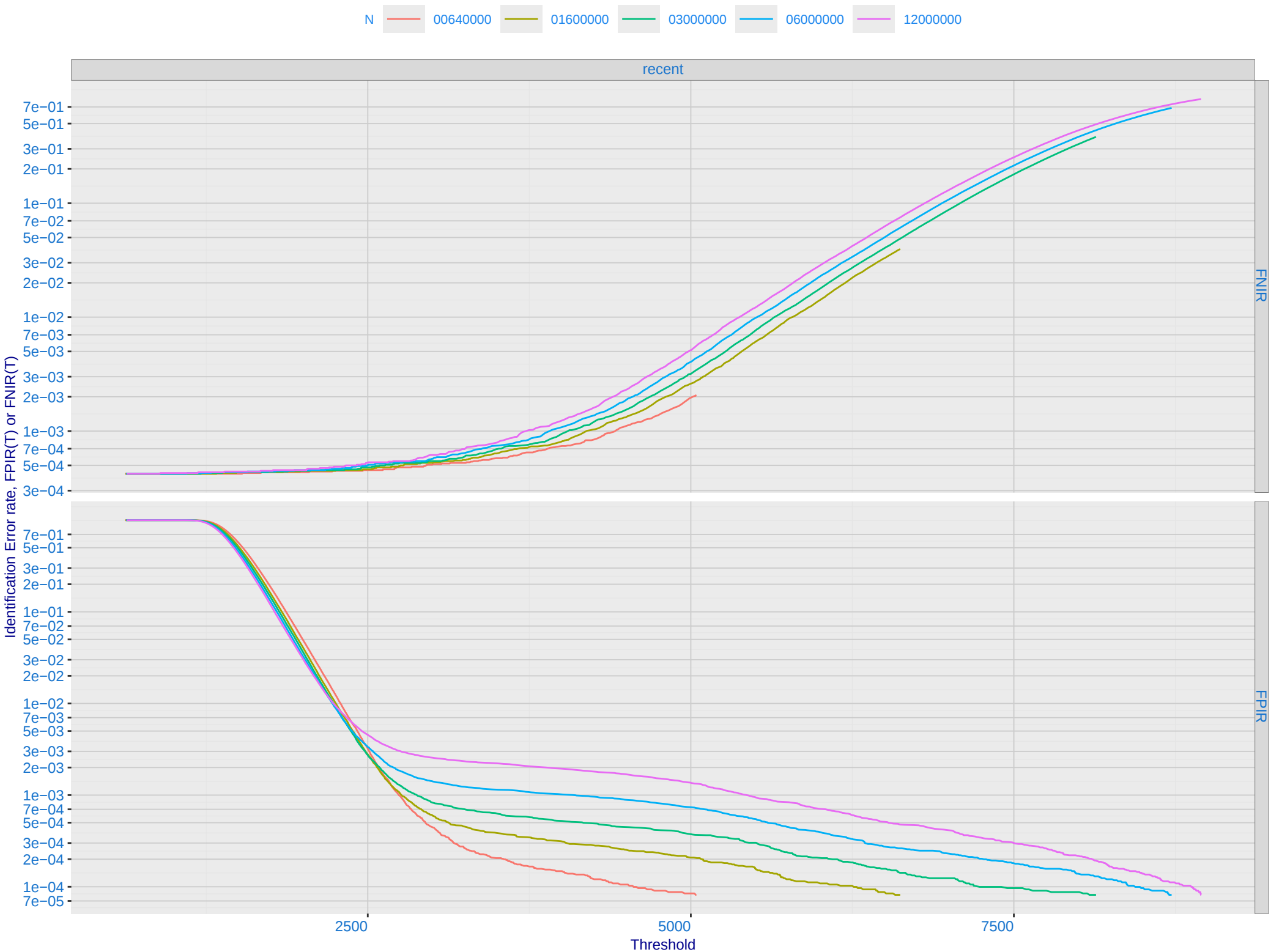
C: Evolution of accuracy for IDEMIA algorithms on three datasets 2018 – present



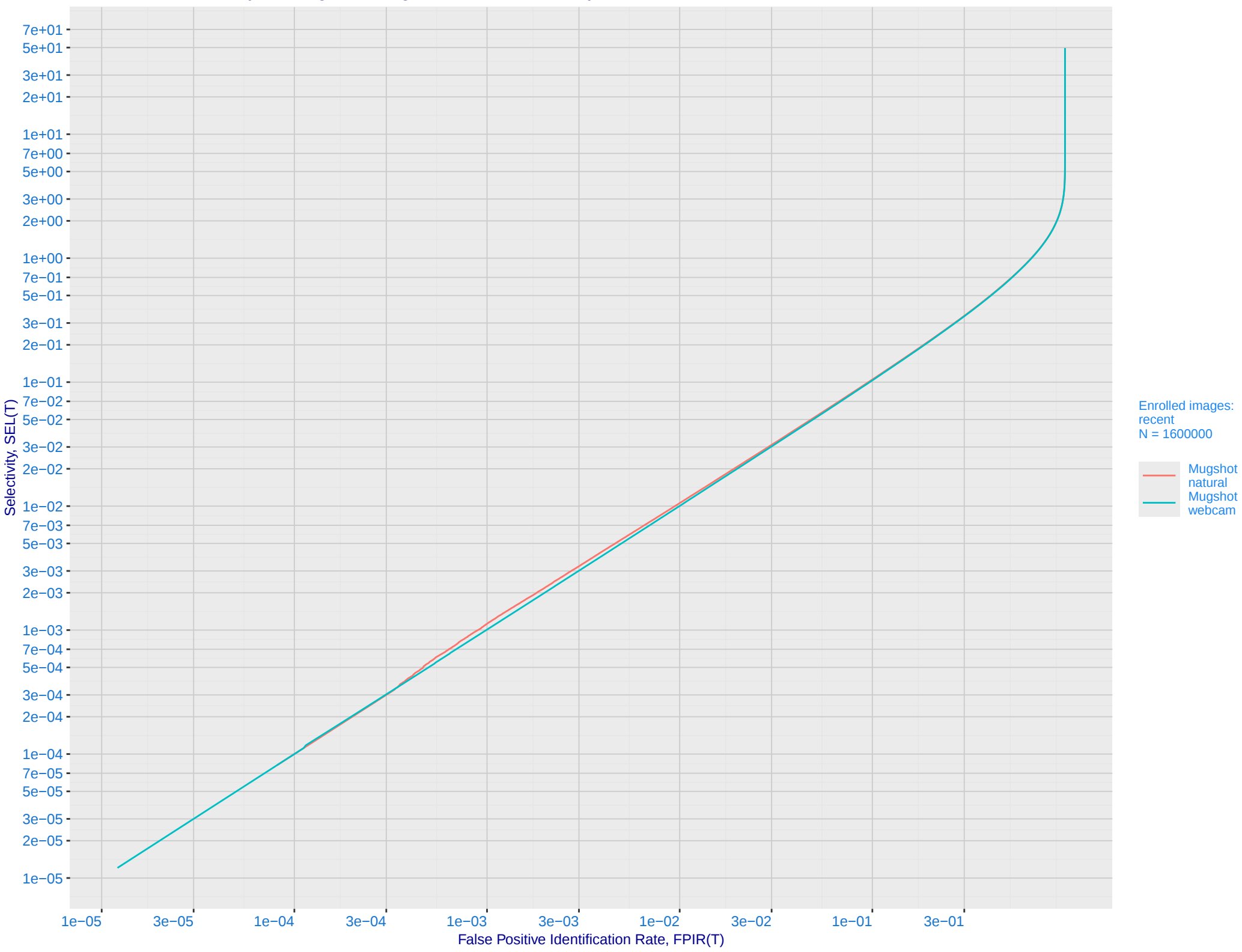
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals



E: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images



F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate



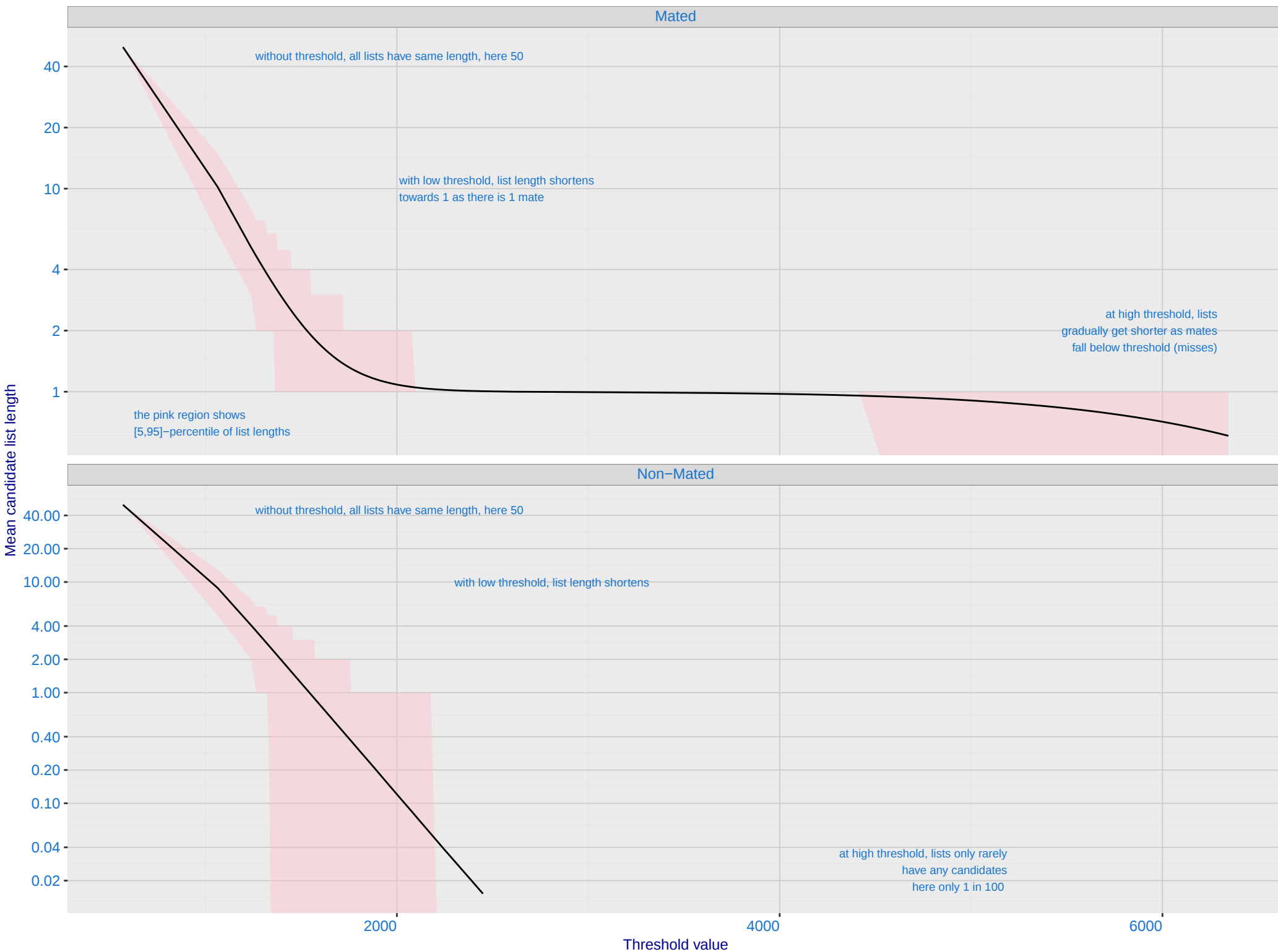
- Immigration visa-border
- Immigration visa-kiosk
- Mugshot
- natural
- Mugshot profile
- Mugshot
- webcam

enrolment_style

—	random
- - - -	recent

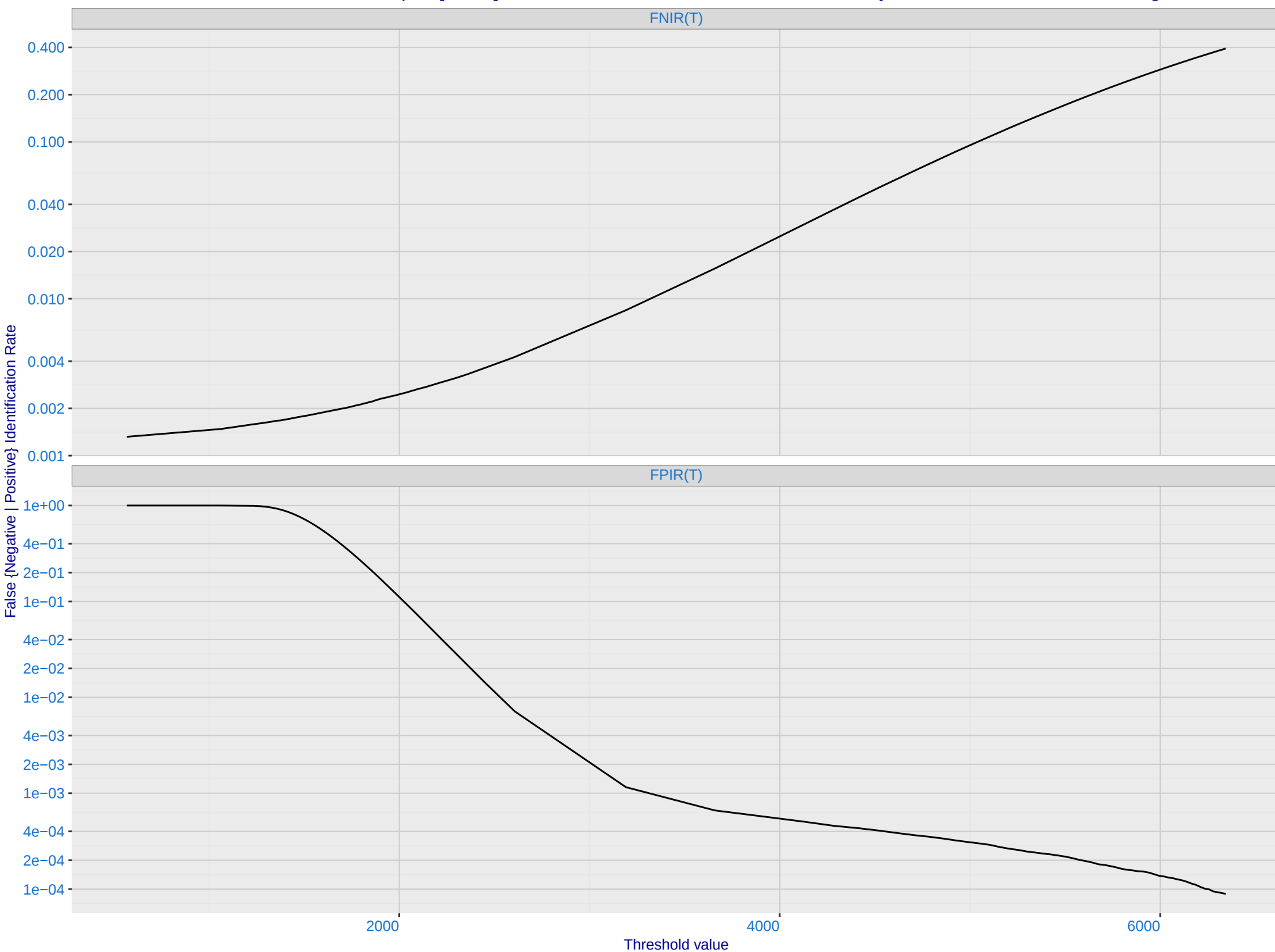
H: Reduced length candidate lists for human review

Dataset is border-border with time-lapse [10,15] YRS with N = 1600000. Probes are 10-15 years later than enrollment image

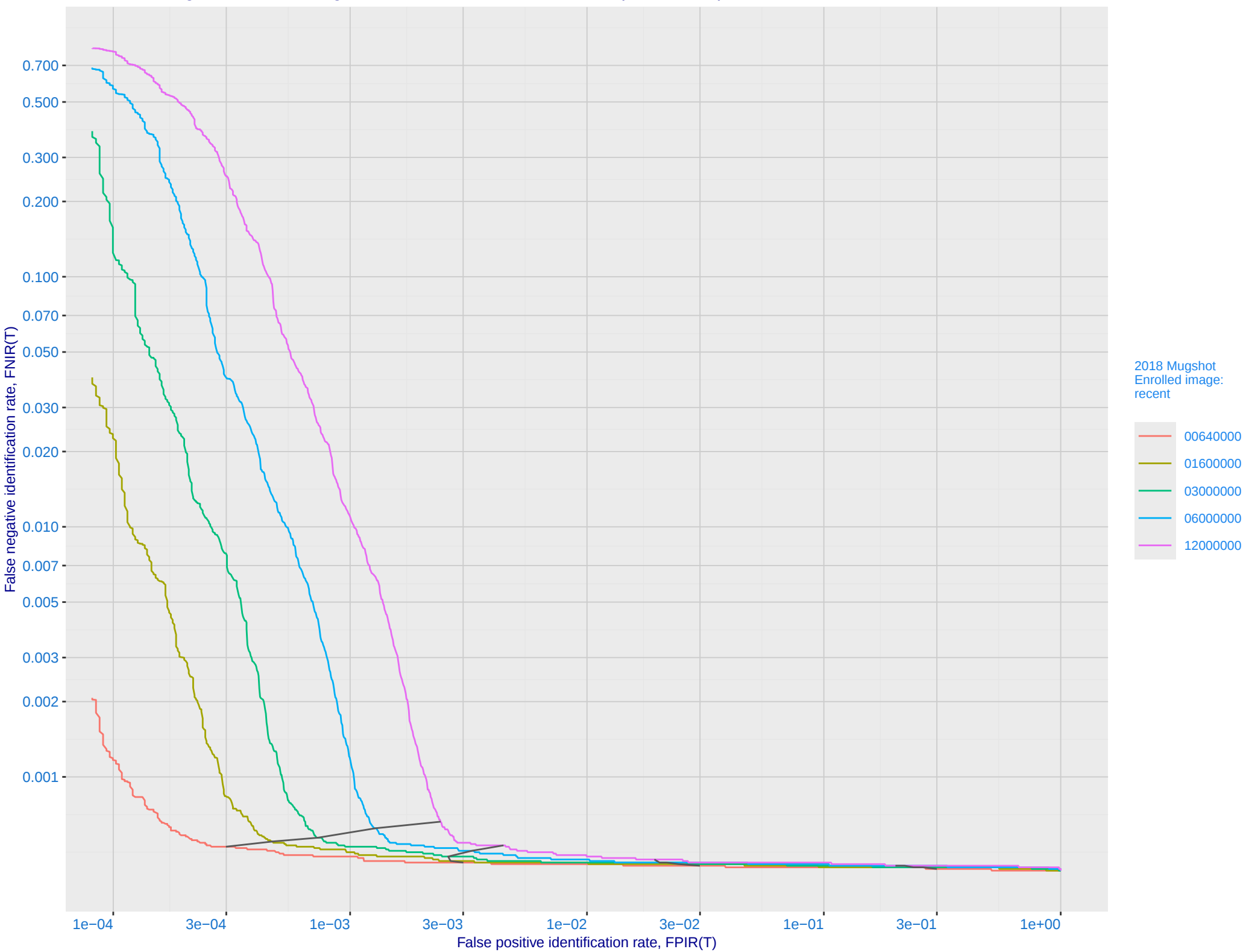


I: FNIR and FPIR dependence on threshold

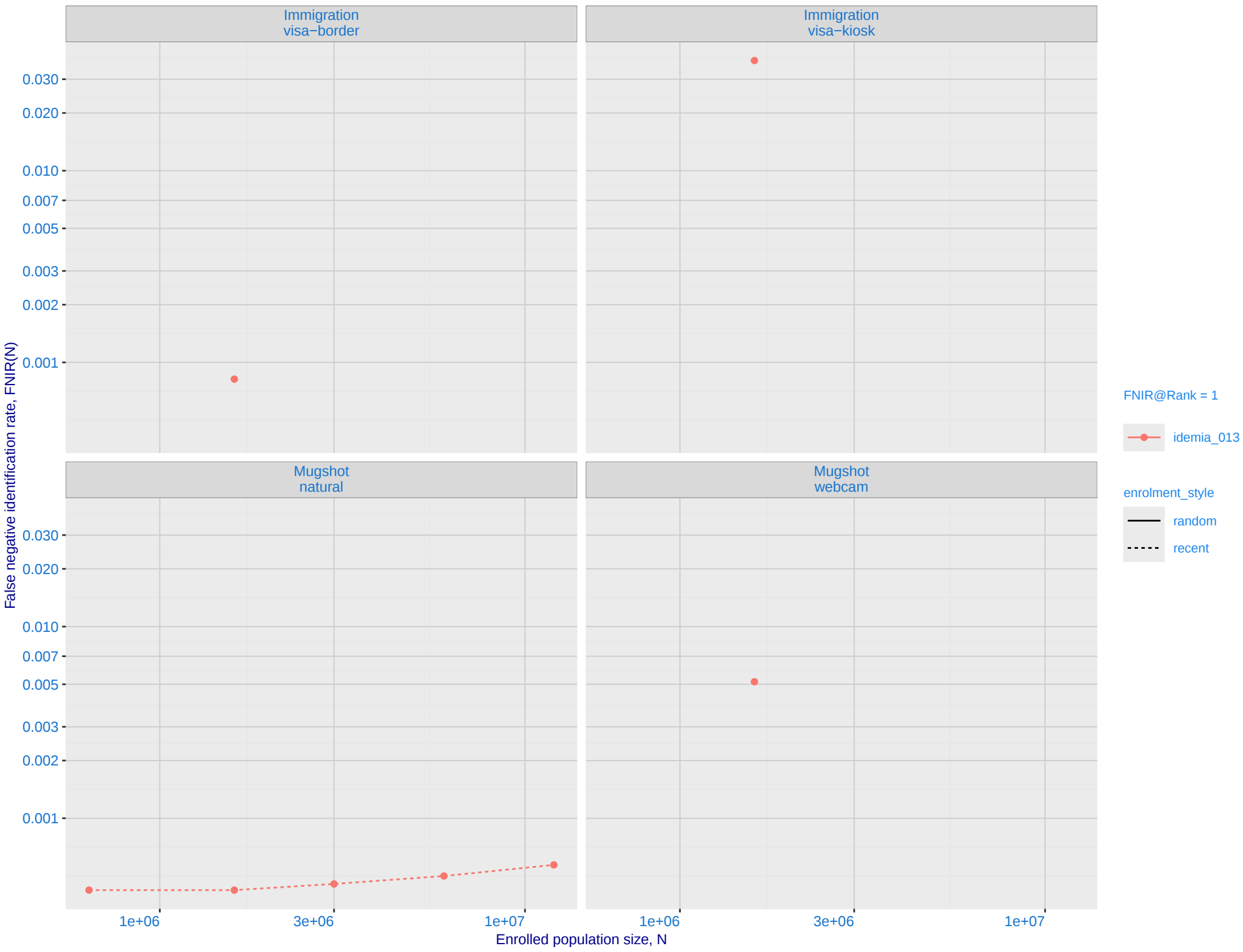
Dataset is border-border with time-lapse [10,15] YRS with N = 1600000. Probes are 10-15 years later than enrollment image



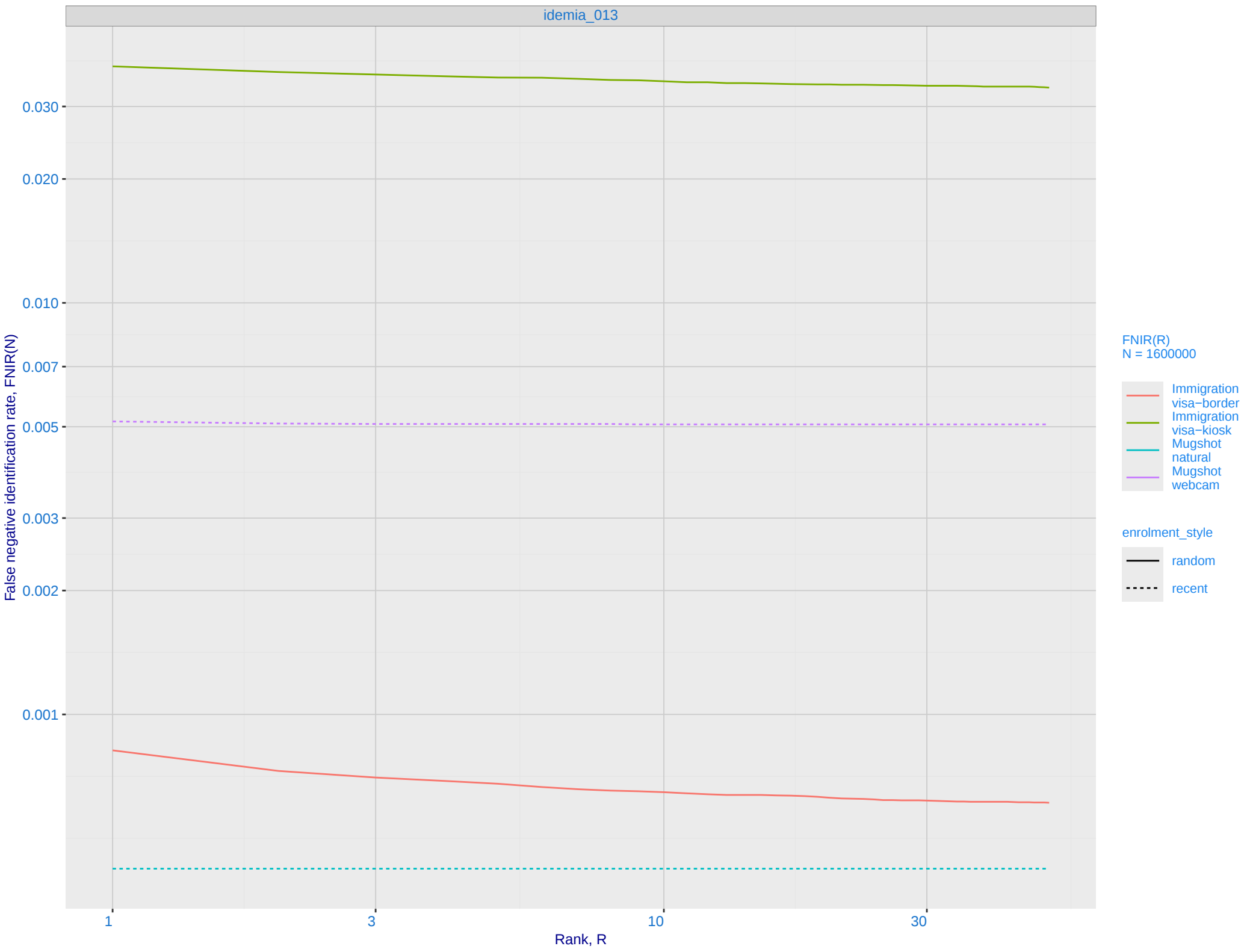
J: DET for Mugshot natural images and various N. Links connect points of equal threshold.



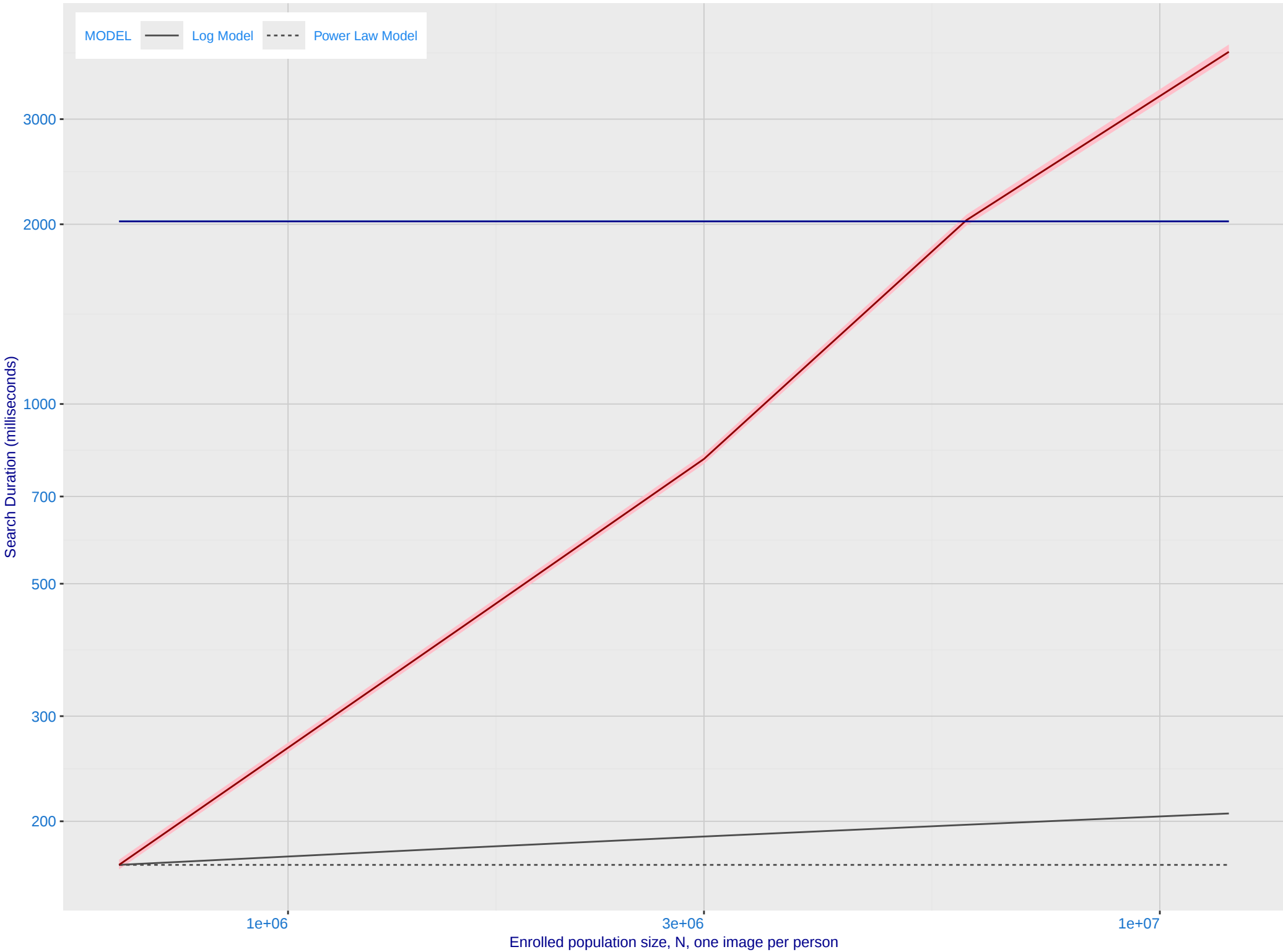
K: Investigational mode: FNIR(N, 1, 0) vs. most accurate (idemia_013)



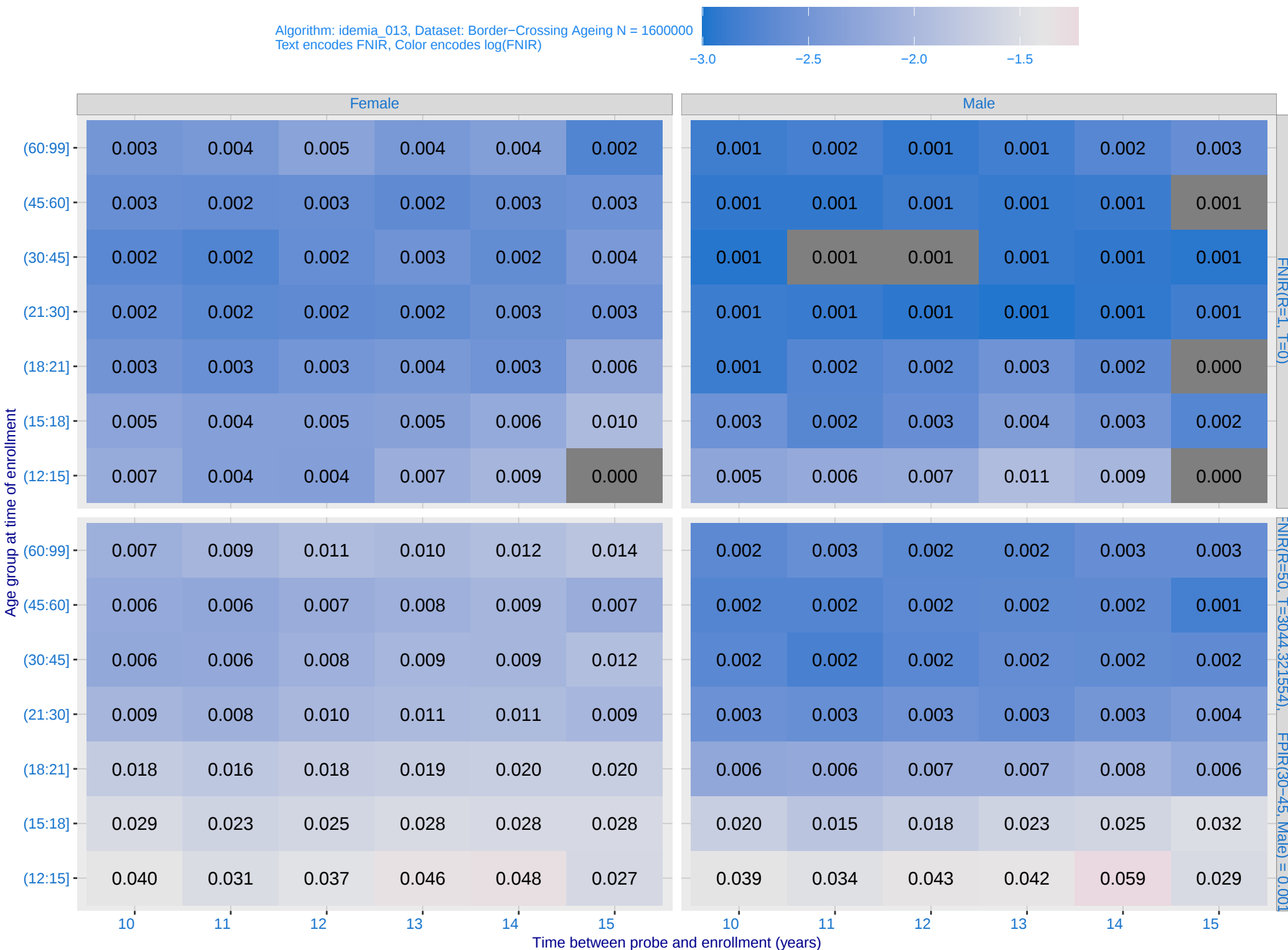
L: Investigational mode: FNIR(1600000, R, 0) by probe type



M: Template duration; search duration vs. N. The blue and pink ribbon covers 95 percent of observed measurements. The template generation time is independent of N. The log and power-law models are fit to the first two (N,T) observations



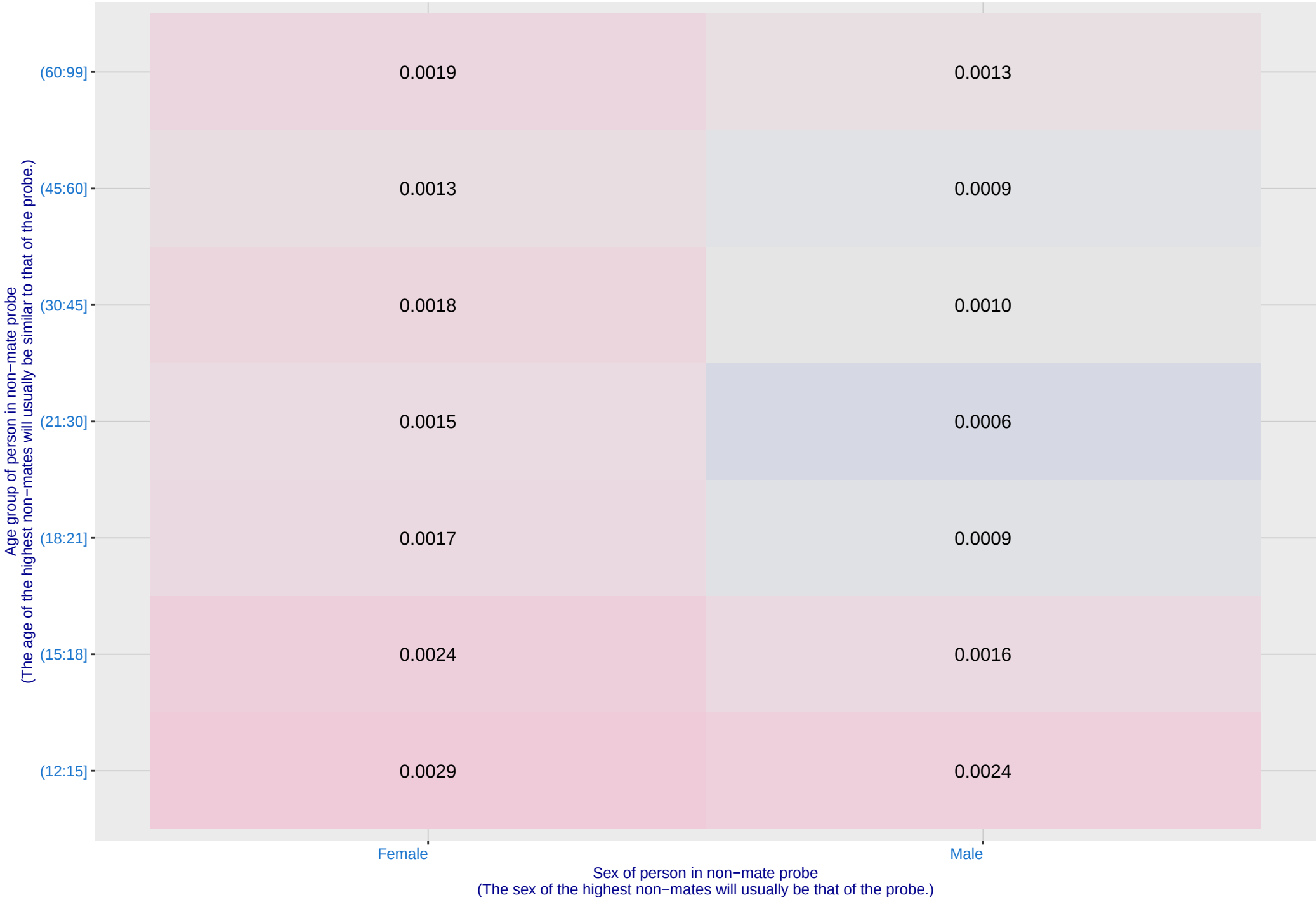
O: FNIR(T, N = 1.6 million) by sex, age and time-lapse. The top row gives investigational rank-1 miss rates. The bottom panels give high threshold for more lights-out identification with low FPIR.



P: FPIR(N = 1.6 million) by sex and age. It is typical for false positive identification rates to be higher in women except in their teens.

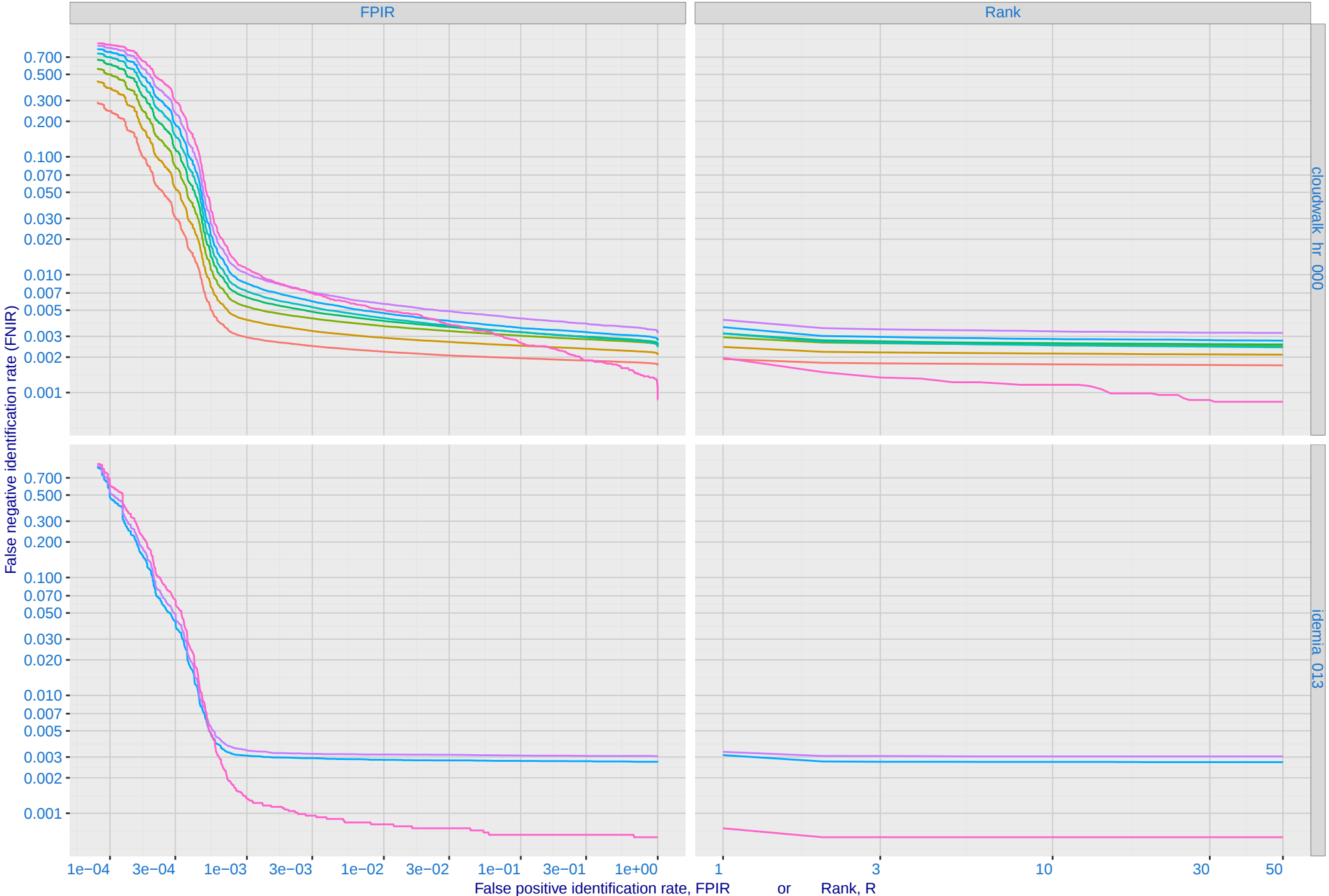
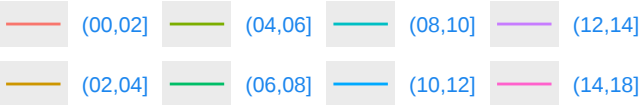
Algorithm: idemia_013, Dataset: Border-Crossing Ageing
Threshold: 3044.321554 set to achive FPIR(30-45, Male) = 0.001

Color encodes log(FPIR)

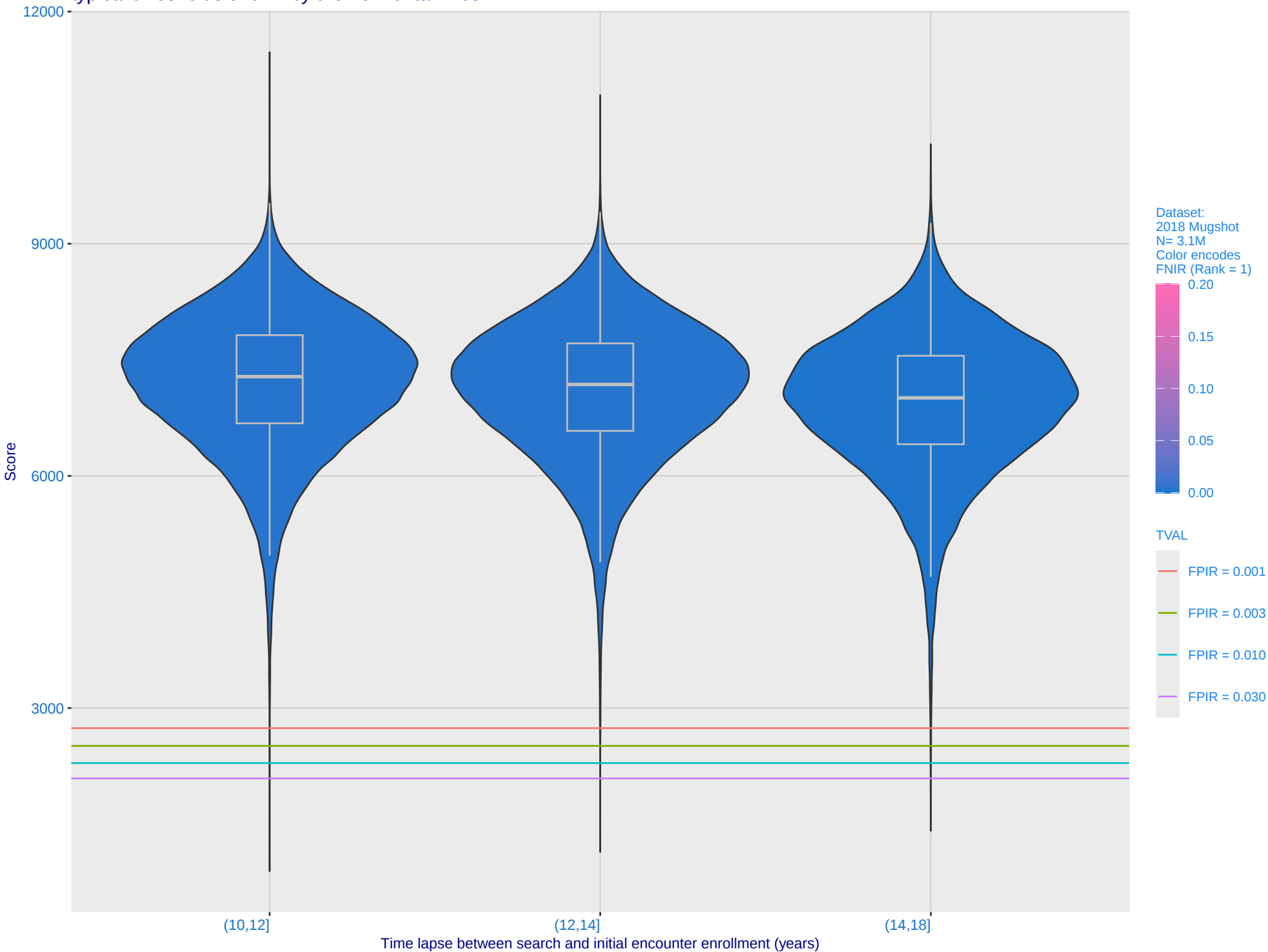


Q: Identification FNIR(N, T, L+1) and Investigational FNIR(N, 0, R) under ageing

Dataset: 2018 Mugshot N = 3068801



R: Decline of genuine scores with ageing, with some eventually dropping below typical thresholds shown by the horizontal lines

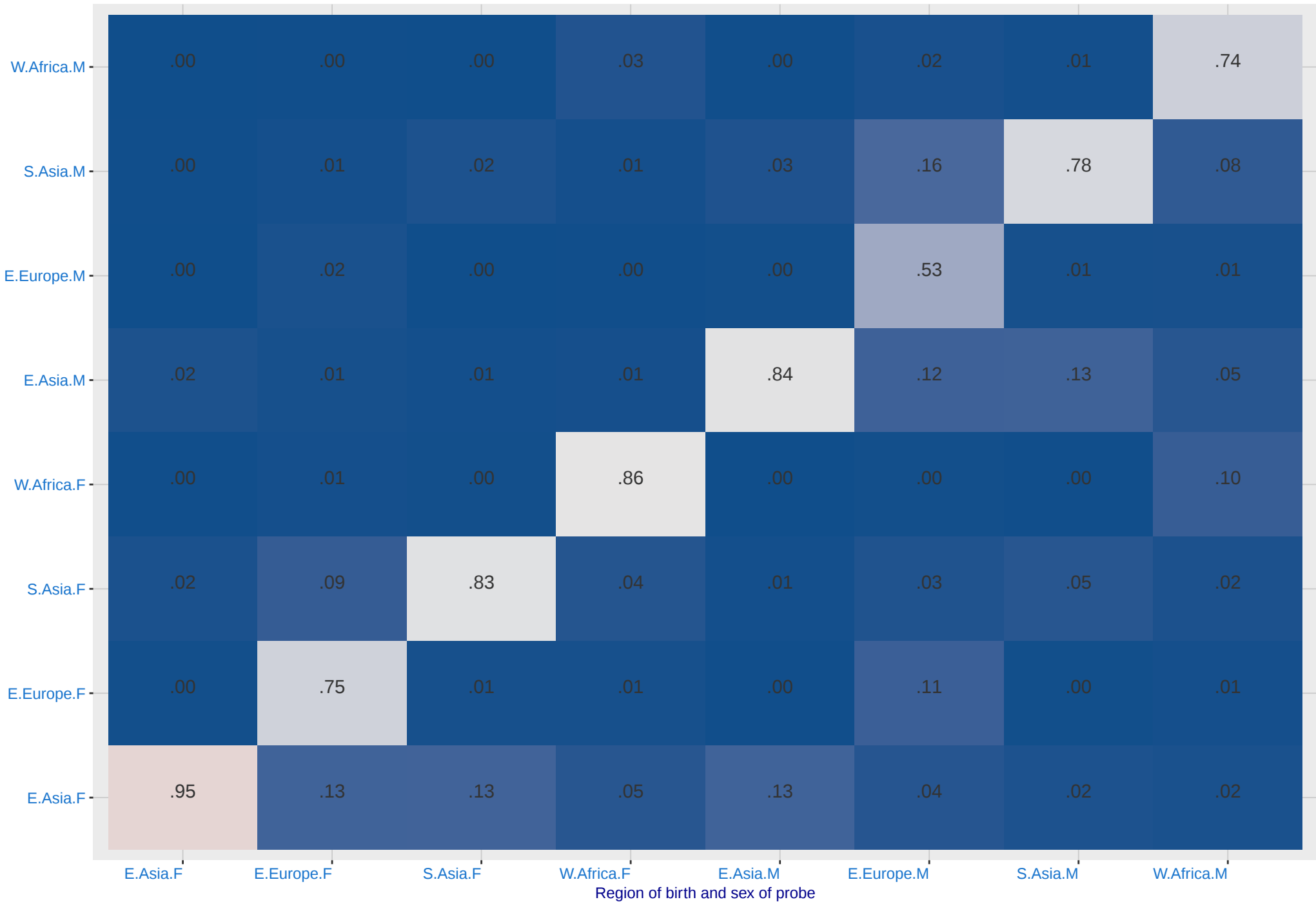


S: Cross demographic group occurrence of probe with top non-mate at T = 0.
The values are proportions, the columns sum to 1.

Cross Demographic Confusion, R = 1, T = 0

0.00 0.25 0.50 0.75 1.00

Region of birth and sex of top non-mate



T: Cross demographic FPIR for algorithm idemia_013, T = 2759.494.
The values are $\log_{10}(\text{FPIR})$

Cross Demographic FPIR: T set for FPIR 0.002000 on E. European Women

