A: Datasheet

Algorithm: intsysmsu_000

Developer: Lomonosov Moscow State University

Submission Date: 2019_08_19

Template size: 2048 bytes

Template time (2.5 percentile): 611 msec

Template time (median): 615 msec

Template time (97.5 percentile): 1057 msec

Investigation:

Frontal mugshot ranking 240 (out of 279) –– FNIR(1600000, 0, 1) = 0.1457 vs. lowest 0.0009 from sensetime_005

Mugshot webcam ranking 105 (out of 241) –– FNIR(1600000, 0, 1) = 0.0234 vs. lowest 0.0062 from sensetime_005

Mugshot profile ranking 70 (out of 210) –– FNIR(1600000, 0, 1) = 0.5624 vs. lowest 0.0587 from xforwardai_002

Immigration visa–border ranking 116 (out of 168) –– FNIR(1600000, 0, 1) = 0.0717 vs. lowest 0.0013 from visionlabs_010

Immigration visa–kiosk ranking 60 (out of 165) –– FNIR(1600000, 0, 1) = 0.1317 vs. lowest 0.0568 from cloudwalk_hr_000

Identification:

Frontal mugshot ranking 273 (out of 279) –– FNIR(1600000, T, L+1) = 0.9983, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004
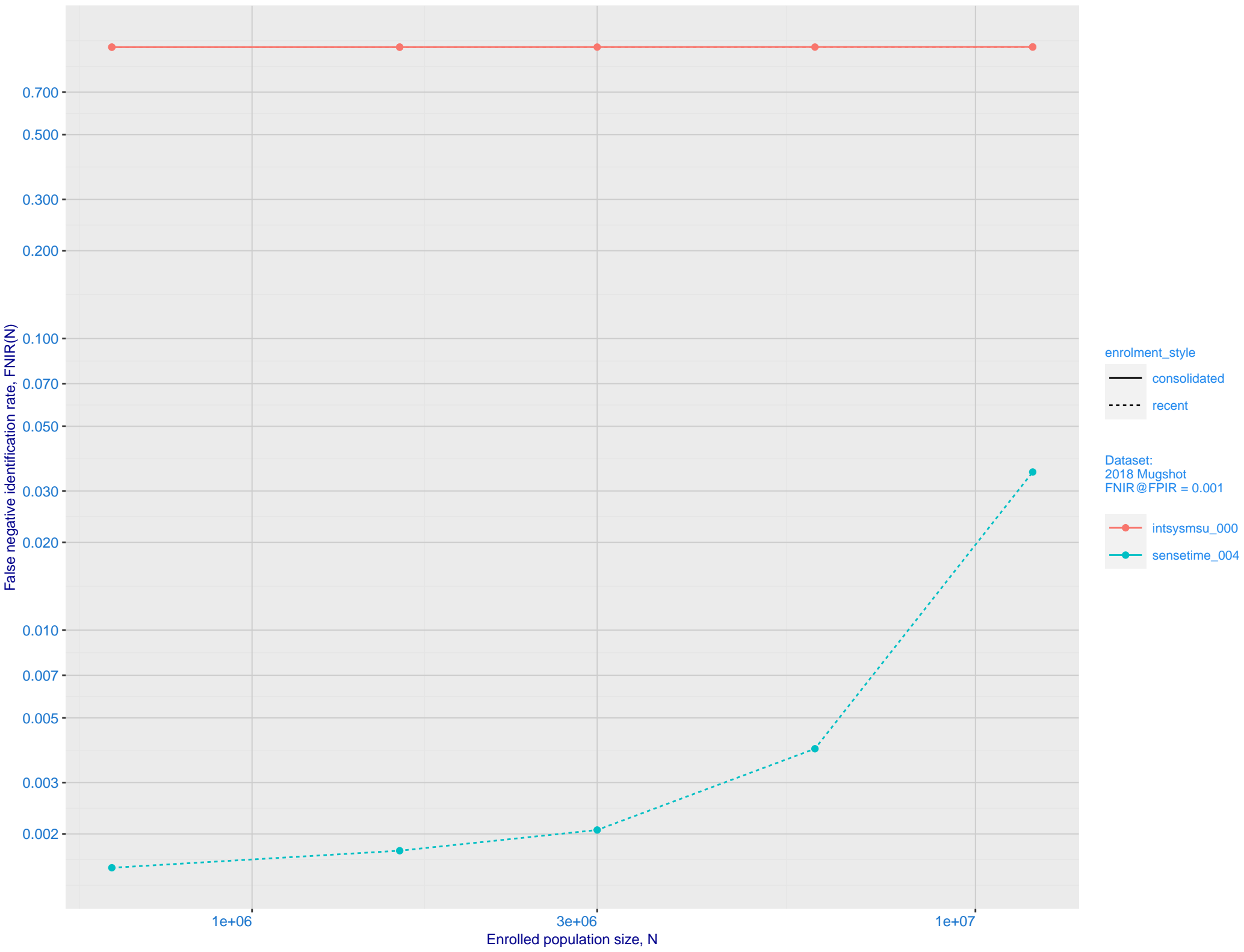
Mugshot webcam ranking 231 (out of 236) –– FNIR(1600000, T, L+1) = 0.9997, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003

Mugshot profile ranking 160 (out of 209) –– FNIR(1600000, T, L+1) = 0.9996, FPIR=0.001000 vs. lowest 0.1331 from cloudwalk_hr_000
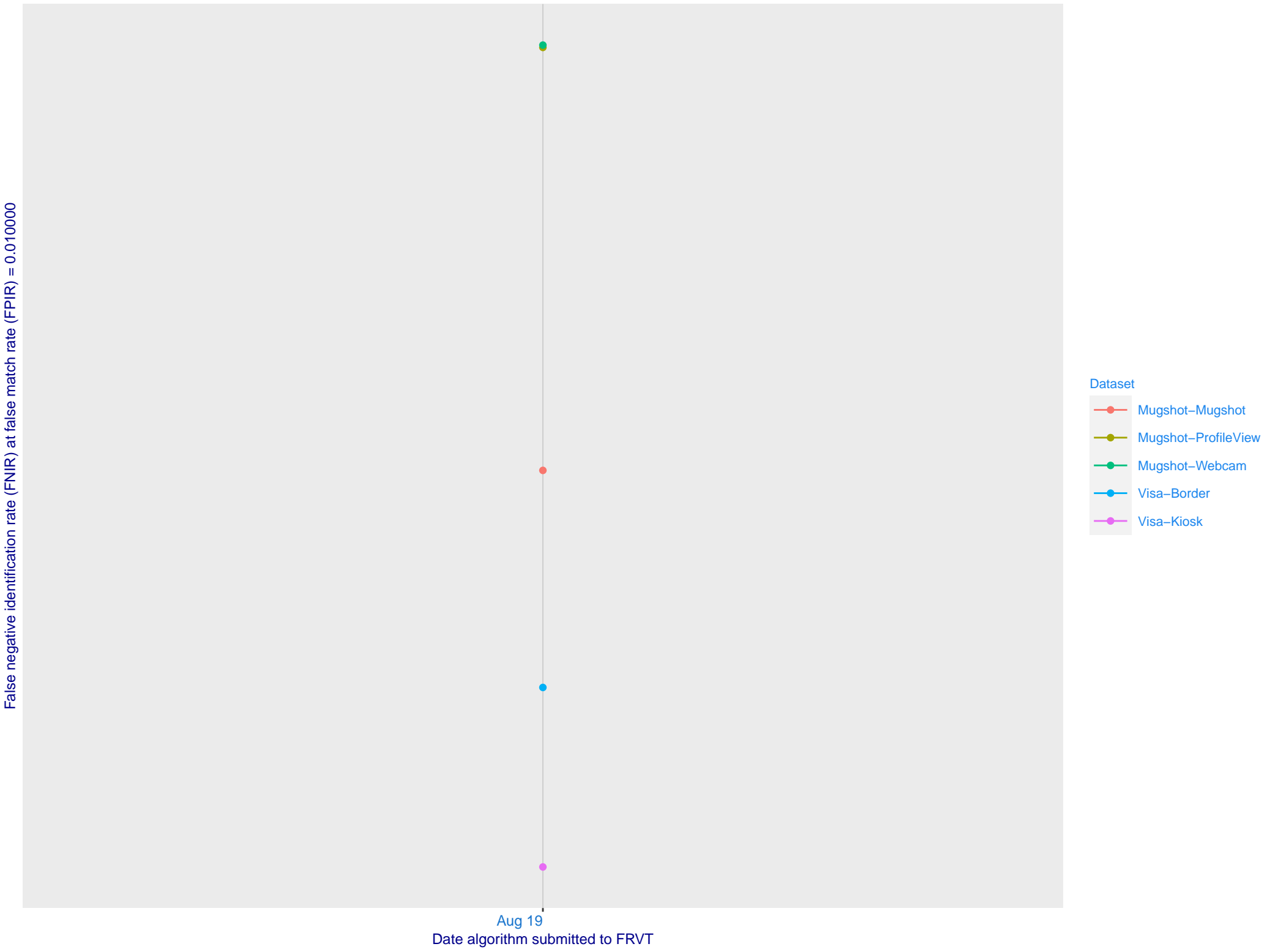
Immigration visa–border ranking 155 (out of 167) –– FNIR(1600000, T, L+1) = 0.9988, FPIR=0.001000 vs. lowest 0.0047 from idemia_008

Immigration visa–kiosk ranking 144 (out of 162) –– FNIR(1600000, T, L+1) = 0.9990, FPIR=0.001000 vs. lowest 0.0996 from cloudwalk_hr_000
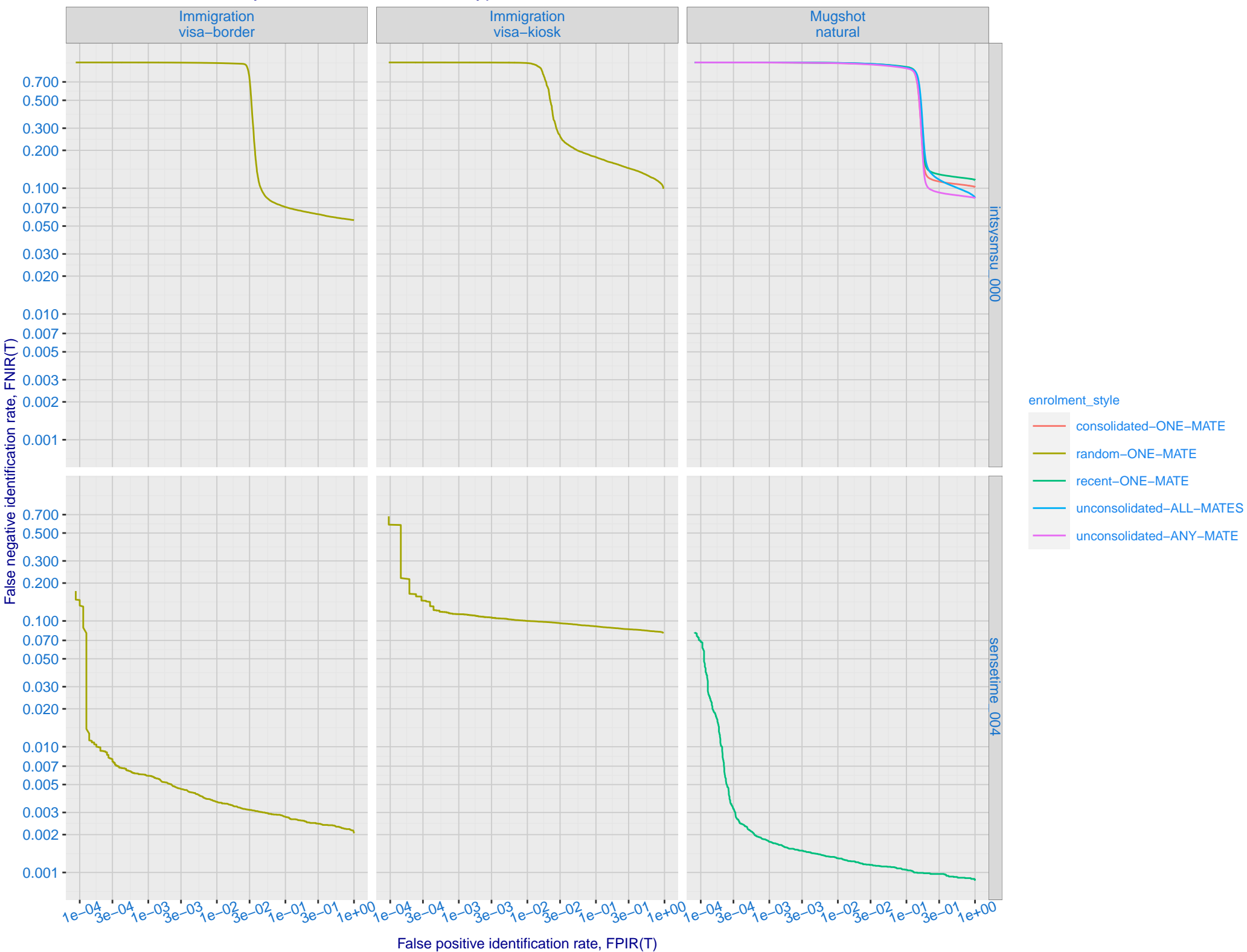
B: Mugshot natural images, identification mode: FNIR(N, L+1, T) vs. most accurate (sensetime_004)
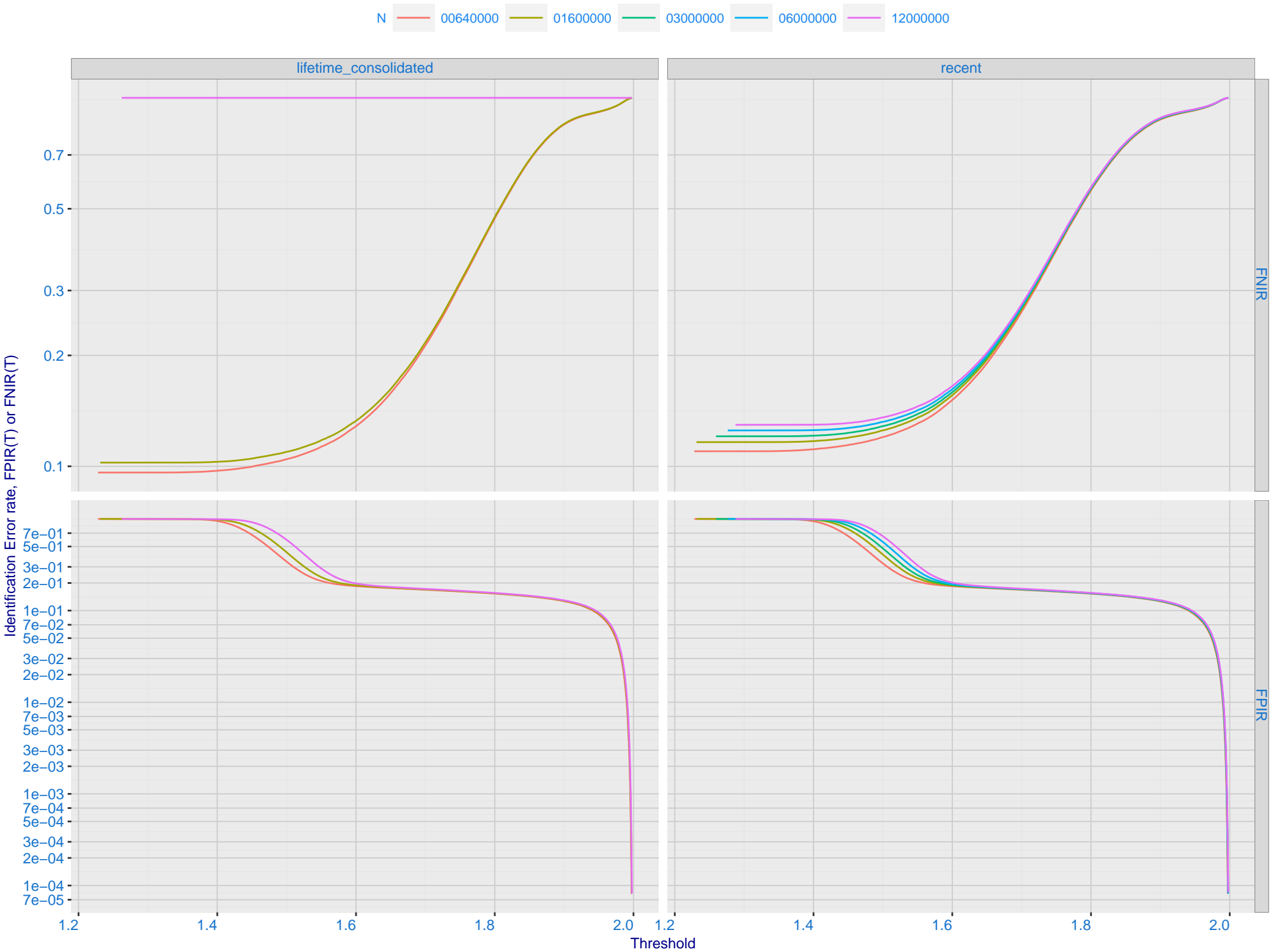
C: Evolution of accuracy for INTSYSMSU algorithms on three datasets 2018 – present

False negative identification rate (FNIR) at false match rate (FPIR) = 0.010000

Date algorithm submitted to FRVT

Aug 19

Dataset
- Mugshot–Mugshot
- Mugshot–ProfileView
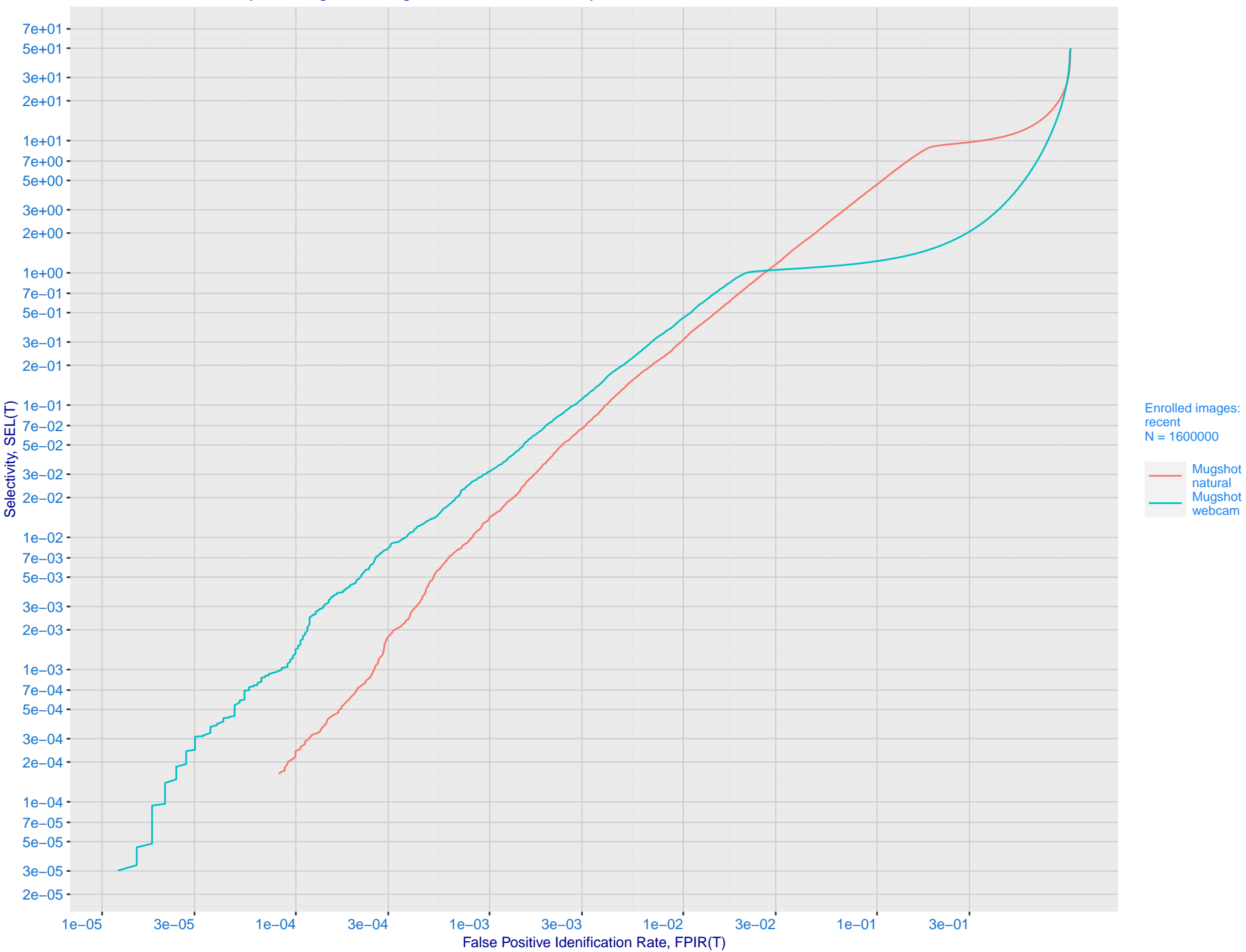- Mugshot–Webcam
- Visa–Border
- Visa–Kiosk

D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals
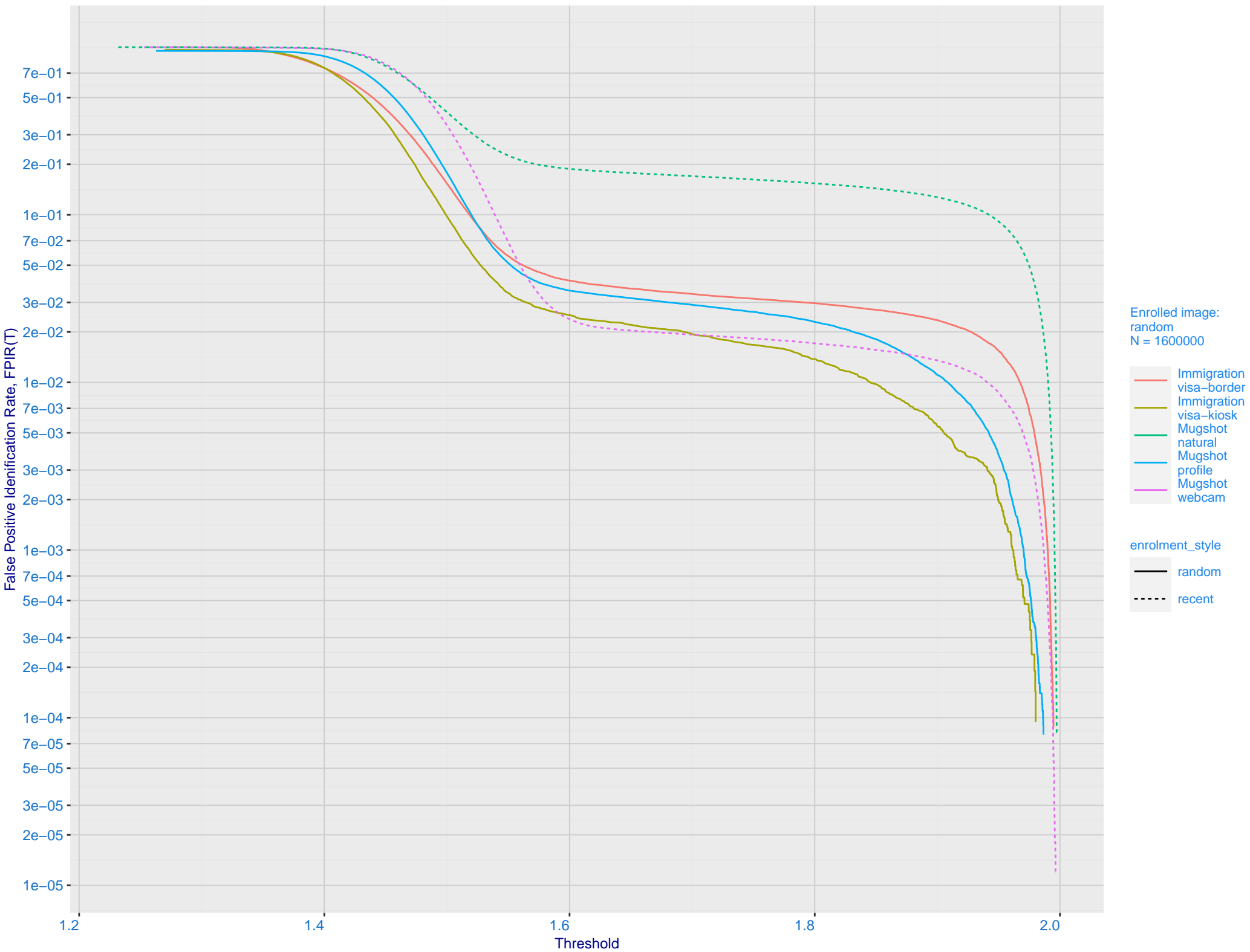
E: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images
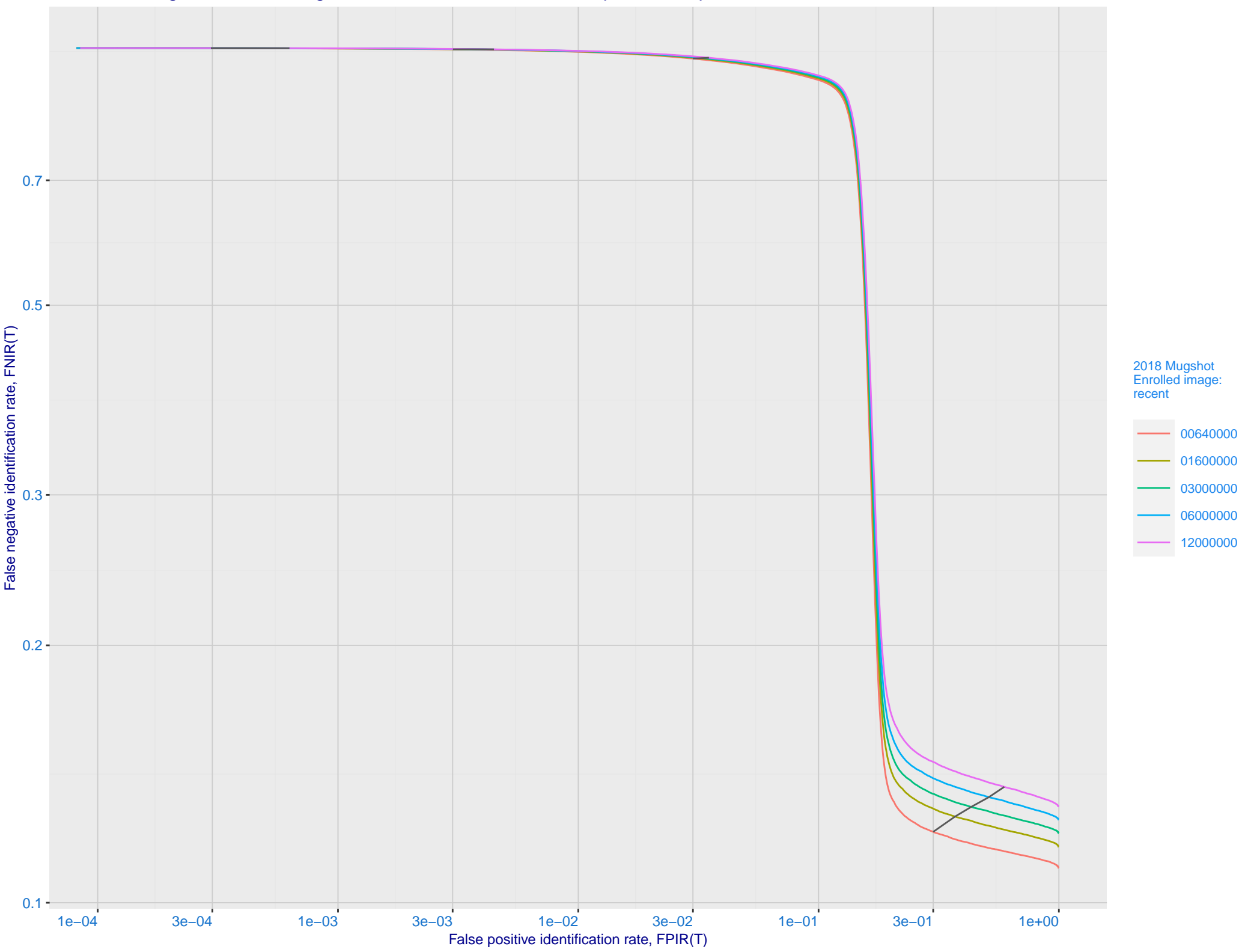
F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate
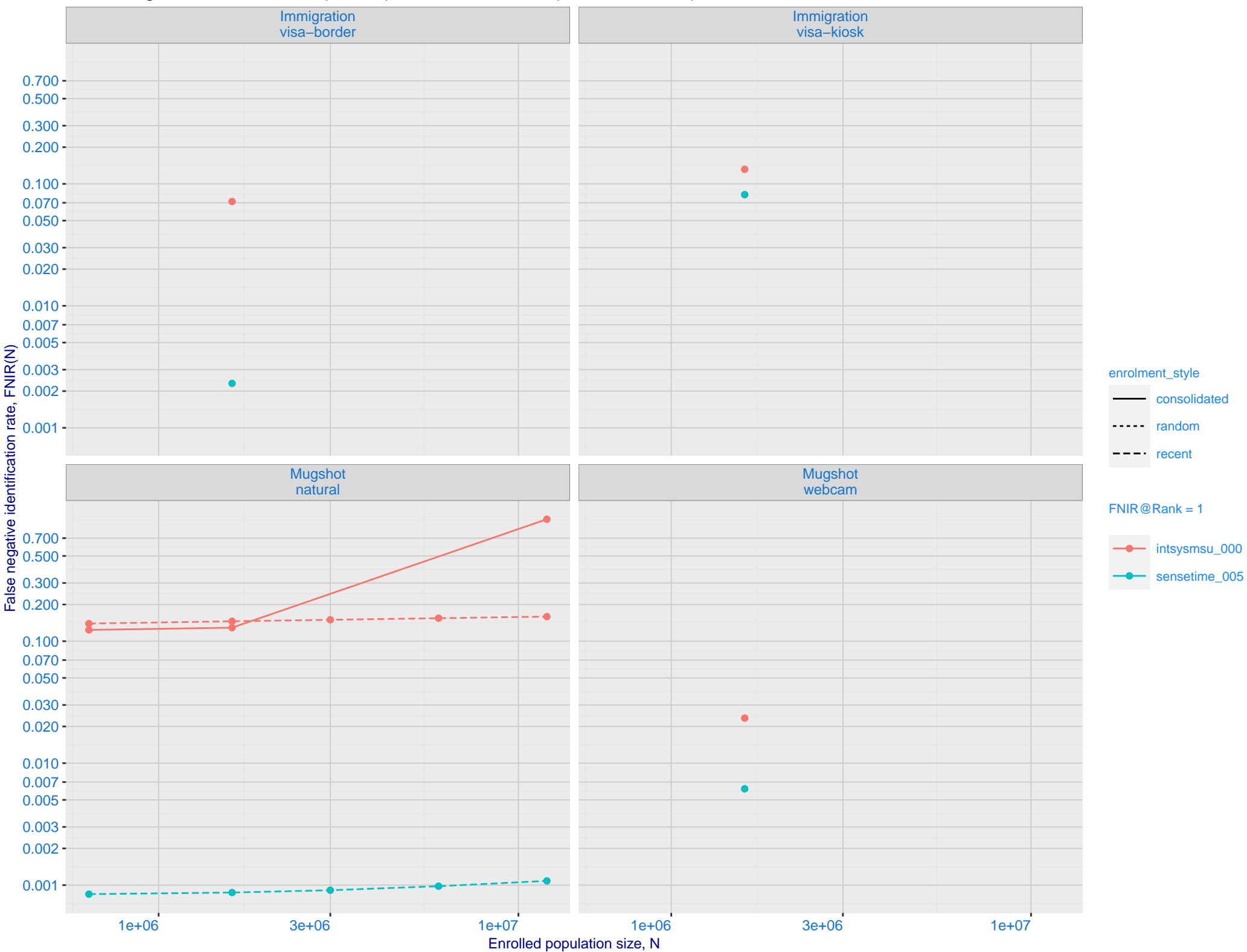
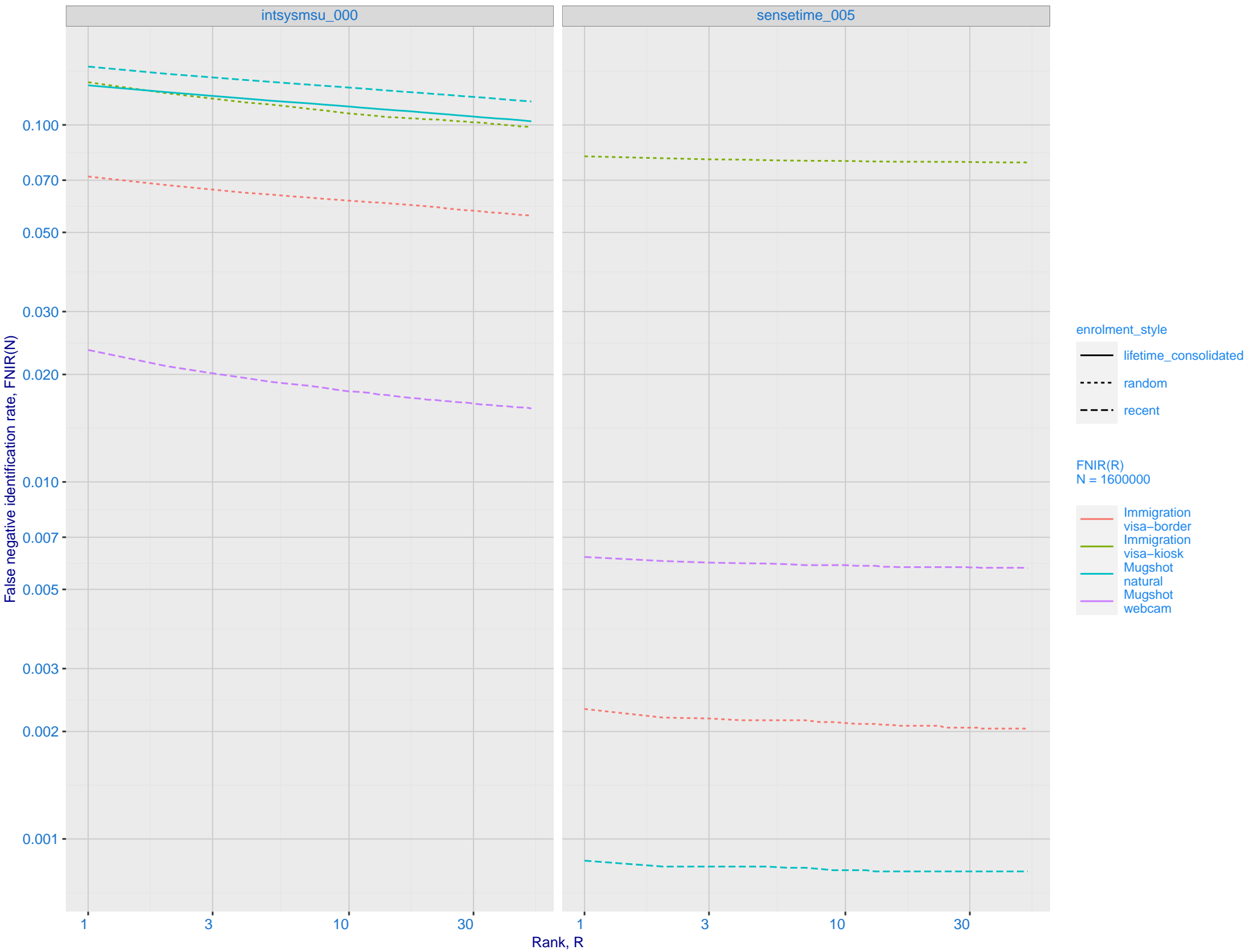G: FPIR dependence on T by probe type for N = 1600000 subjects

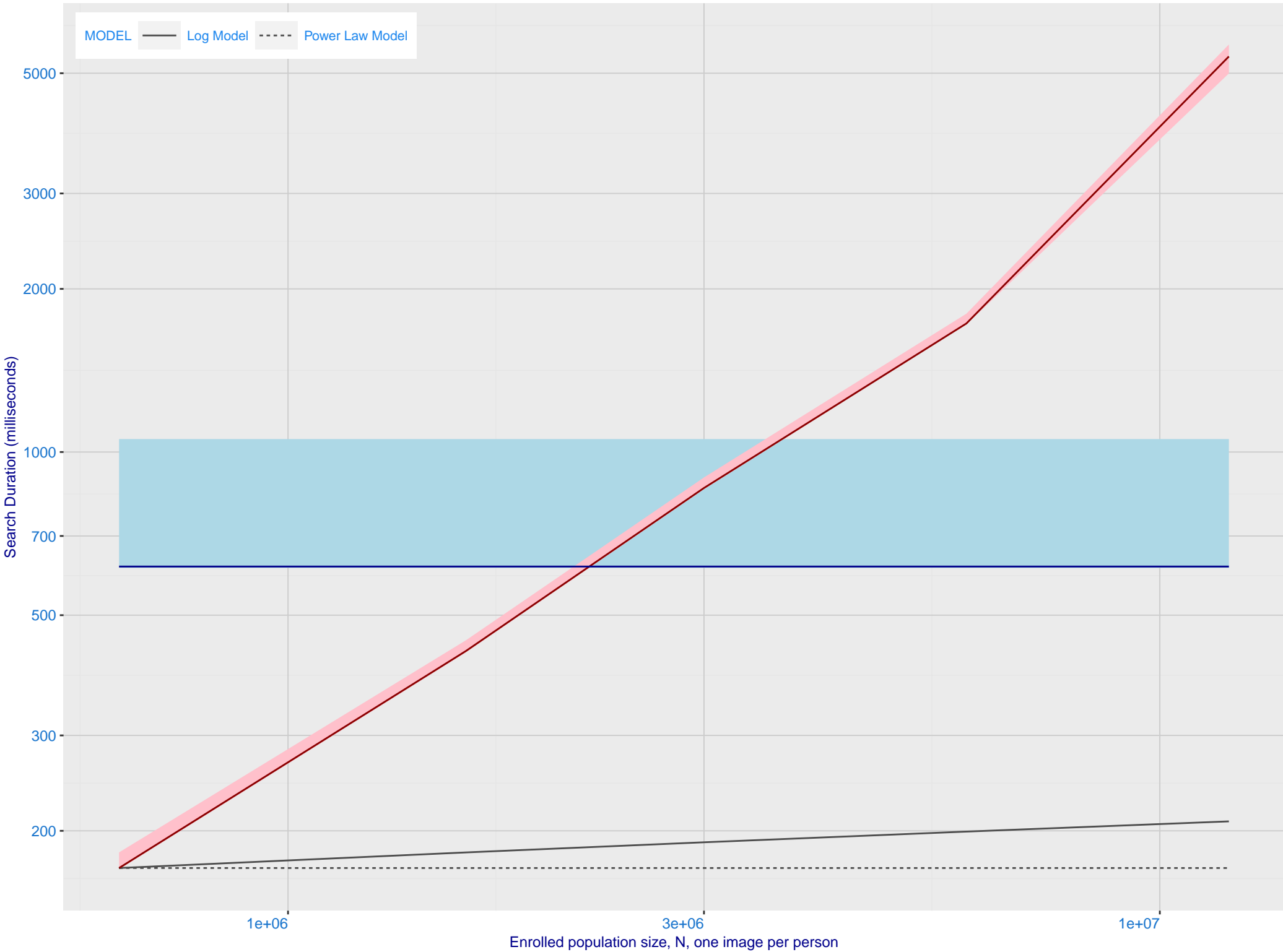J: DET for Mugshot natural images and various N. Links connect points of equal threshold.

K: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005)

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

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

Dataset: 2018 Mugshot   N = 3068801

- (00,02]
- (02,04]
- (04,06]
- (06,08]
- (08,10]
- (10,12]
- (12,14]
- (14,18]

FPIR

Rank

False negative identification rate (FNIR)

cloudwalk_hr_000

False positive identification rate, FPIR   or   Rank, R