A: Datasheet

Algorithm: tevian_5

Developer: Tevian

Submission Date: 2018_10_30

Template size: 2048 bytes

Template time (2.5 percentile): 368 msec

Template time (median): 405 msec

Template time (97.5 percentile): 611 msec

Investigation:

Frontal mugshot ranking 116 (out of 279) –– FNIR(1600000, 0, 1) = 0.0073 vs. lowest 0.0009 from sensetime_005

Mugshot webcam ranking 120 (out of 241) –– FNIR(1600000, 0, 1) = 0.0282 vs. lowest 0.0062 from sensetime_005

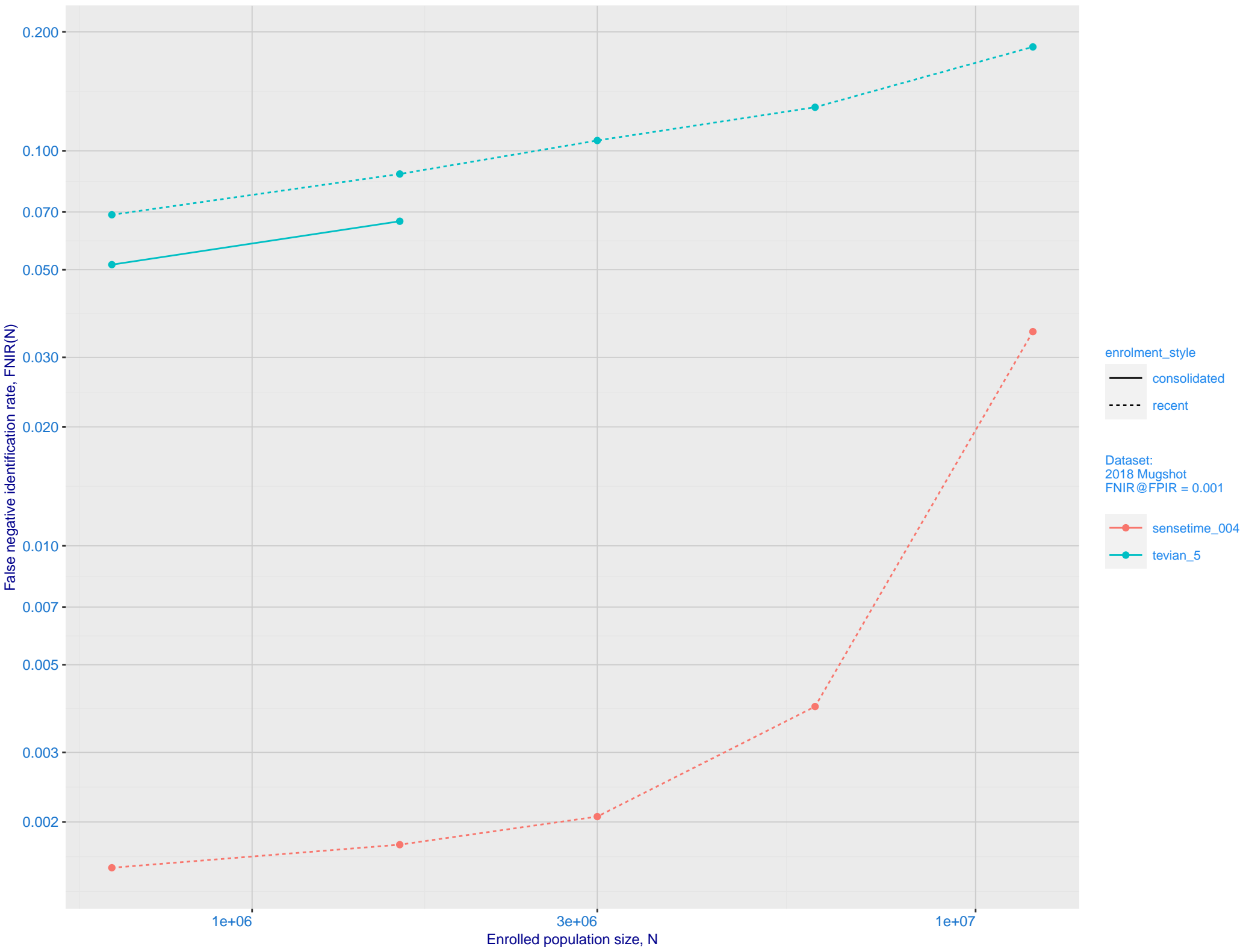Mugshot profile ranking 52 (out of 210) –– FNIR(1600000, 0, 1) = 0.4667 vs. lowest 0.0587 from xforwardai_002

Identification:

Frontal mugshot ranking 135 (out of 279) –– FNIR(1600000, T, L+1) = 0.0873, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004
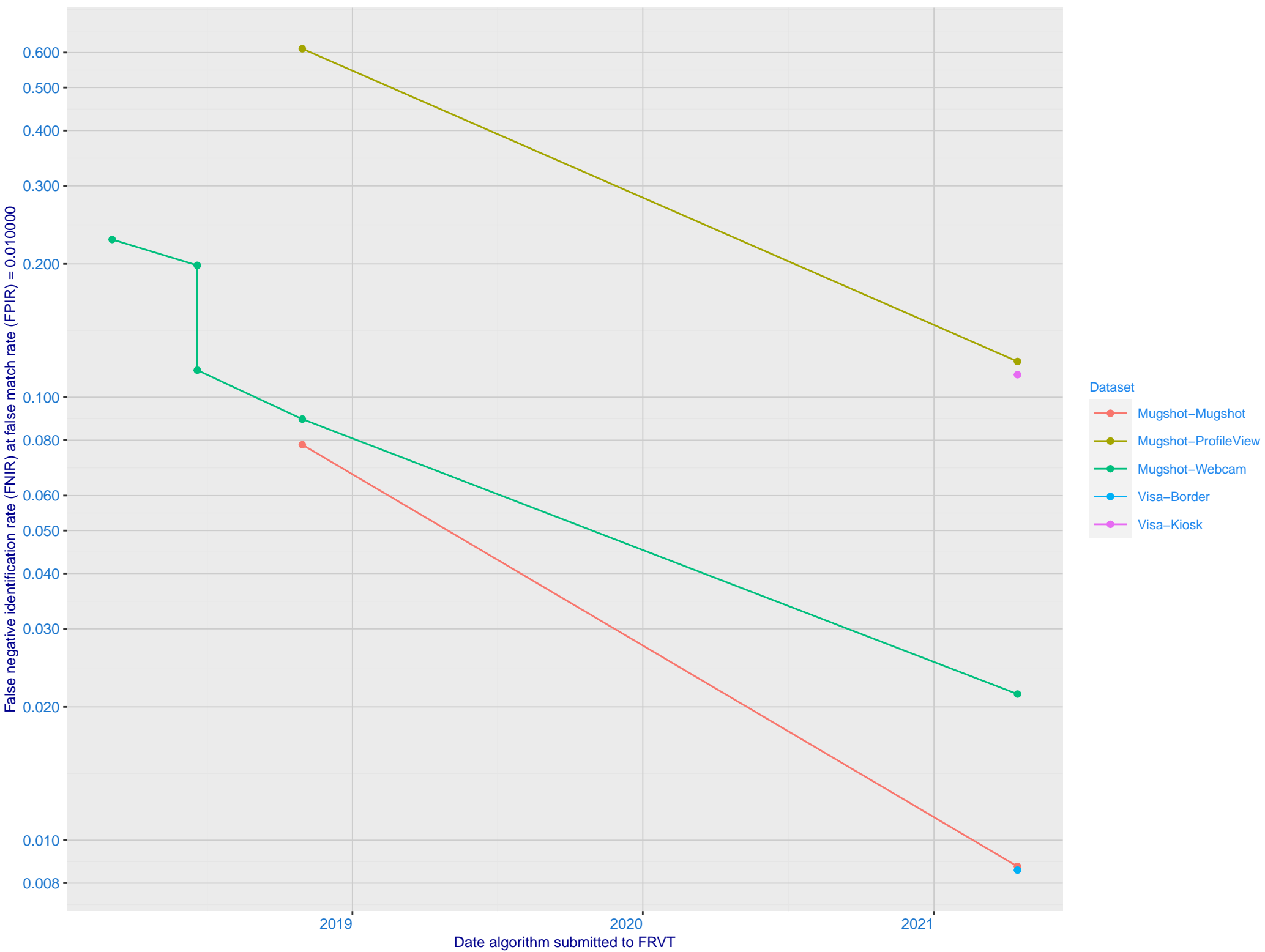
Mugshot webcam ranking 111 (out of 236) –– FNIR(1600000, T, L+1) = 0.1438, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003

Mugshot profile ranking 46 (out of 209) –– FNIR(1600000, T, L+1) = 0.9619, FPIR=0.001000 vs. lowest 0.1331 from cloudwalk_hr_000
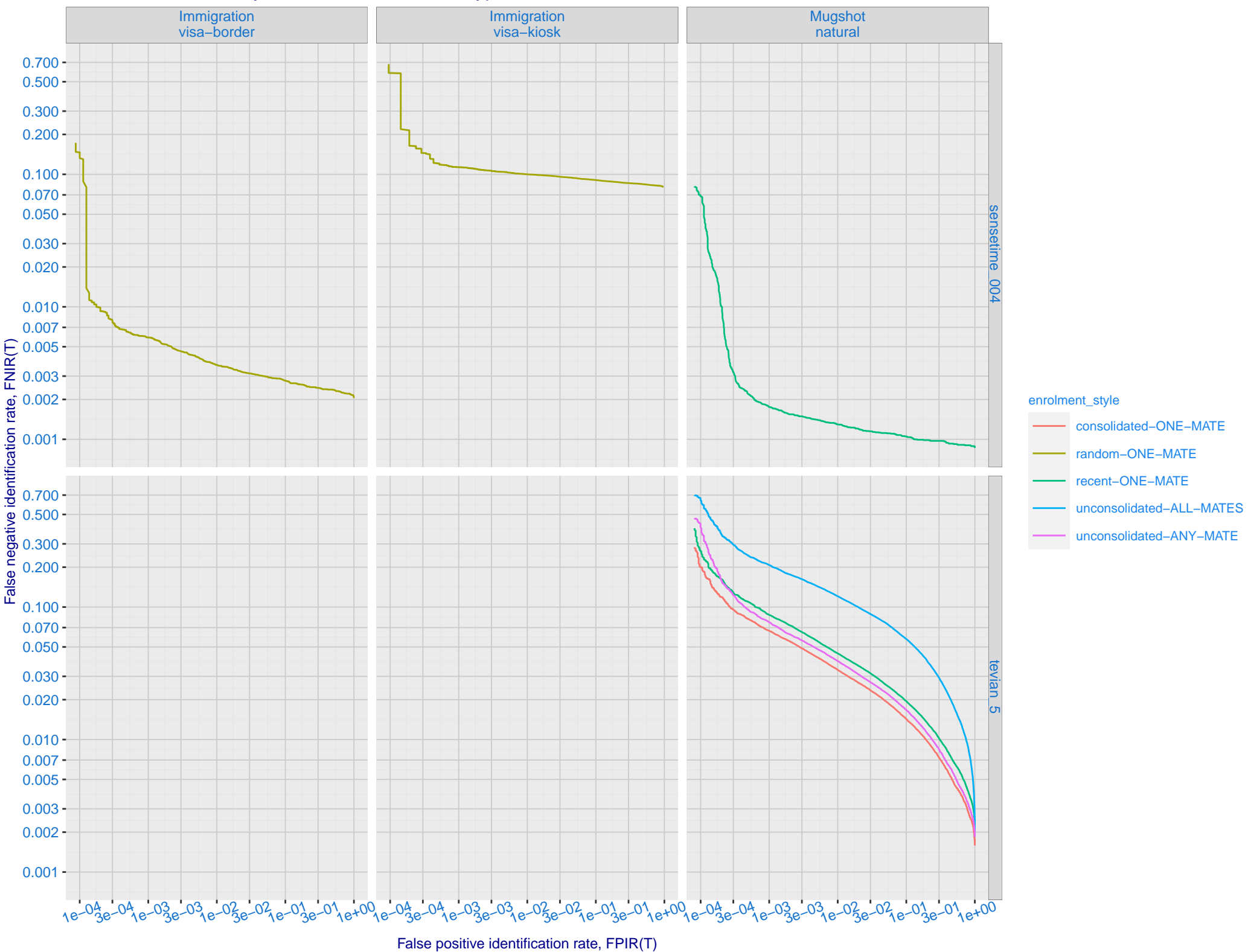
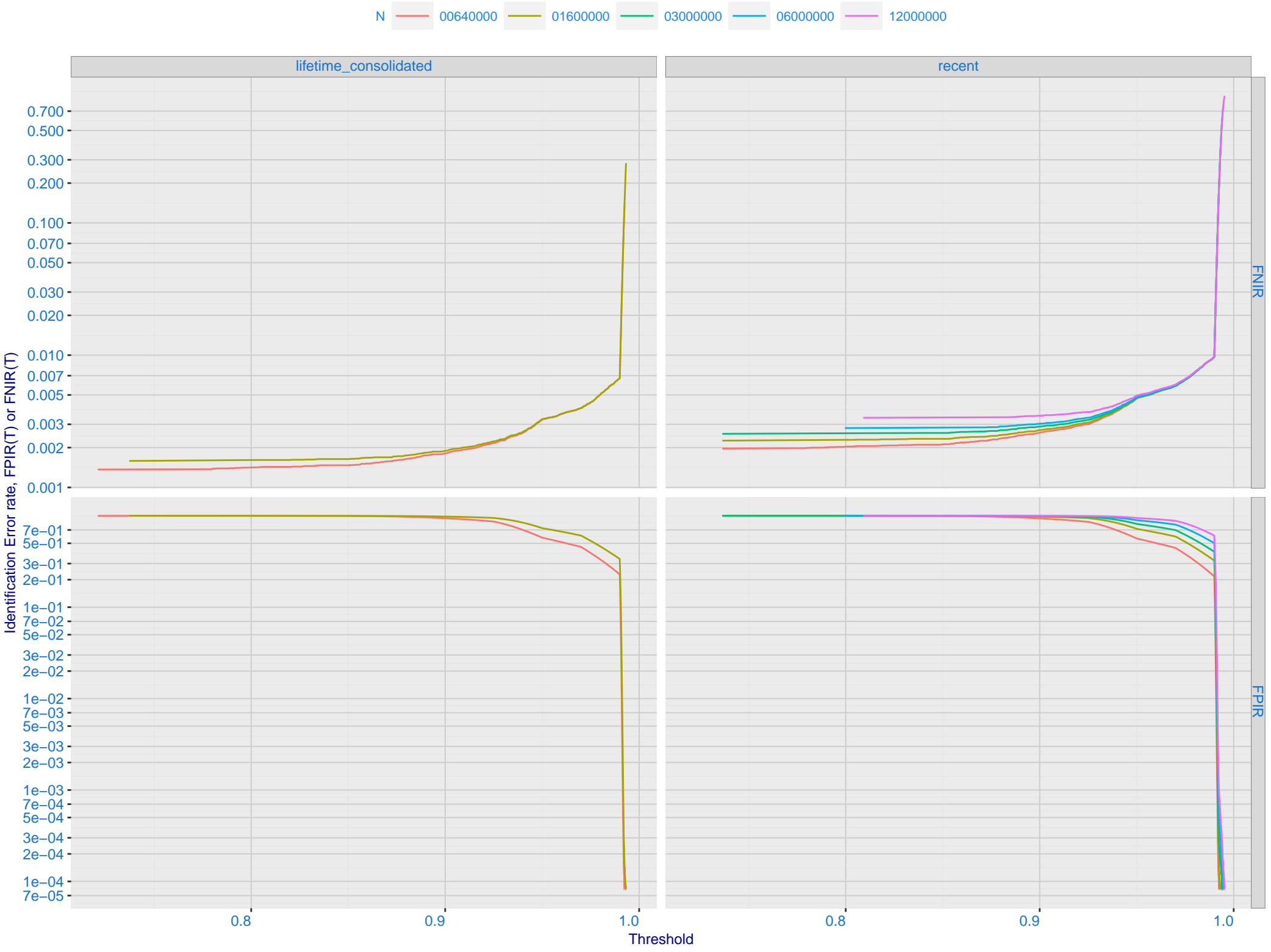B: Mugshot natural images, identification mode: FNIR(N, L+1, T) vs. most accurate (sensetime_004)

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

X-axis: Date algorithm submitted to FRVT

Y-axis: False negative identification rate (FNIR) at false match rate (FPIR) = 0.010000

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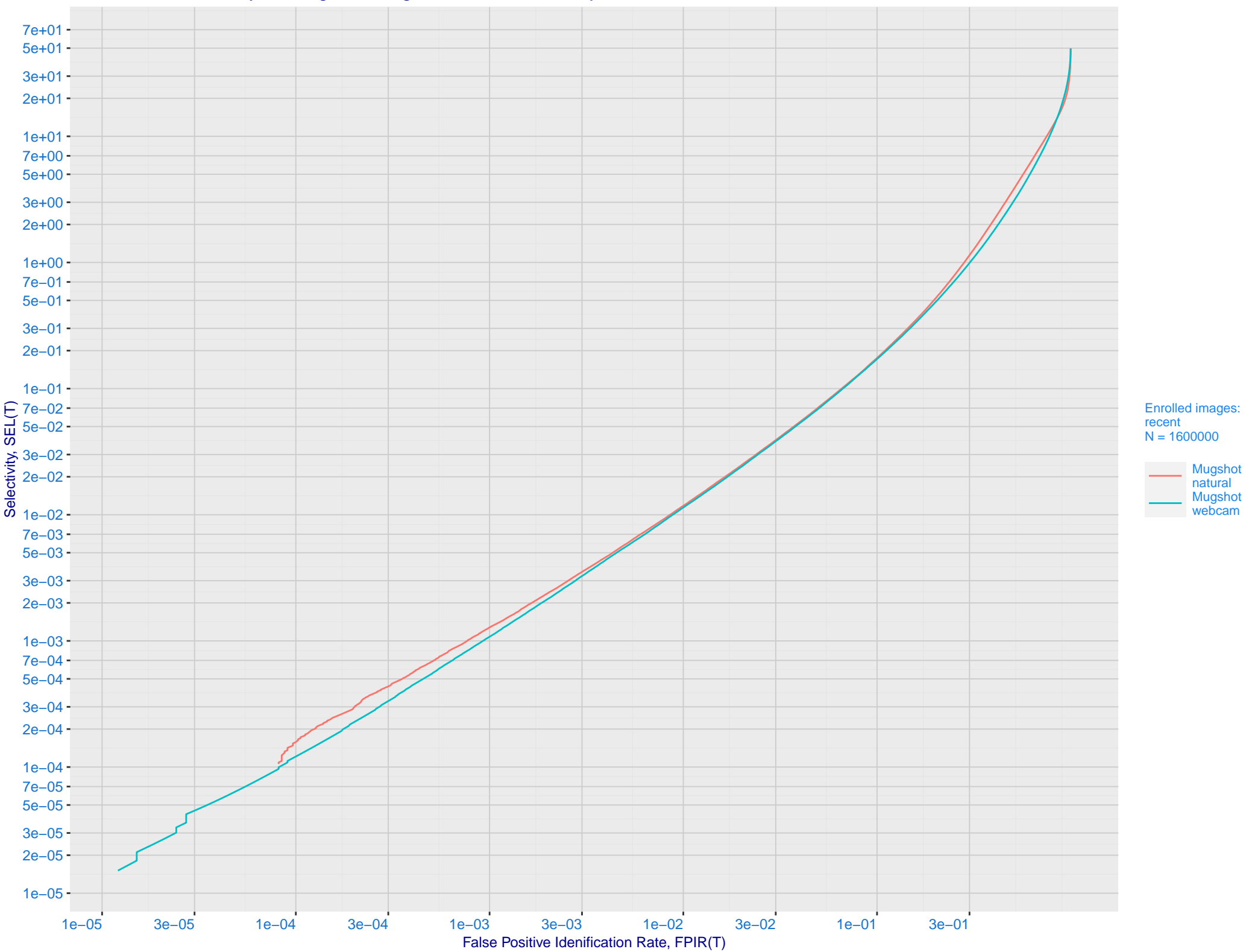- Mugshot–Webcam
- Visa–Border
- Visa–Kiosk

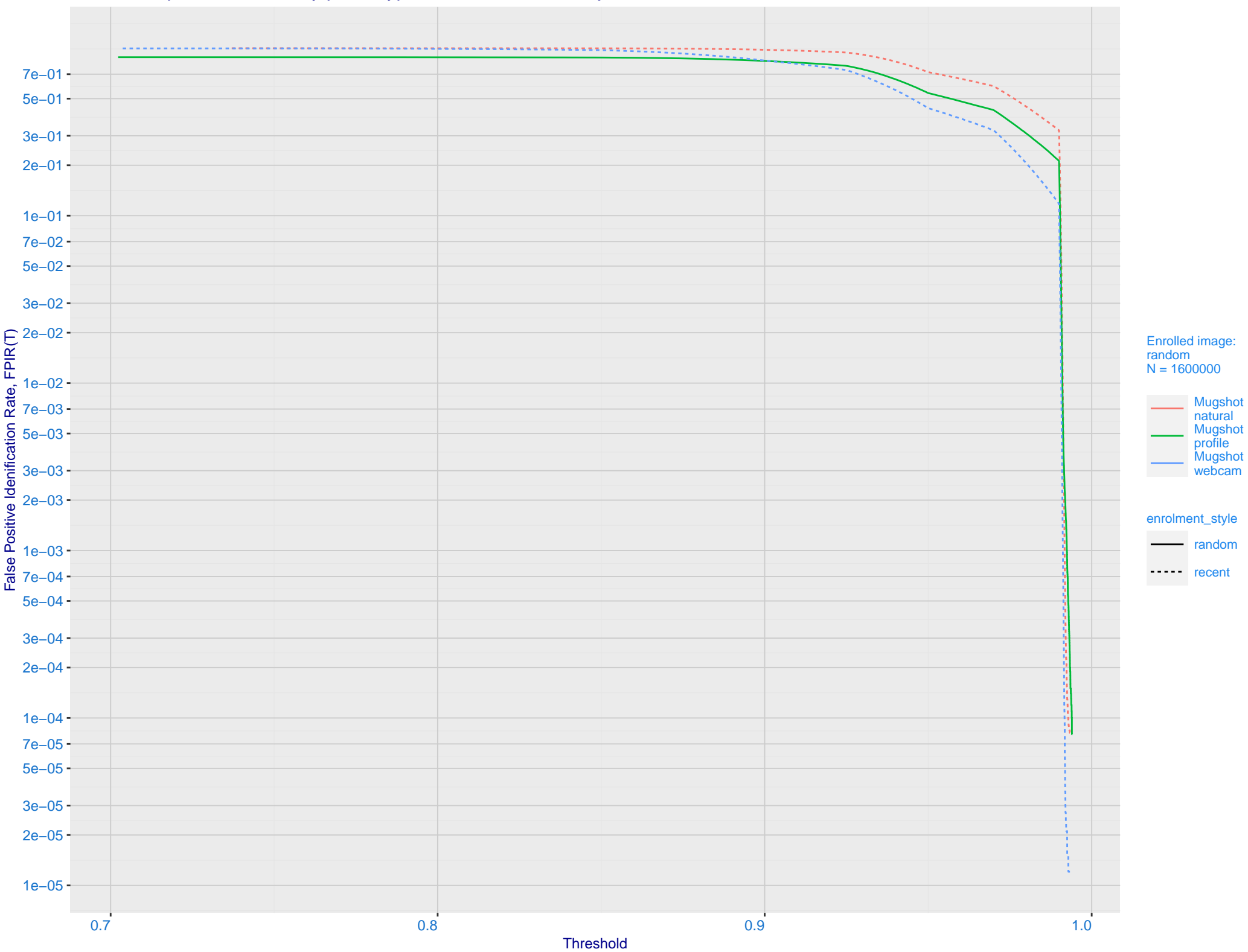D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals

E: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images
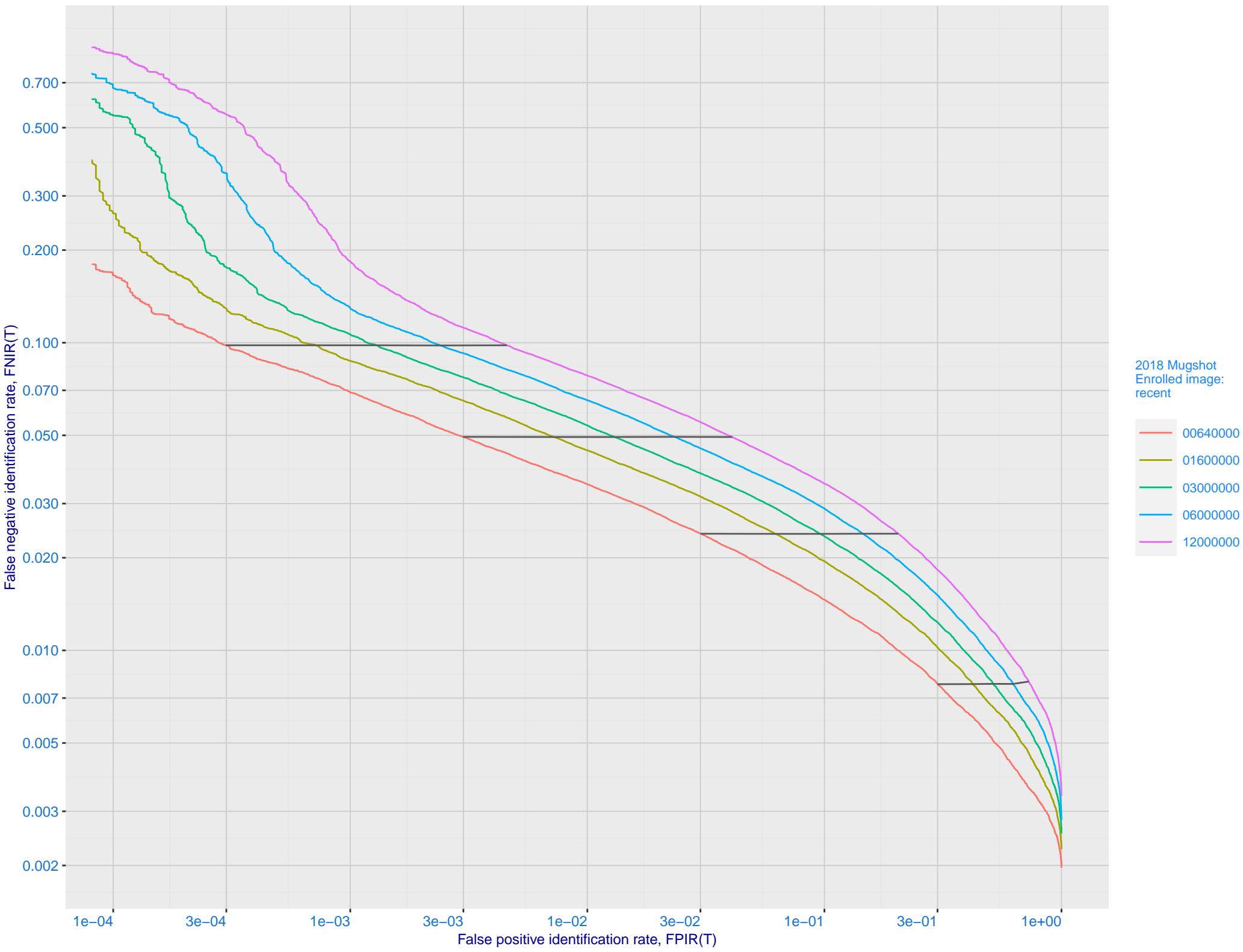
F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate

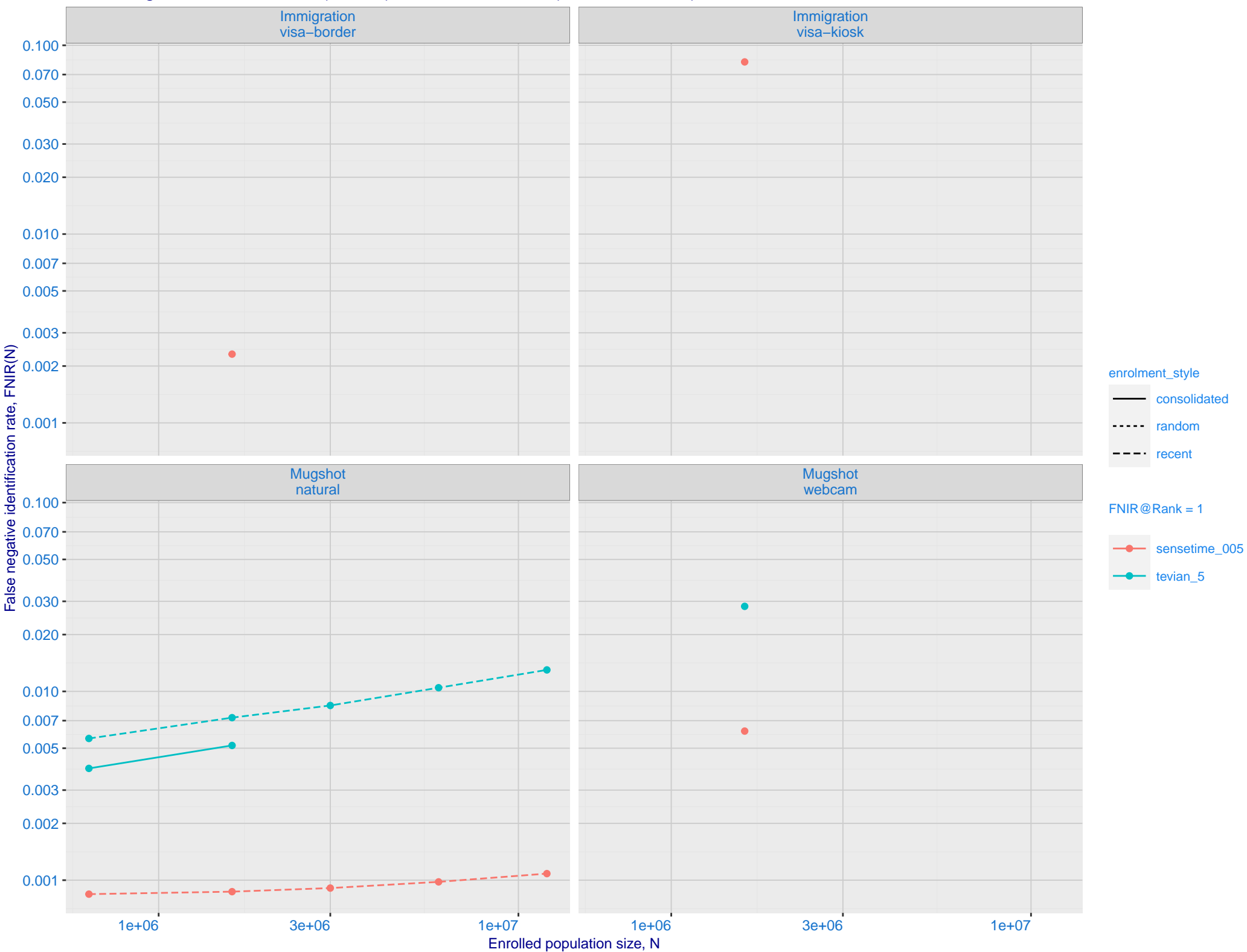G: FPIR dependence on T by probe type for N = 1600000 subjects

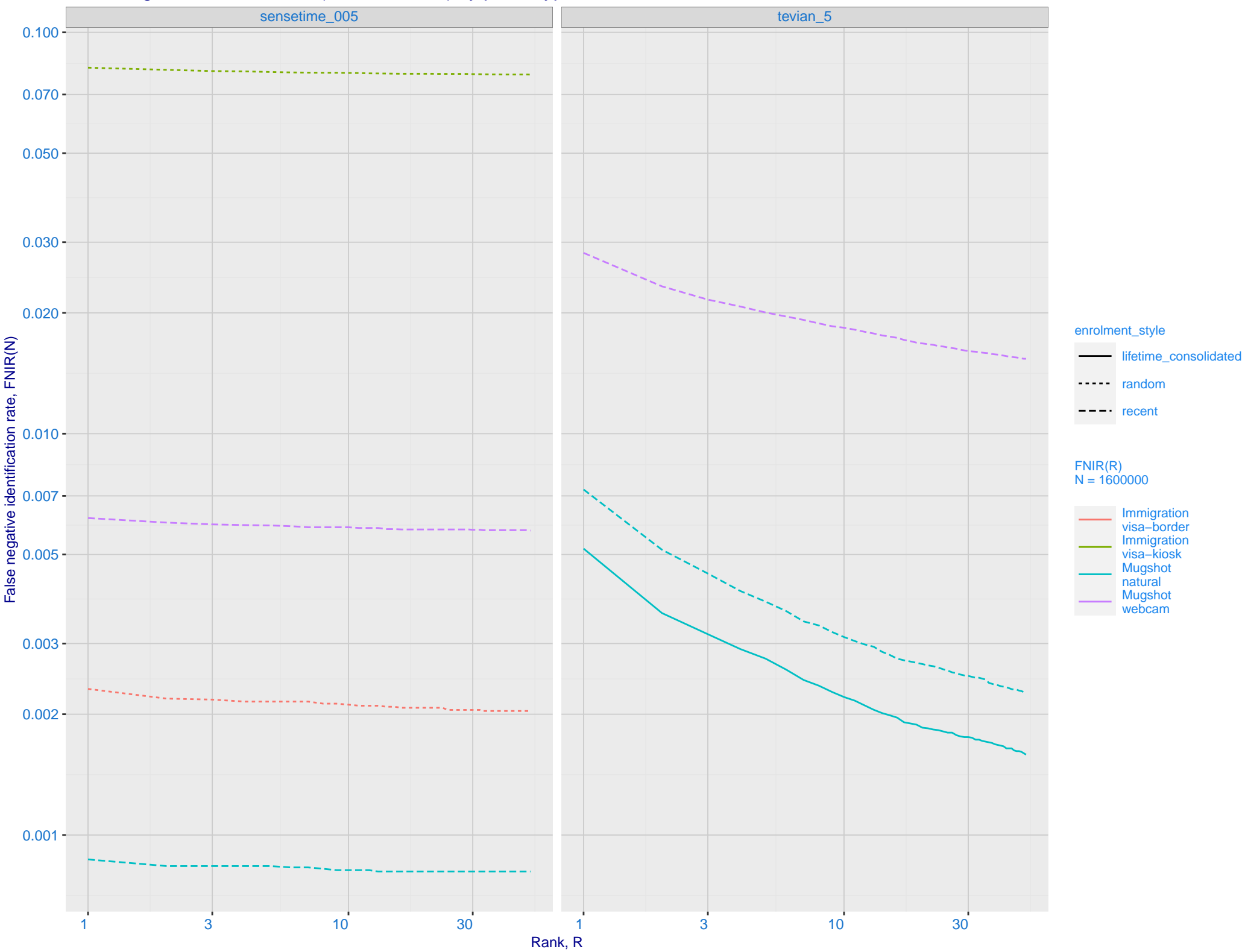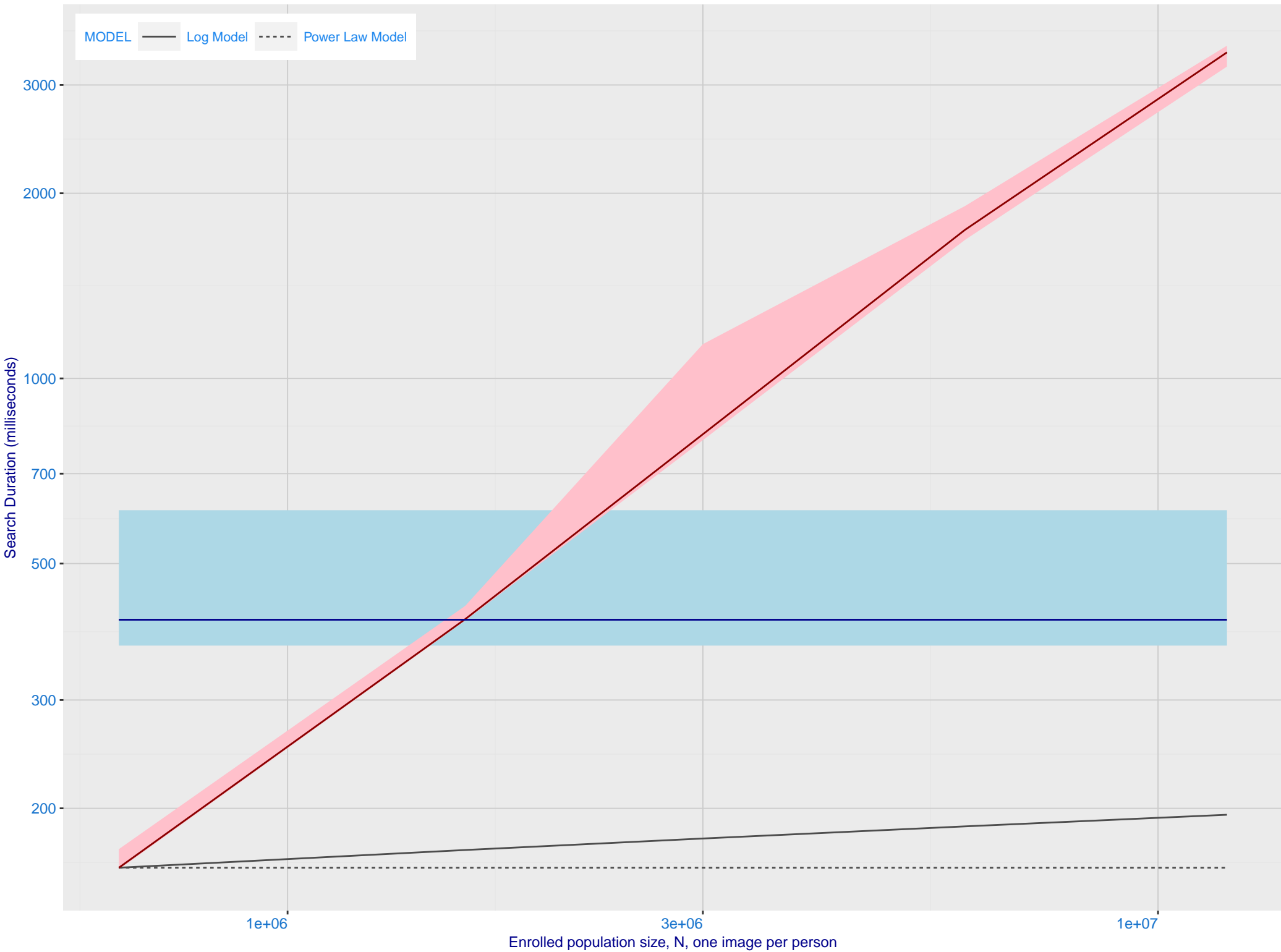J: DET for Mugshot natural images and various N. Links connect points of equal threshold.

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

Legend: (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