## A: Datasheet

Algorithm: yisheng_1

Developer: Zhuhai Yisheng Electronics Technology

Submission Date: 2018_06_19

Template size: 3704 bytes

Template time (2.5 percentile): 363 msec

Template time (median): 384 msec

Template time (97.5 percentile): 423 msec

Investigation:

Frontal mugshot ranking 190 (out of 279) –– FNIR(1600000, 0, 1) = 0.0265  vs. lowest 0.0009 from sensetime_005

Mugshot webcam ranking 168 (out of 241) –– FNIR(1600000, 0, 1) = 0.0601  vs. lowest 0.0062 from sensetime_005

Immigration visa–border ranking 113 (out of 168) –– FNIR(1600000, 0, 1) = 0.0583  vs. lowest 0.0013 from visionlabs_010

Immigration visa–kiosk ranking 114 (out of 165) –– FNIR(1600000, 0, 1) = 0.2874  vs. lowest 0.0568 from cloudwalk_hr_000

Identification:

Frontal mugshot ranking 213 (out of 279) –– FNIR(1600000, T, L+1) = 0.3460, FPIR=0.001000  vs. lowest 0.0018 from sensetime_004

Mugshot webcam ranking 212 (out of 236) –– FNIR(1600000, T, L+1) = 0.8078, FPIR=0.001000  vs. lowest 0.0122 from sensetime_003

Immigration visa–border ranking 132 (out of 167) –– FNIR(1600000, T, L+1) = 0.6664, FPIR=0.001000  vs. lowest 0.0047 from idemia_008

Immigration visa–kiosk ranking 118 (out of 162) –– FNIR(1600000, T, L+1) = 0.9236, FPIR=0.001000  vs. lowest 0.0996 from cloudwalk_hr_000
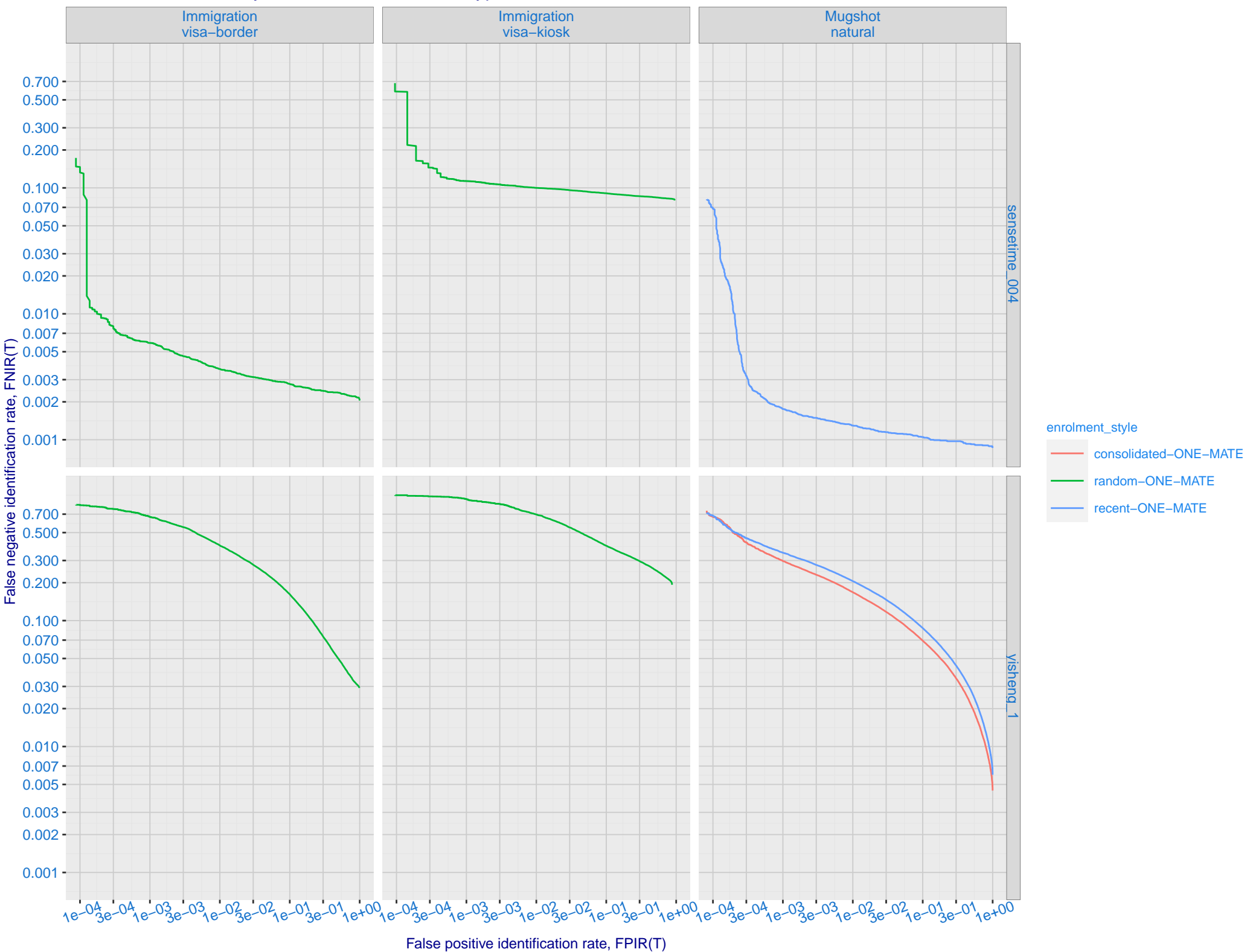
B: Mugshot natural images, identification mode: FNIR(N, L+1, T) vs. most accurate (sensetime_004)
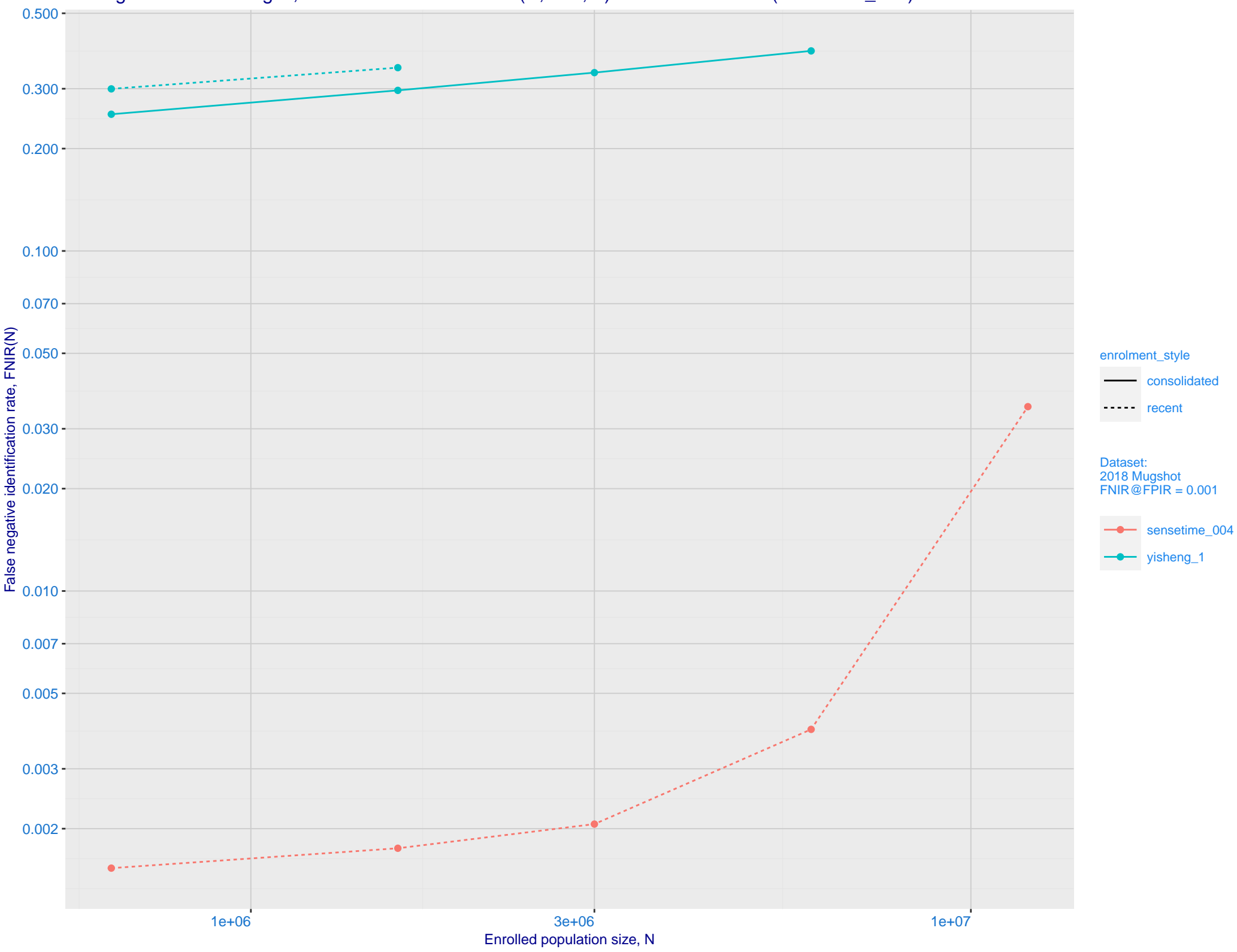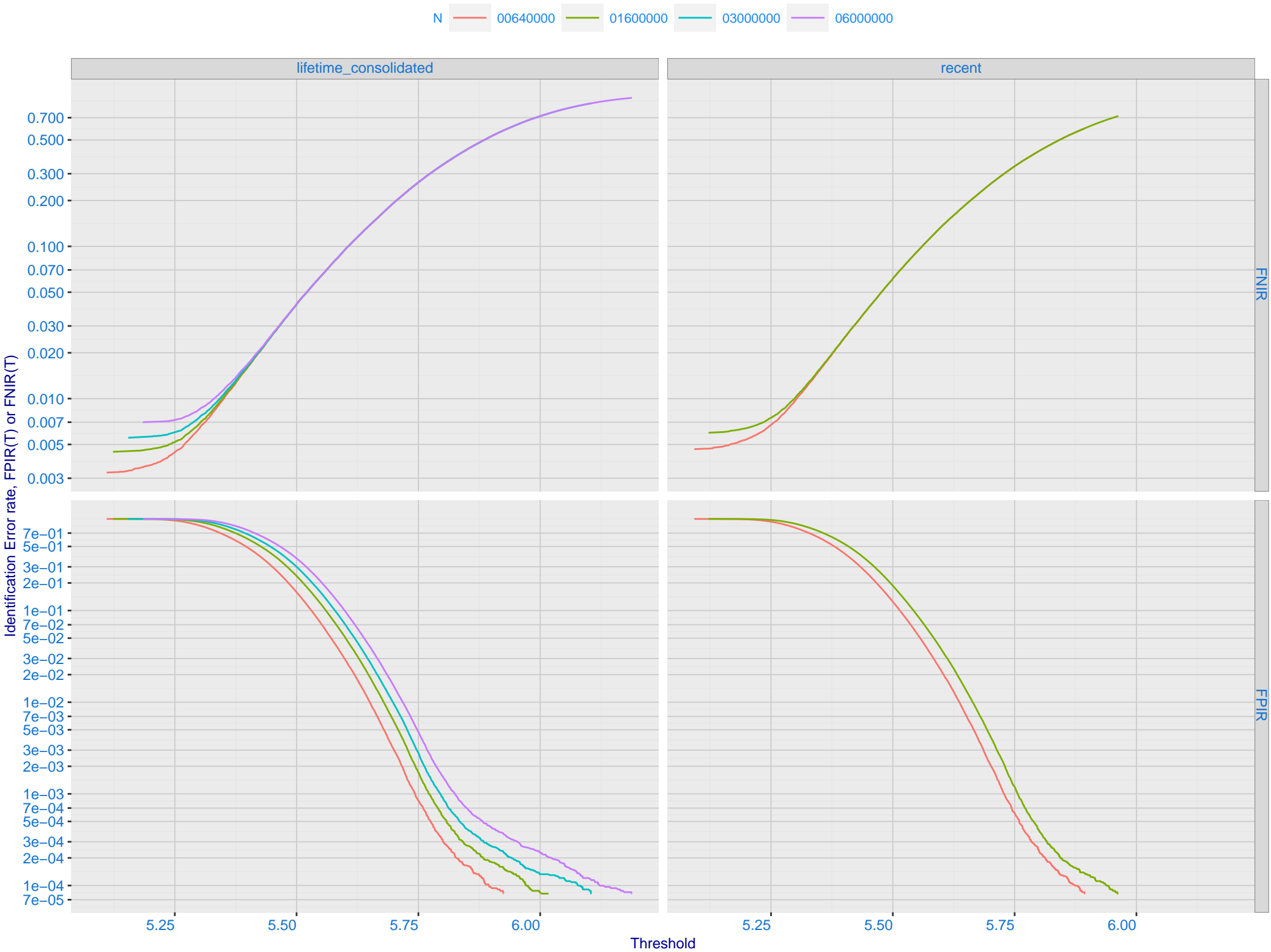
C: Evolution of accuracy for YISHENG algorithms on three datasets 2018 – present
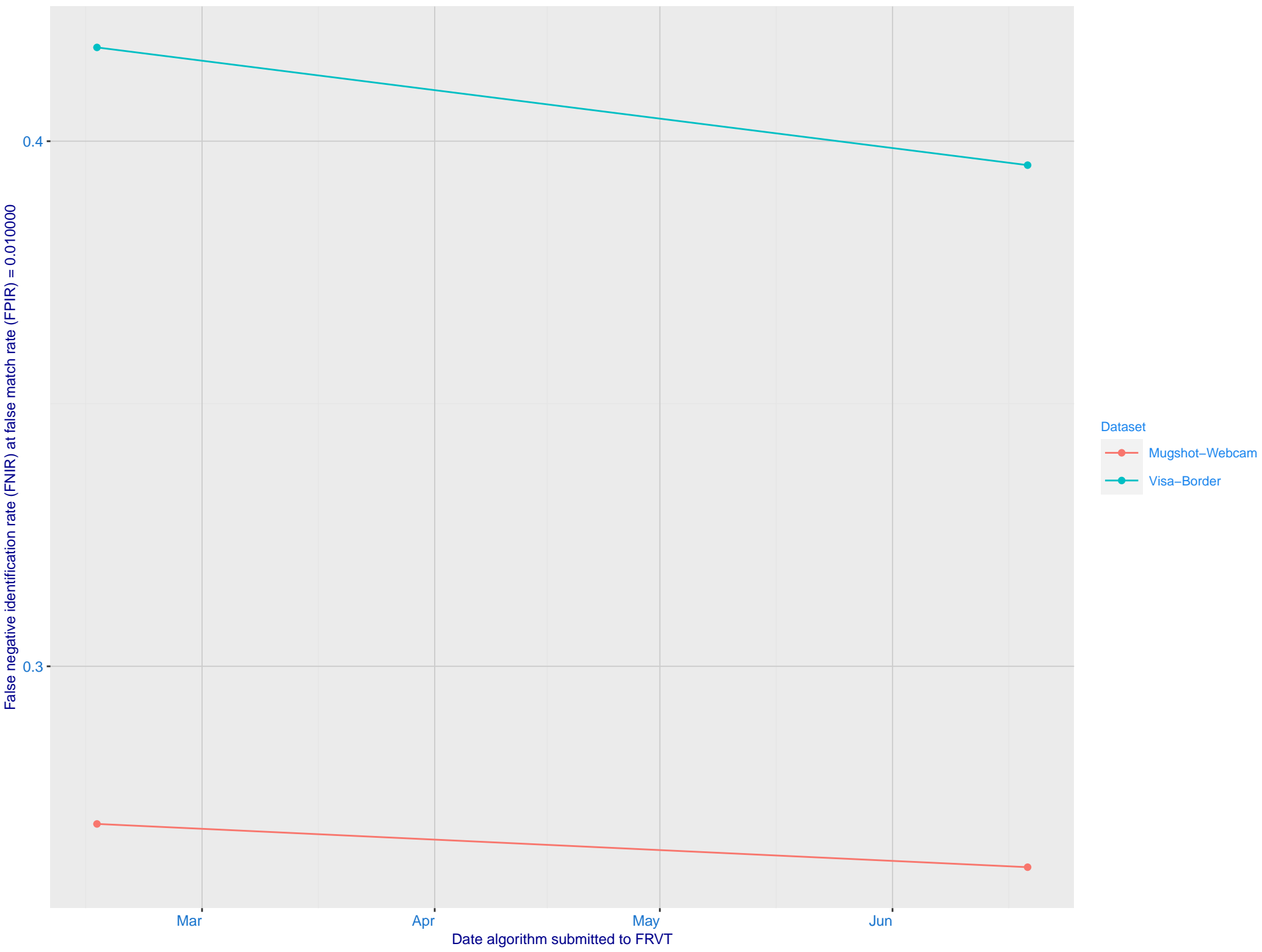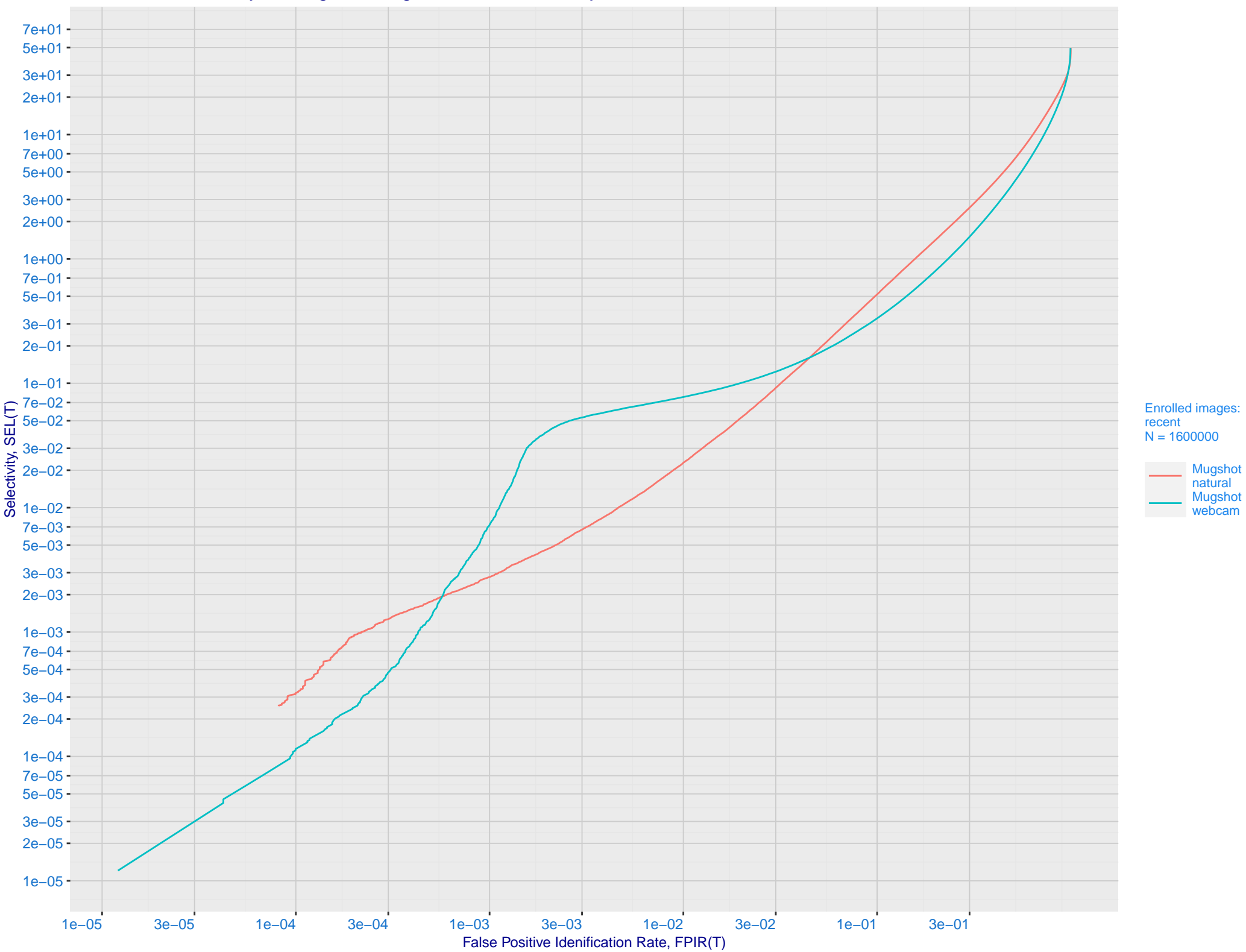
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals
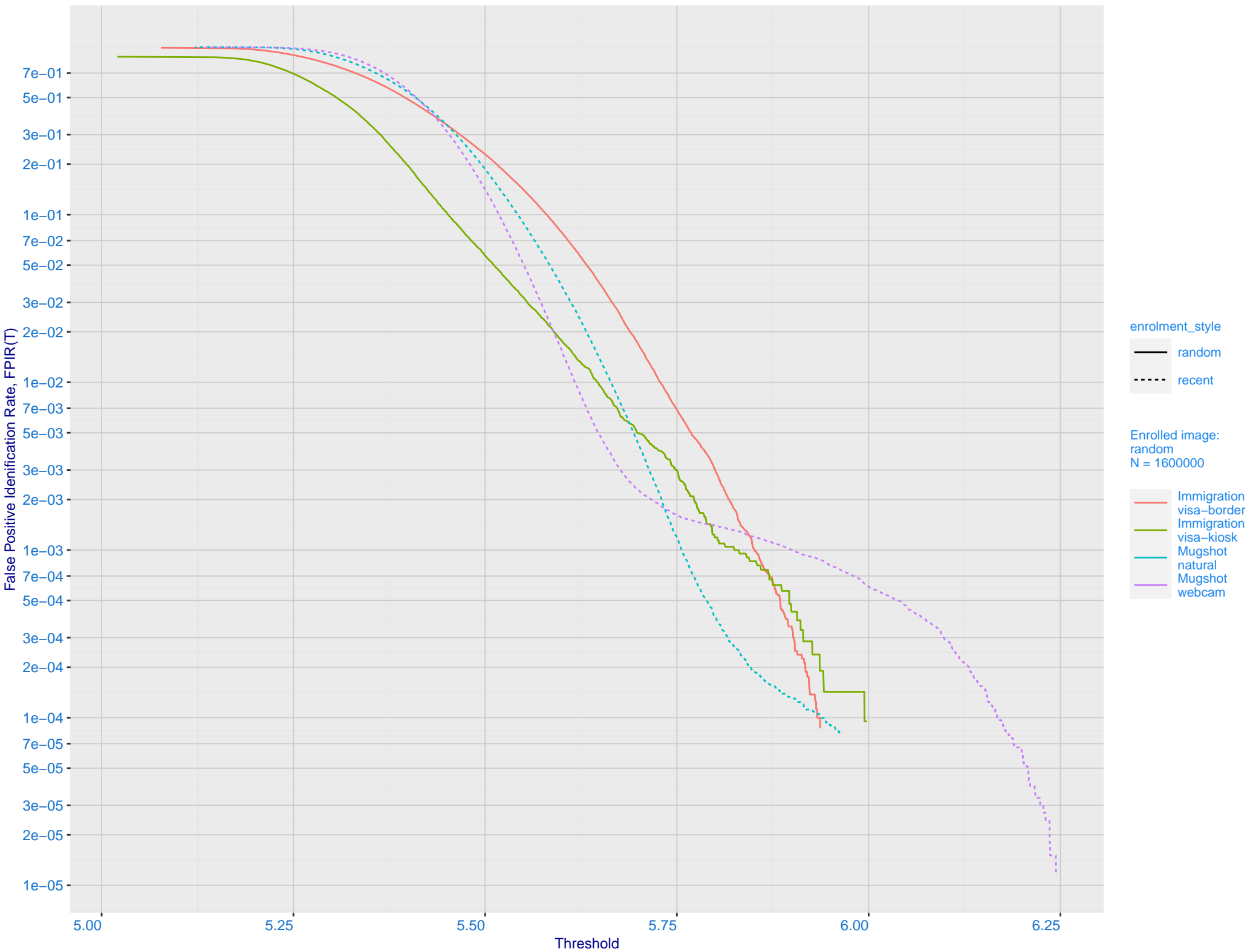
E: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images
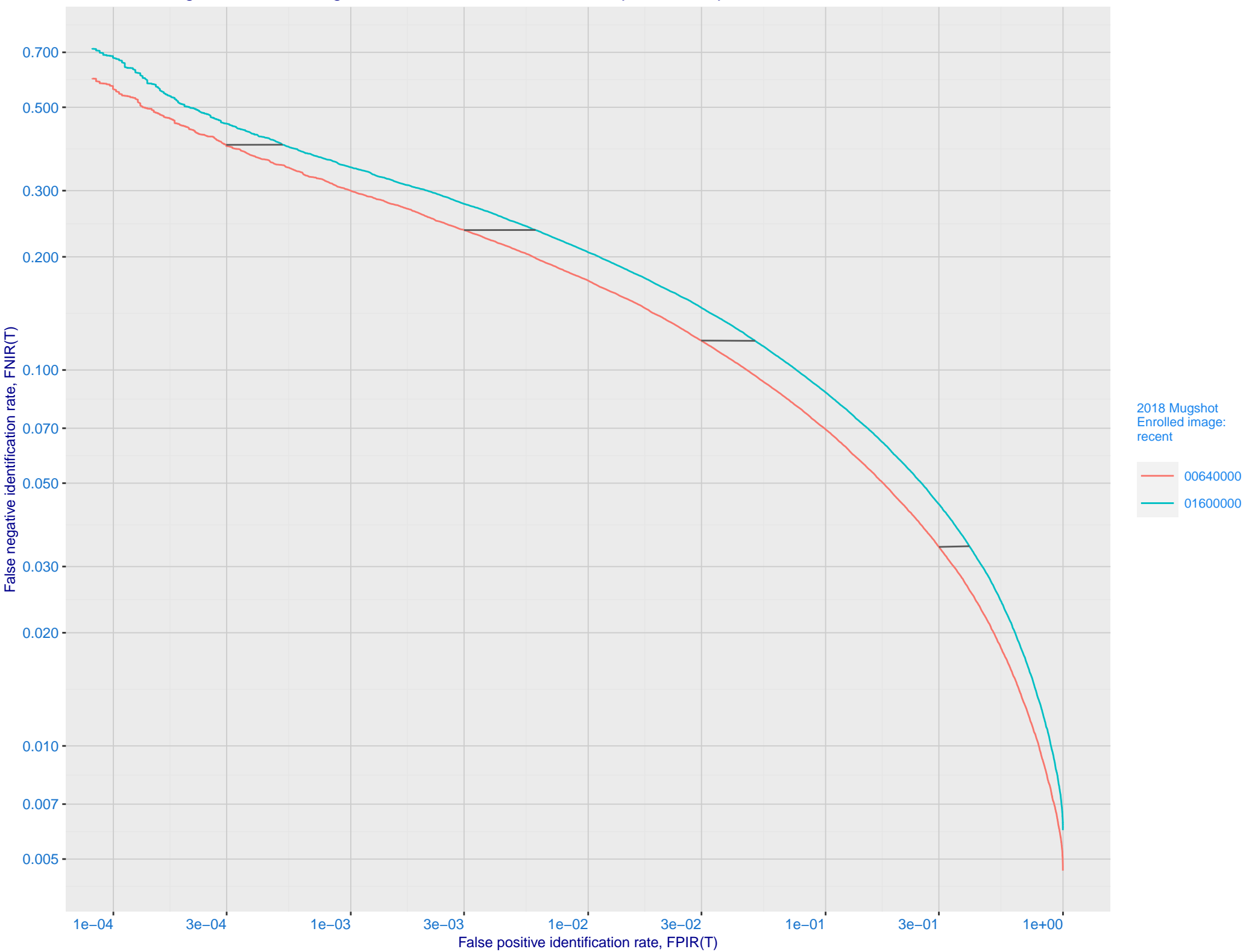
F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate

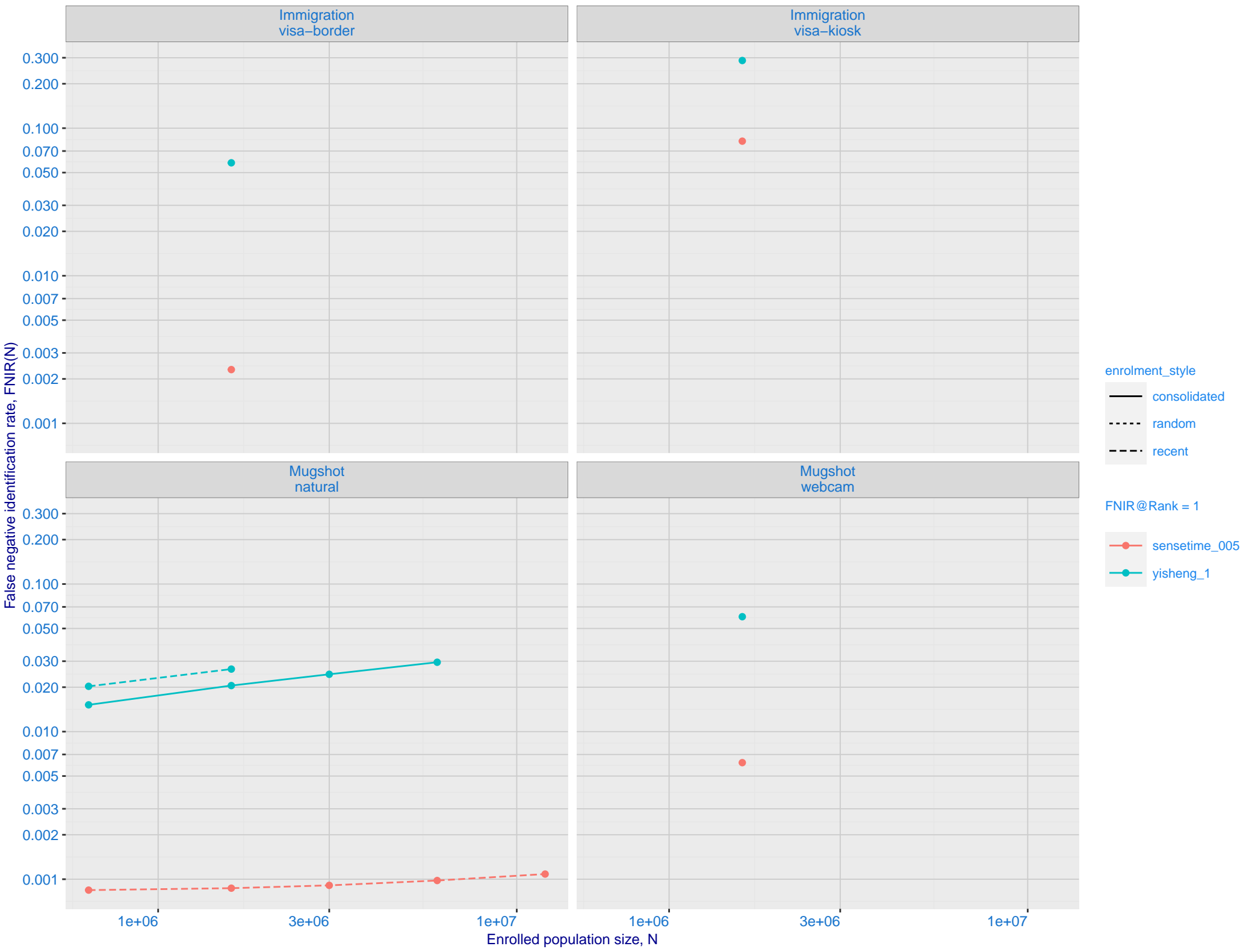G: FPIR dependence on T by probe type for N = 1600000 subjects

J: DET for Mugshot natural images and various N. Links connect points of equal threshold.
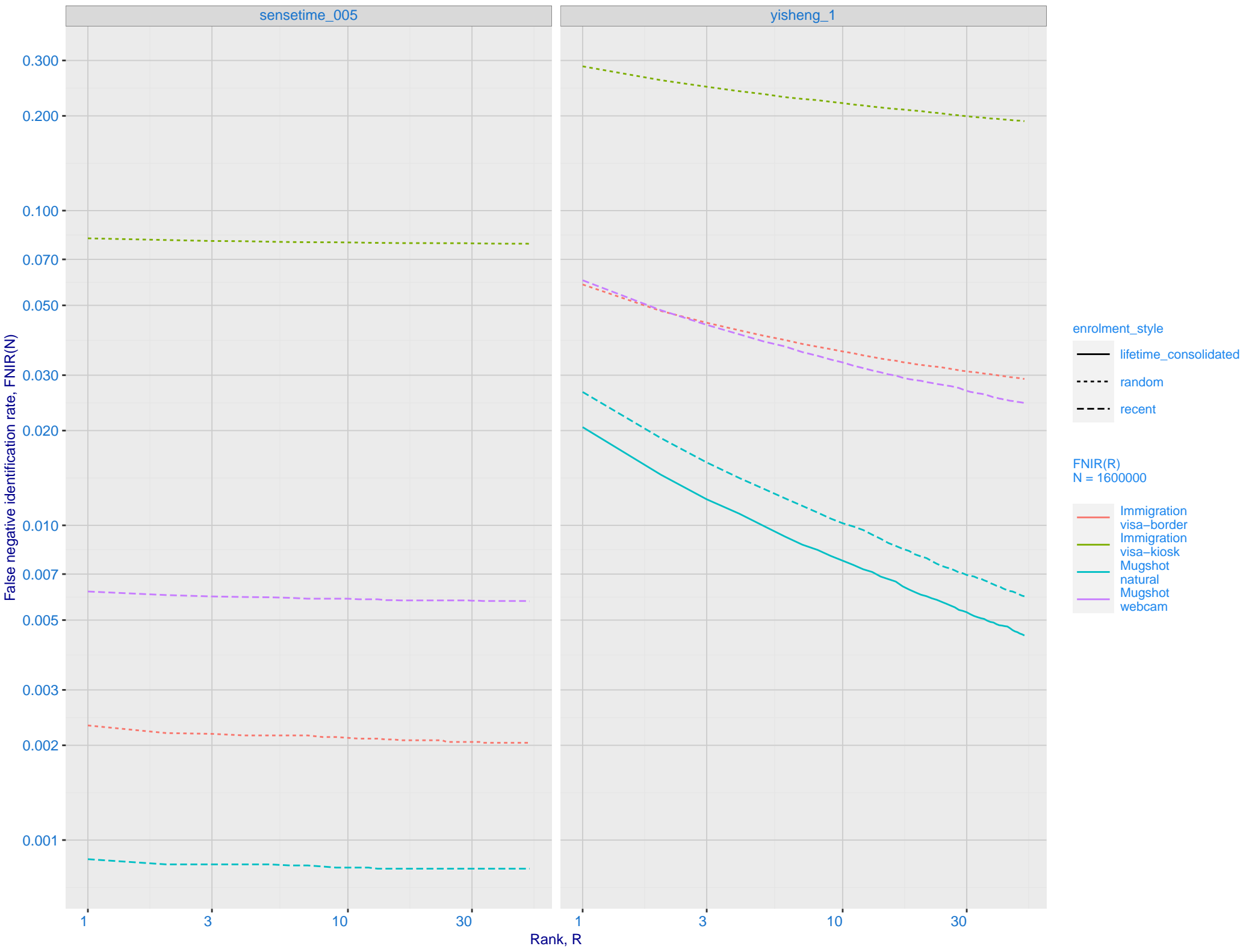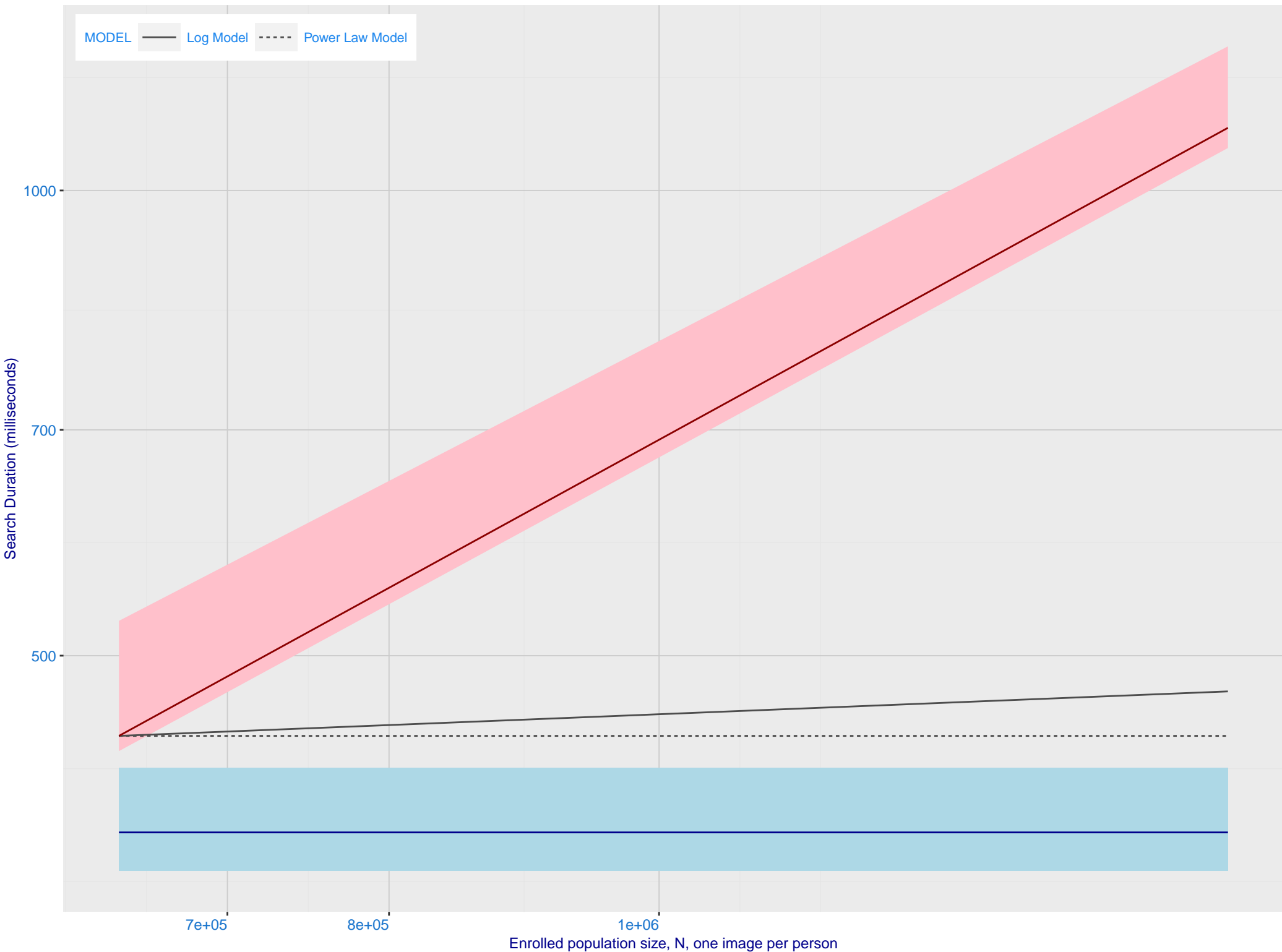
K: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005)

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