

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 178 (out of 265) --- FNIR(1600000, 0, 1) = 0.0265 vs. lowest 0.0009 from sensetime\_005

Mugshot webcam ranking 156 (out of 227) --- FNIR(1600000, 0, 1) = 0.0601 vs. lowest 0.0062 from sensetime\_005

Immigration visa-border ranking 97 (out of 148) --- FNIR(1600000, 0, 1) = 0.0583 vs. lowest 0.0013 from visionlabs\_010

Immigration visa-kiosk ranking 97 (out of 145) --- FNIR(1600000, 0, 1) = 0.2874 vs. lowest 0.0568 from hr\_000

Identification:

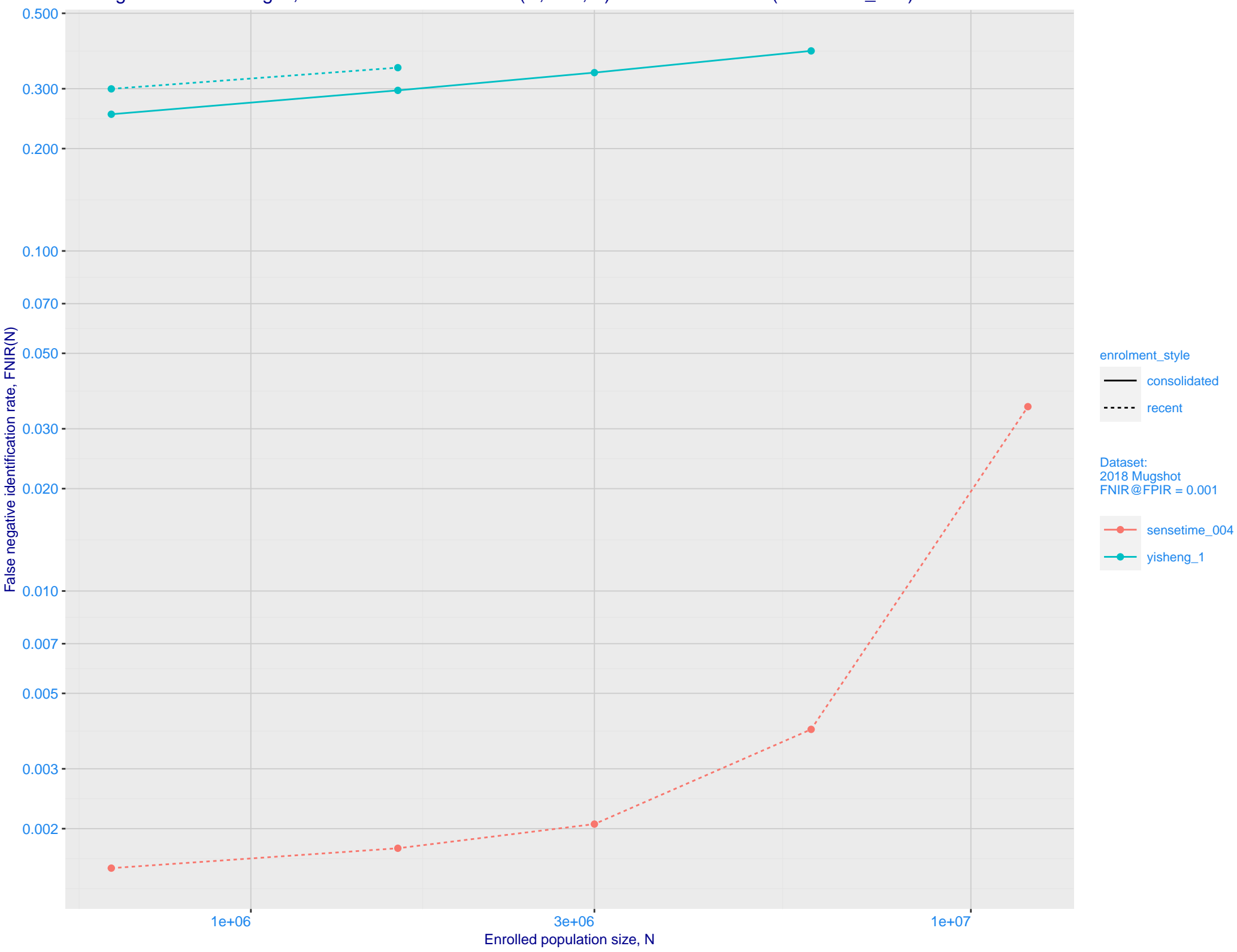
Frontal mugshot ranking 201 (out of 265) --- FNIR(1600000, T, L+1) = 0.3460, FPIR=0.001000 vs. lowest 0.0018 from sensetime\_004

Mugshot webcam ranking 201 (out of 225) --- FNIR(1600000, T, L+1) = 0.8078, FPIR=0.001000 vs. lowest 0.0122 from sensetime\_003

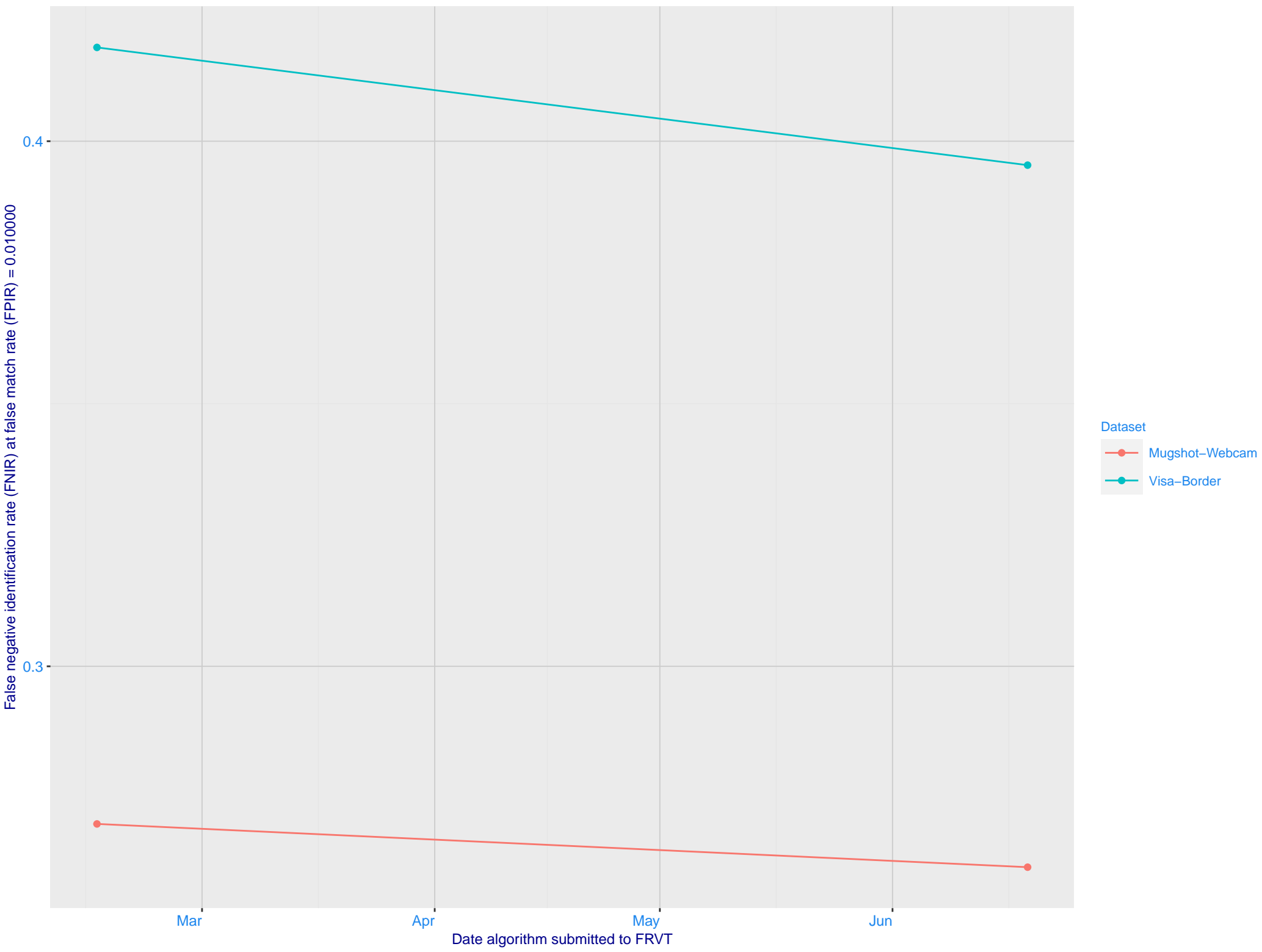
Immigration visa-border ranking 113 (out of 146) --- FNIR(1600000, T, L+1) = 0.6664, FPIR=0.001000 vs. lowest 0.0049 from hr\_000

Immigration visa-kiosk ranking 106 (out of 141) --- FNIR(1600000, T, L+1) = 0.9236, FPIR=0.001000 vs. lowest 0.0996 from hr\_000

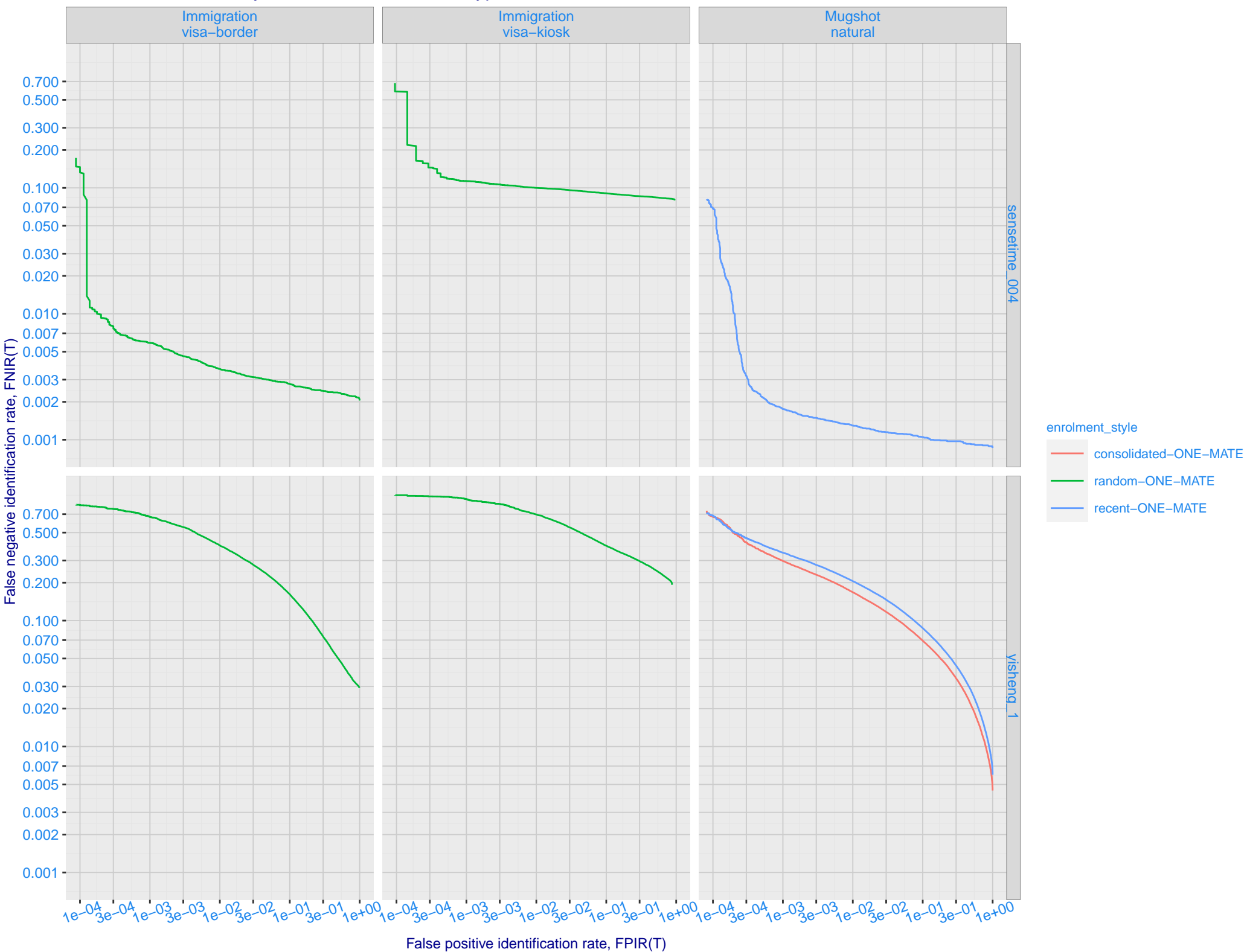
B: Mugshot natural images, identification mode: FNIR(N, L+1, T) vs. most accurate (sensetime\_004)



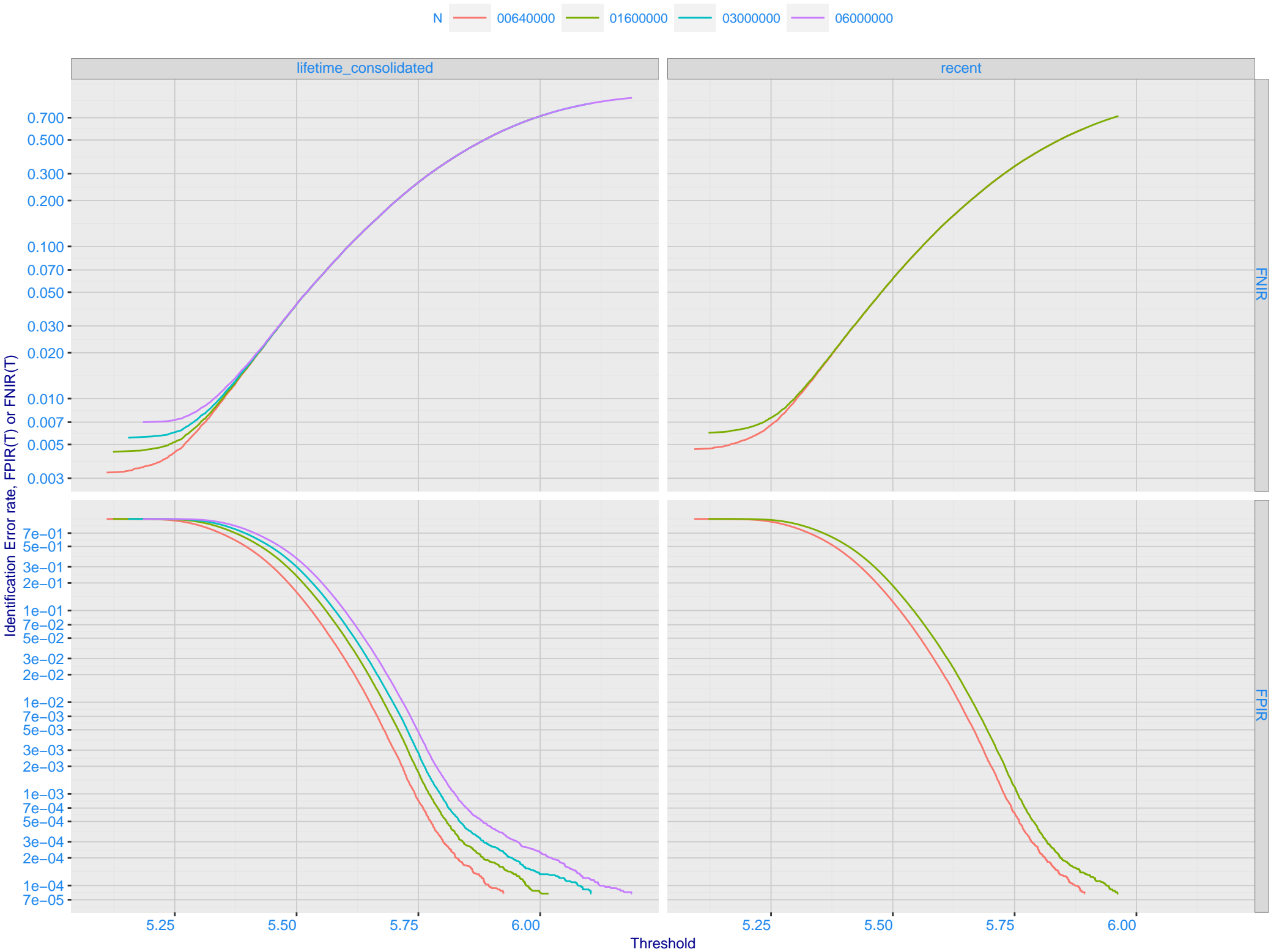
C: Evolution of accuracy for YISHENG algorithms on three datasets 2018 – present



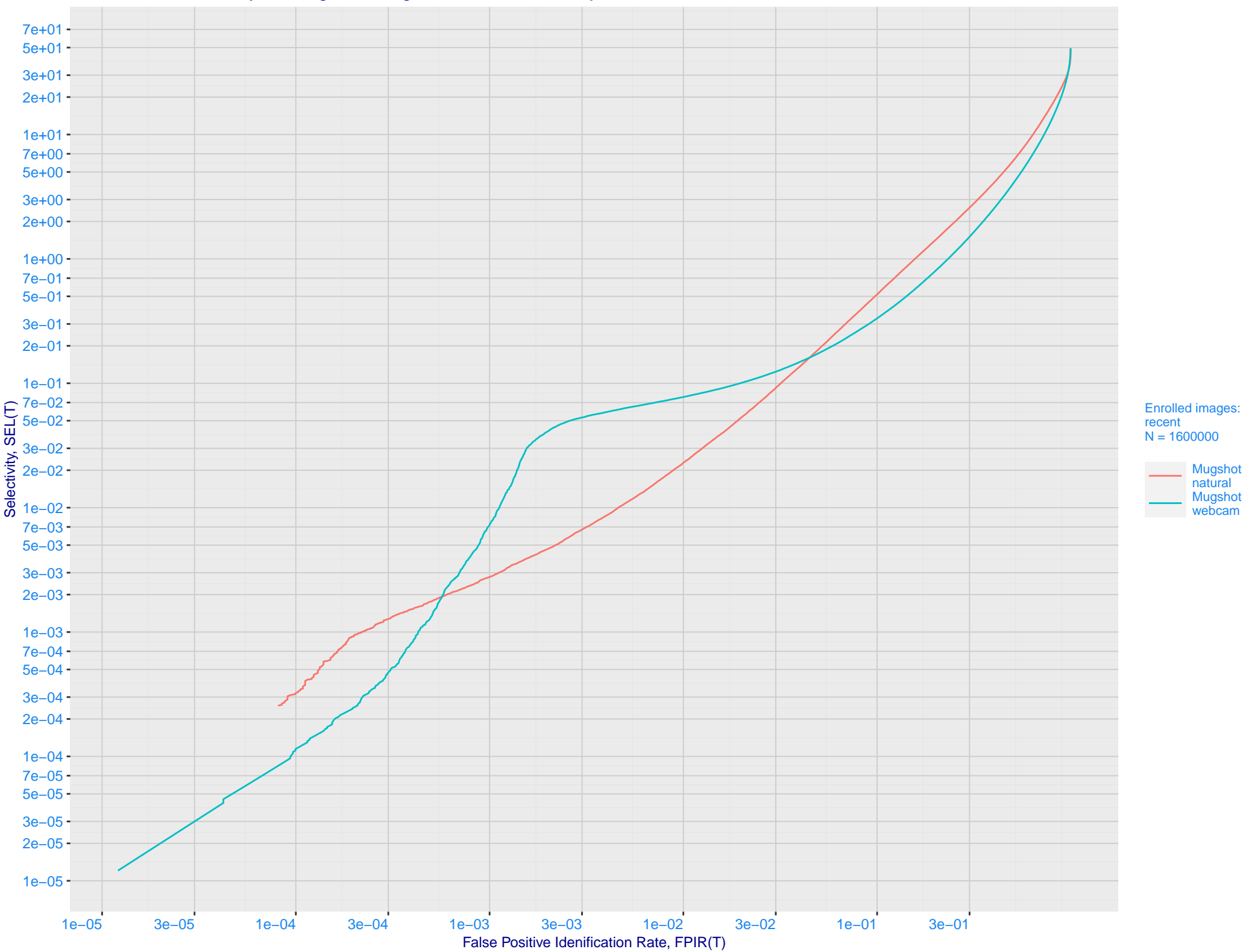
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals



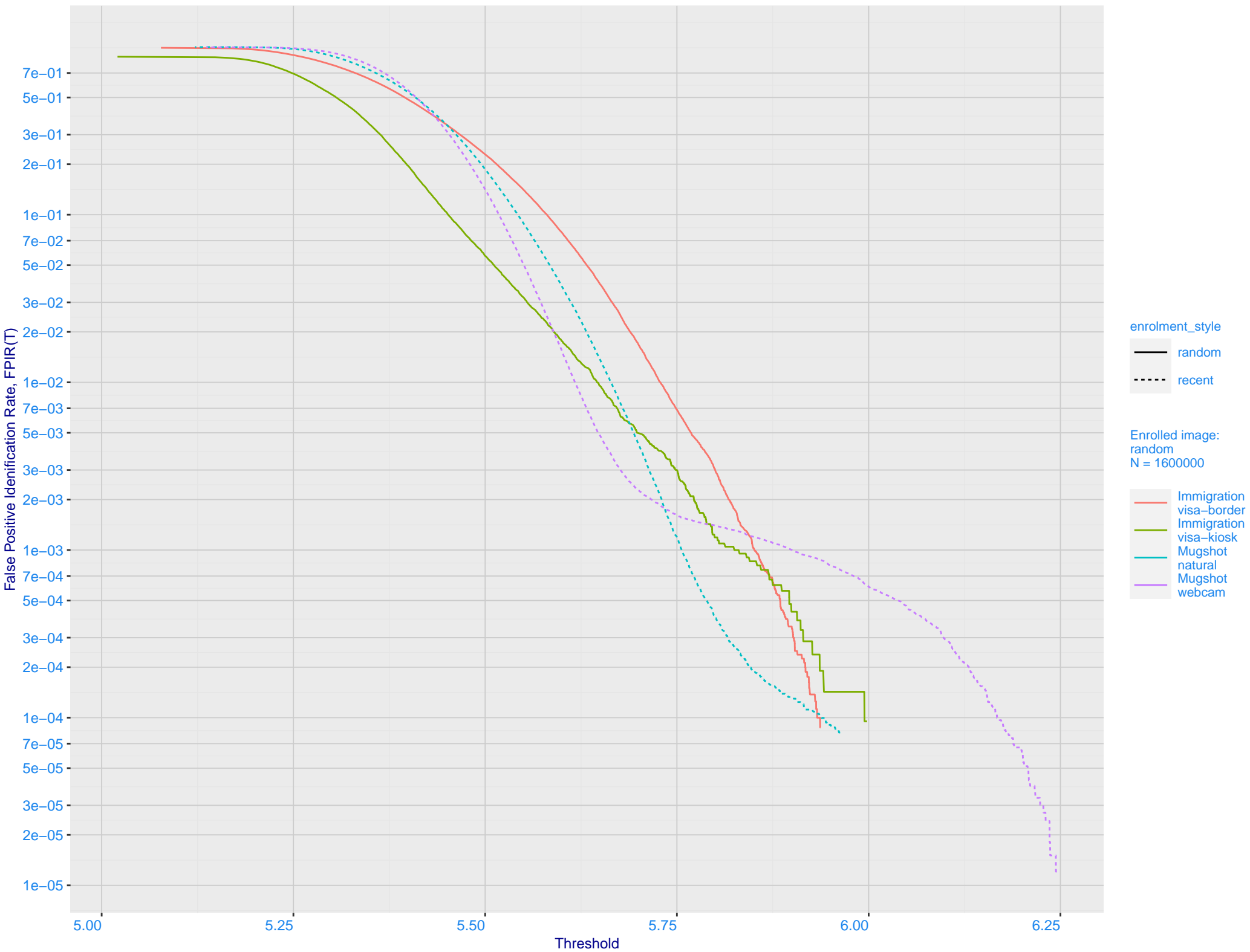
E: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images



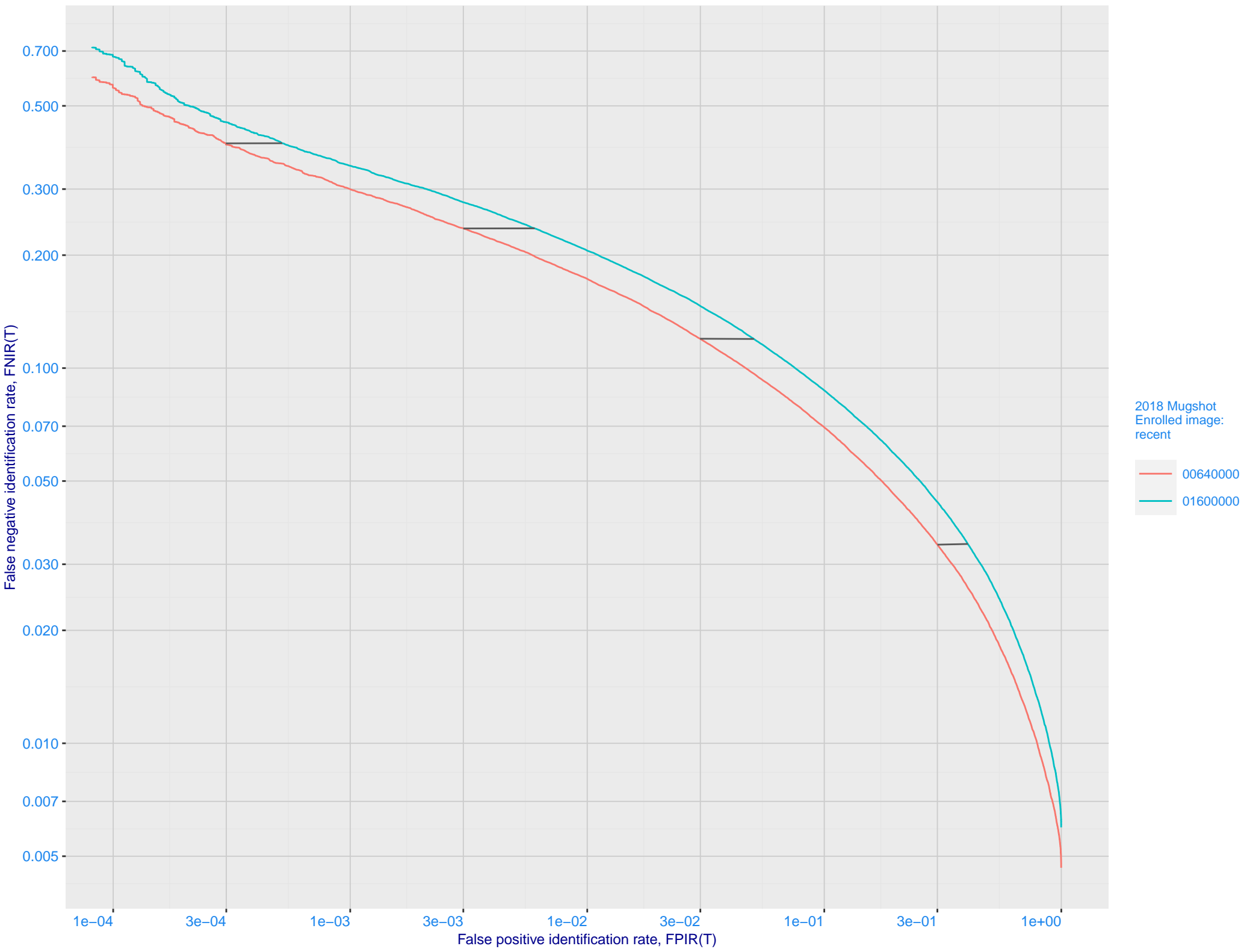
F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate



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

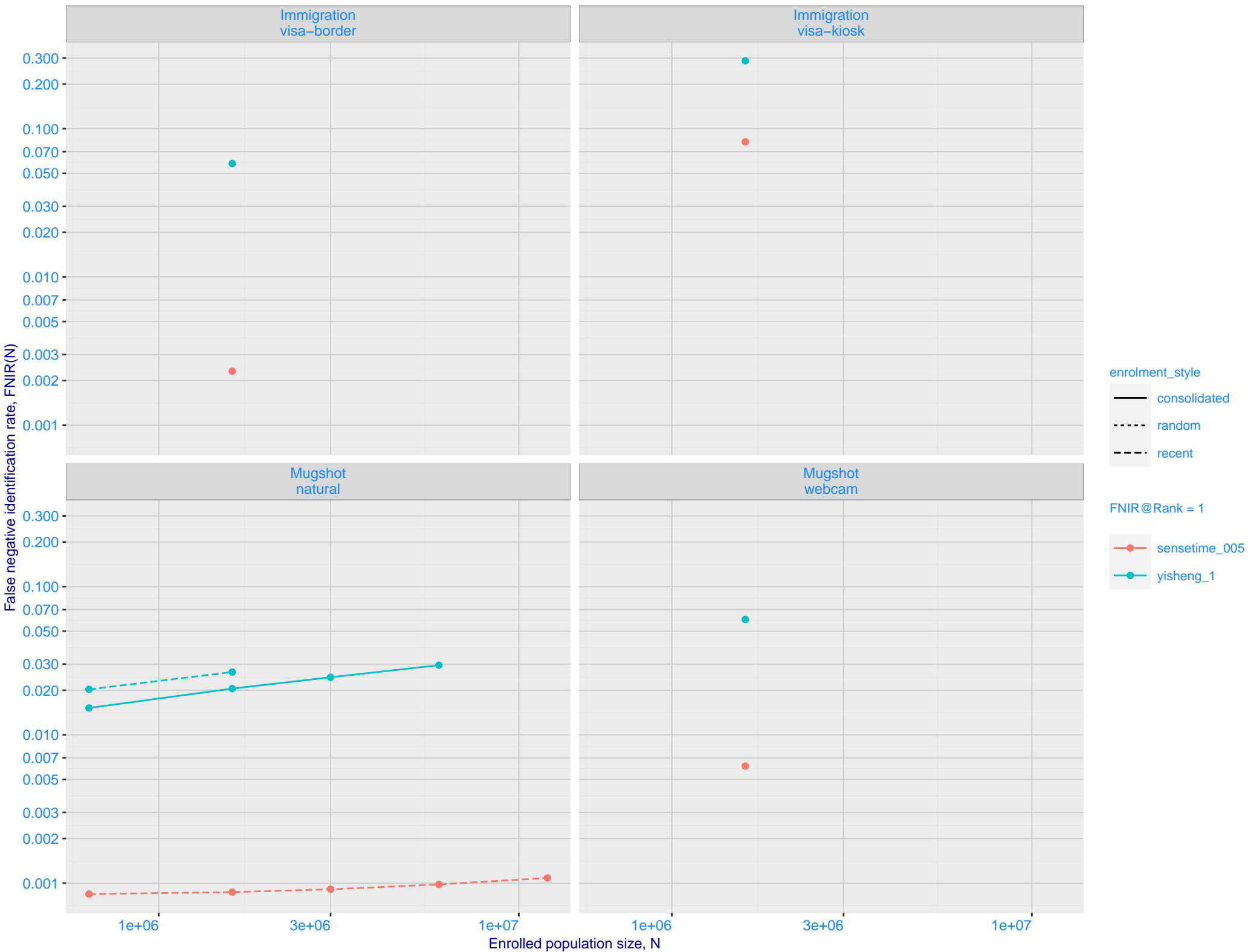


H: DET for Mugshot natural images and various N. Links connect points of equal threshold.

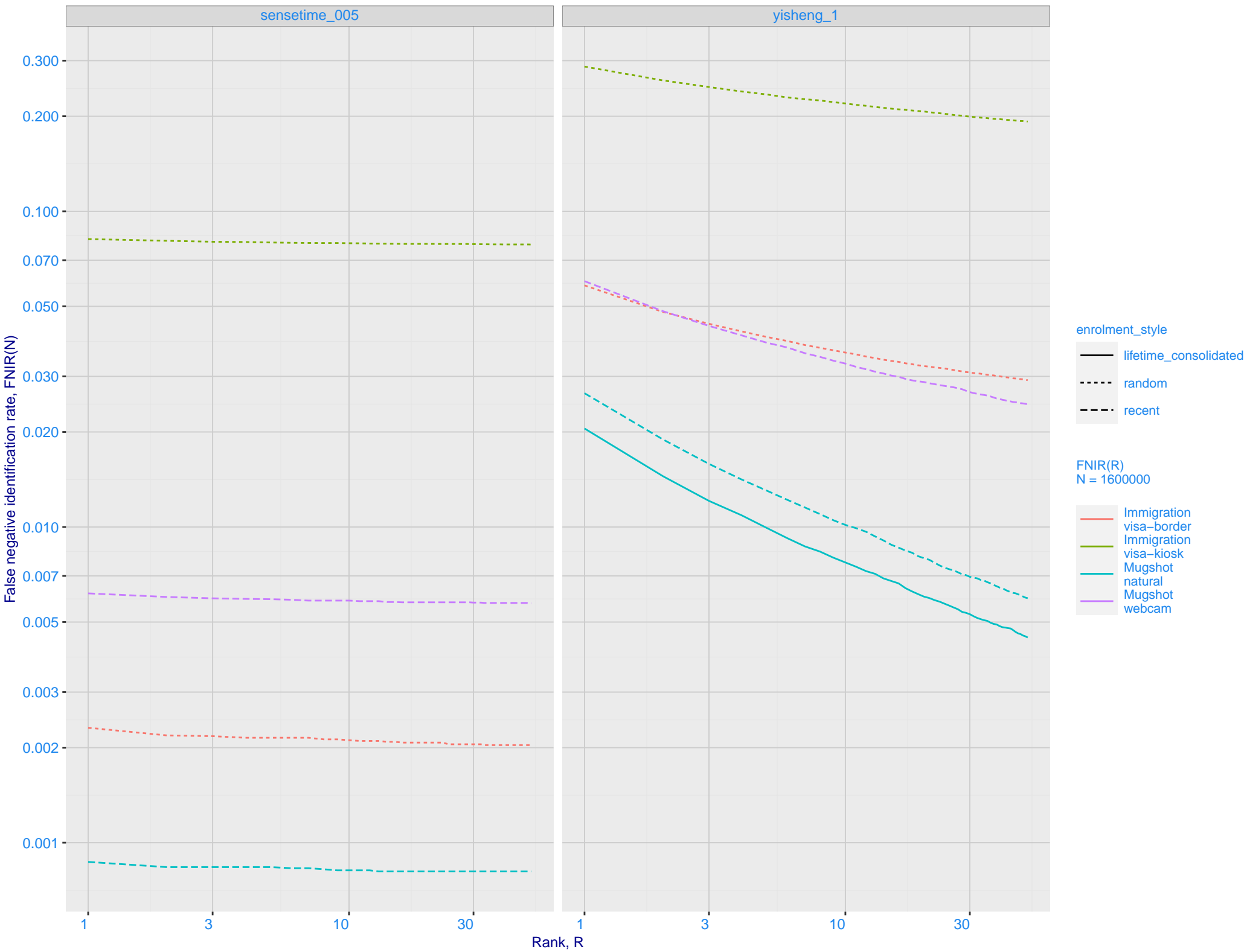




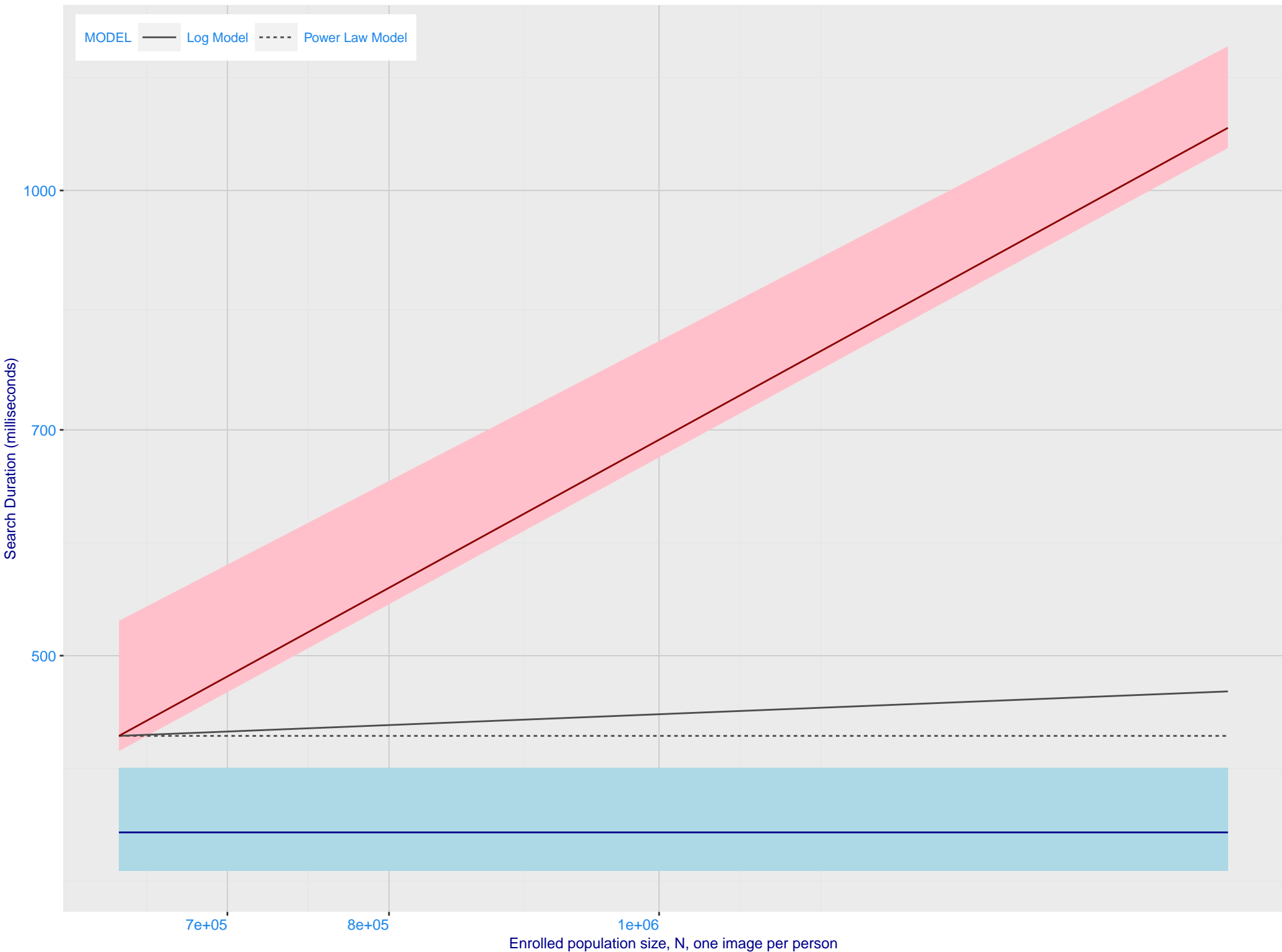
# I: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime\_005)



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



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



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

Dataset: 2018 Mugshot N = 3068801

