

A: Datasheet

Algorithm: siat\_1

Developer: Shenzhen Inst Adv Integrated Tech CAS

Submission Date: 2018\_06\_30

Template size: 2052 bytes

Template time (2.5 percentile): 777 msec

Template time (median): 829 msec

Template time (97.5 percentile): 927 msec

Investigation:

Frontal mugshot ranking 22 (out of 265) — FNIR(1600000, 0, 1) = 0.0018 vs. lowest 0.0009 from sensetime\_005

Mugshot webcam ranking 205 (out of 227) — FNIR(1600000, 0, 1) = 0.3328 vs. lowest 0.0062 from sensetime\_005

Immigration visa–border ranking 30 (out of 148) — FNIR(1600000, 0, 1) = 0.0043 vs. lowest 0.0013 from visionlabs\_010

Immigration visa–kiosk ranking 25 (out of 145) — FNIR(1600000, 0, 1) = 0.0991 vs. lowest 0.0568 from hr\_000

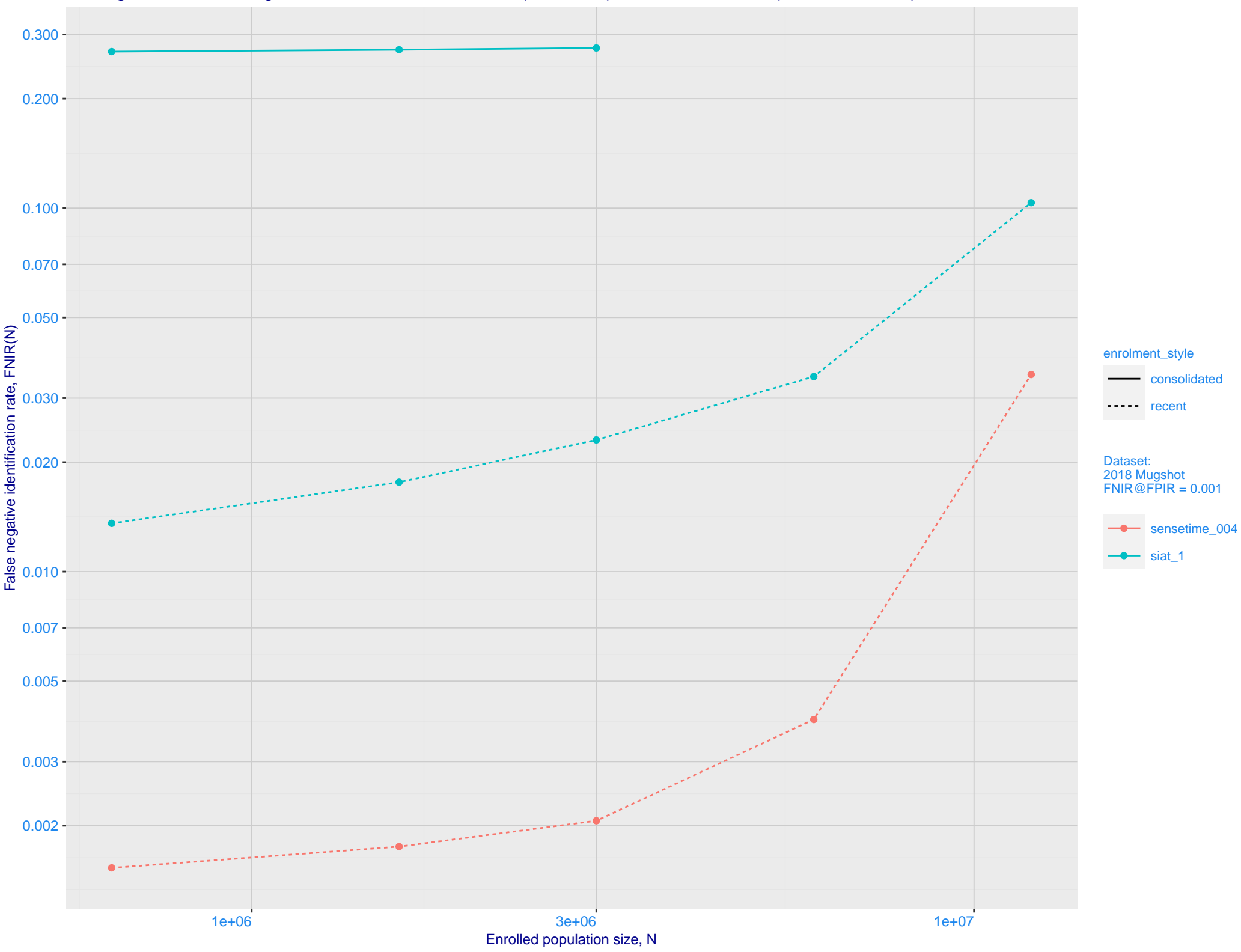
Identification:

Frontal mugshot ranking 28 (out of 265) — FNIR(1600000, T, L+1) = 0.0176, FPIR=0.001000 vs. lowest 0.0018 from sensetime\_004

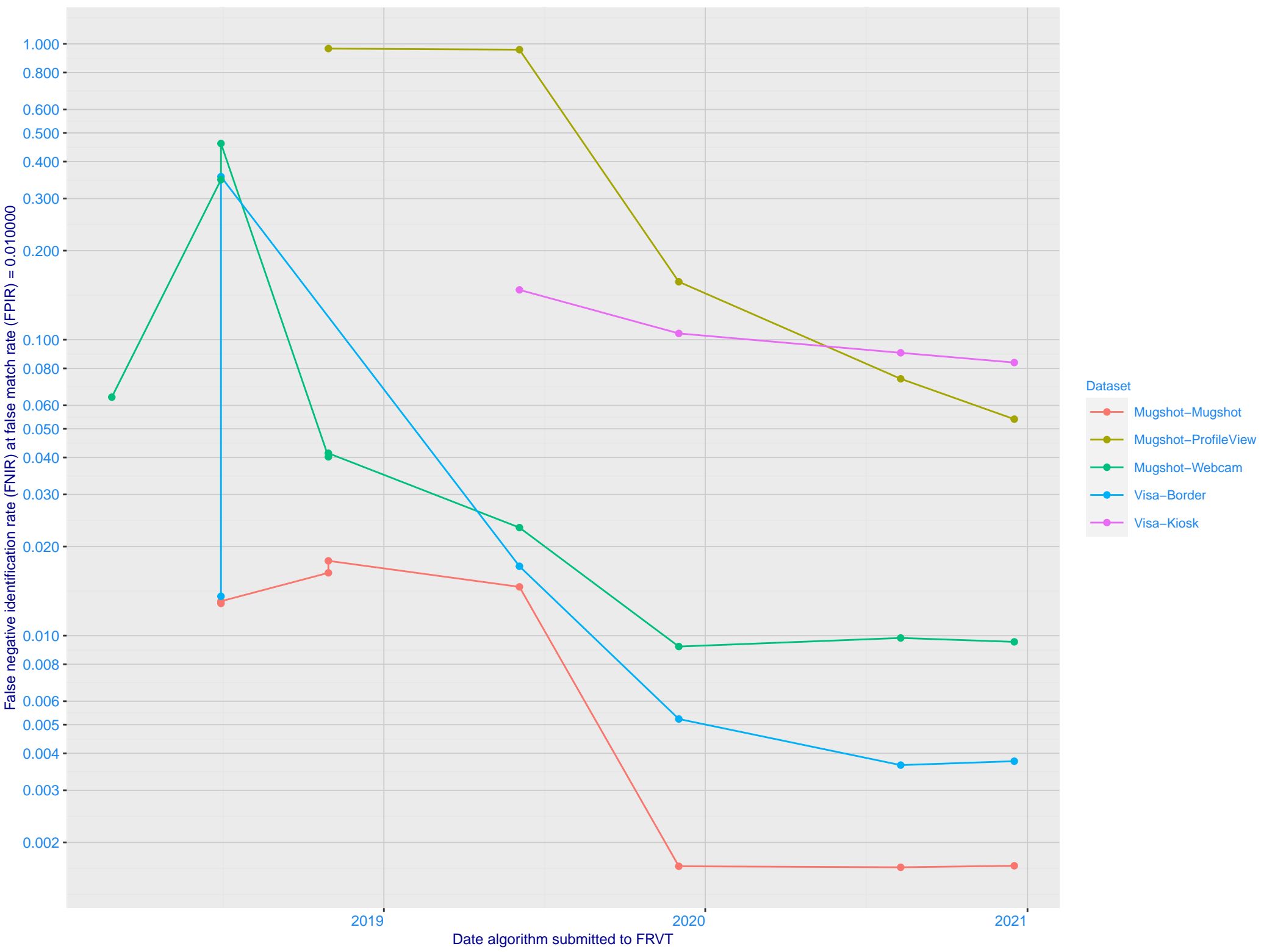
Mugshot webcam ranking 169 (out of 225) — FNIR(1600000, T, L+1) = 0.3647, FPIR=0.001000 vs. lowest 0.0122 from sensetime\_003

Immigration visa–border ranking 27 (out of 146) — FNIR(1600000, T, L+1) = 0.0308, FPIR=0.001000 vs. lowest 0.0049 from hr\_000

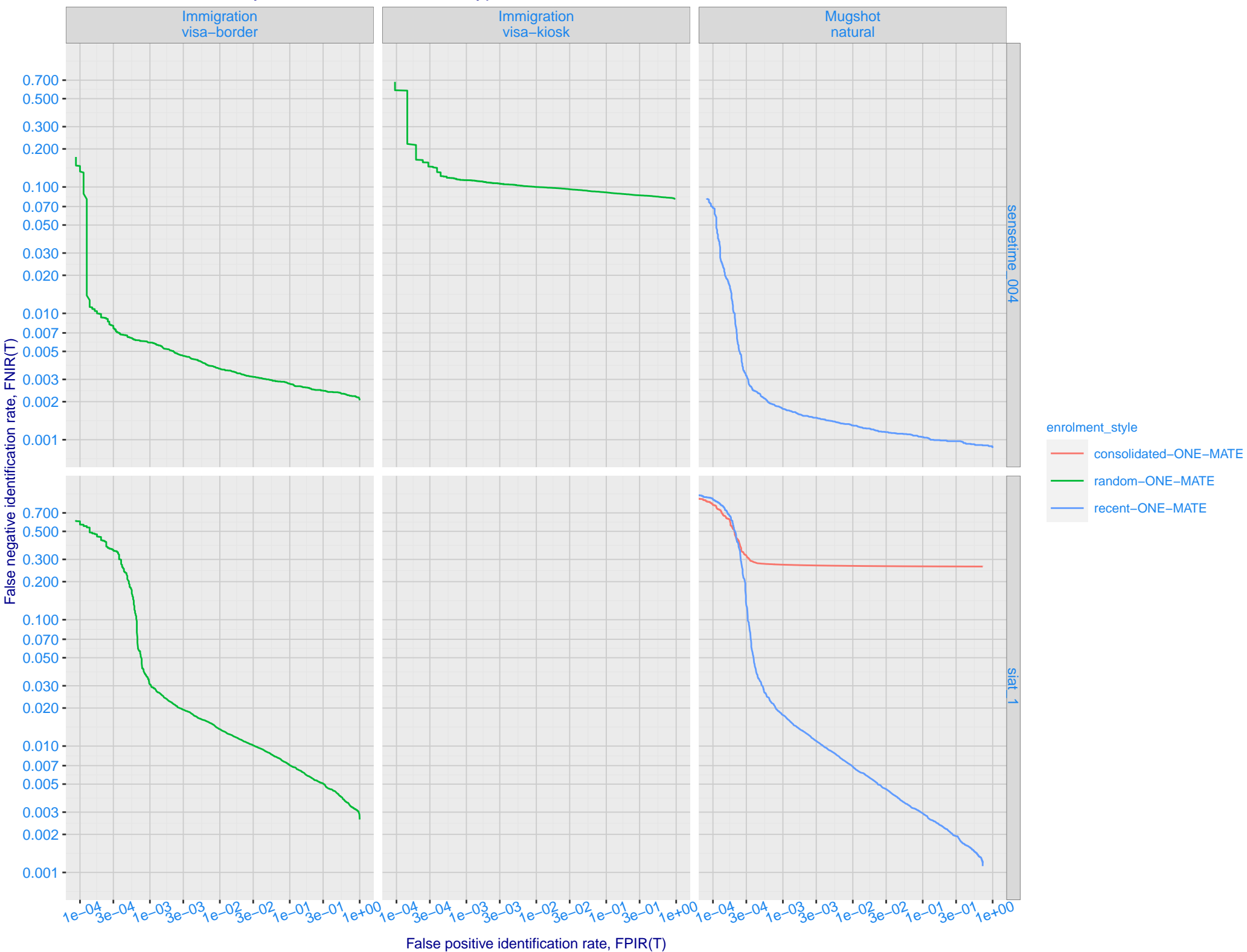
B: Mugshot natural images, identification mode: FNIR(N, L+1, T) vs. most accurate (sensetime\_004)



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

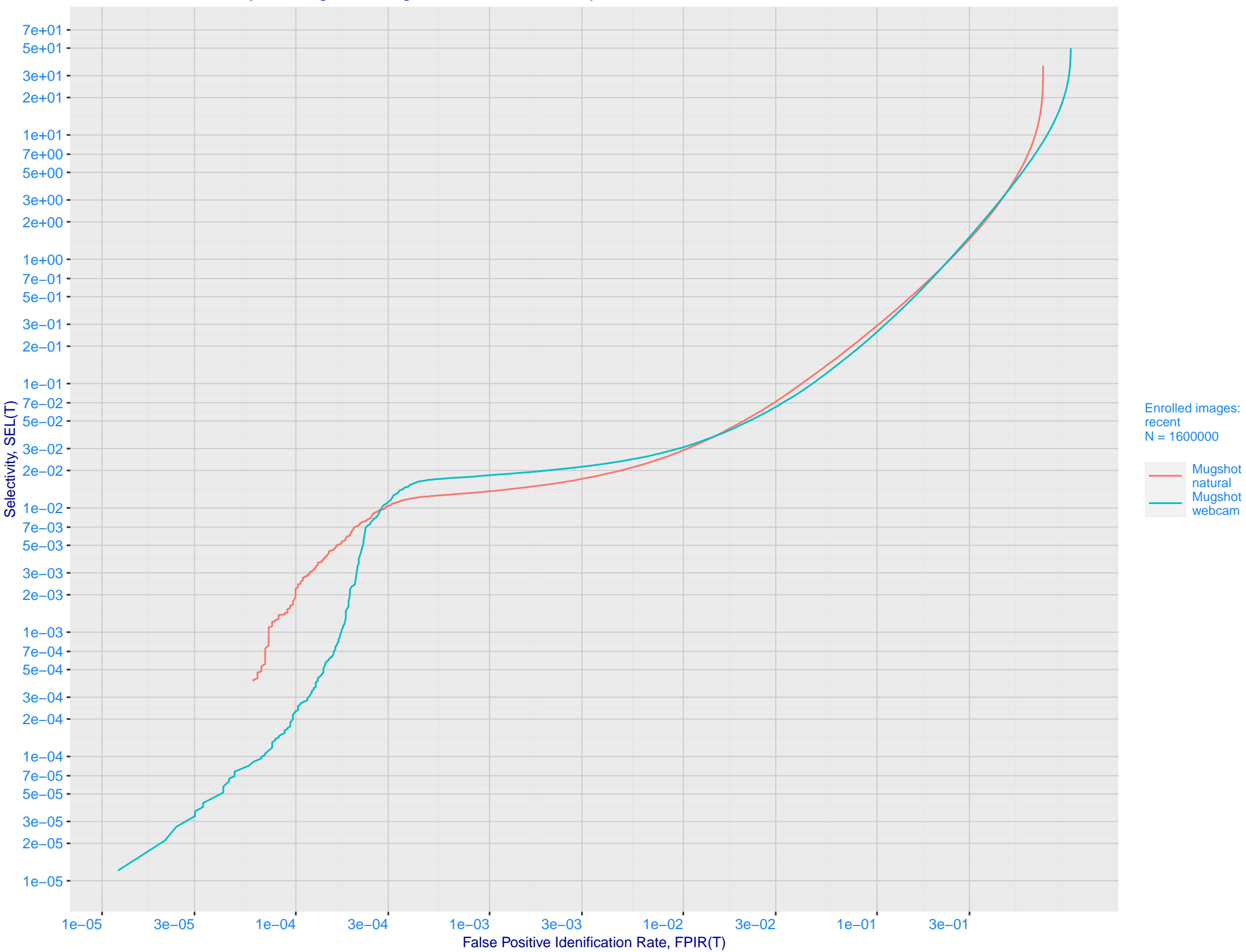


D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals

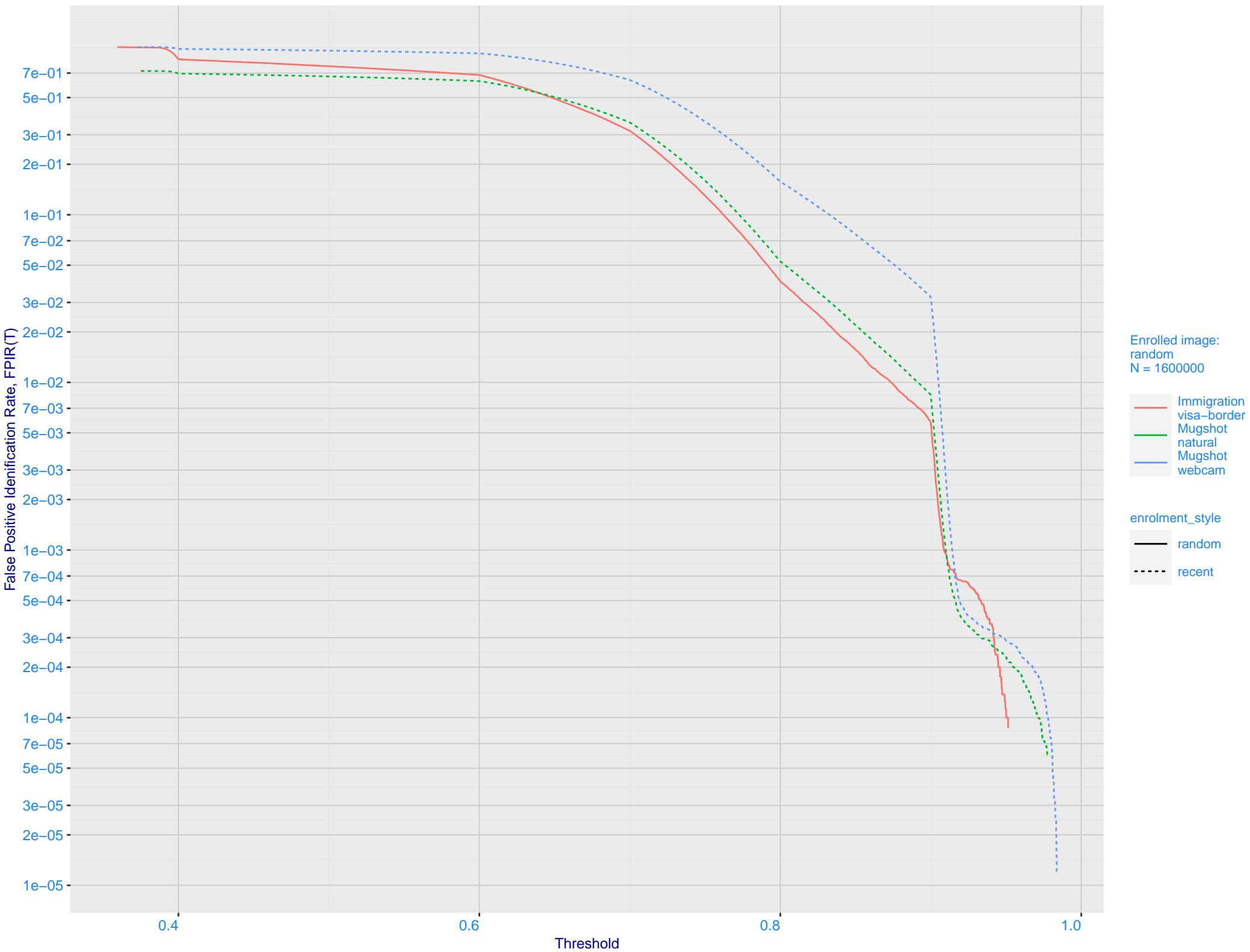




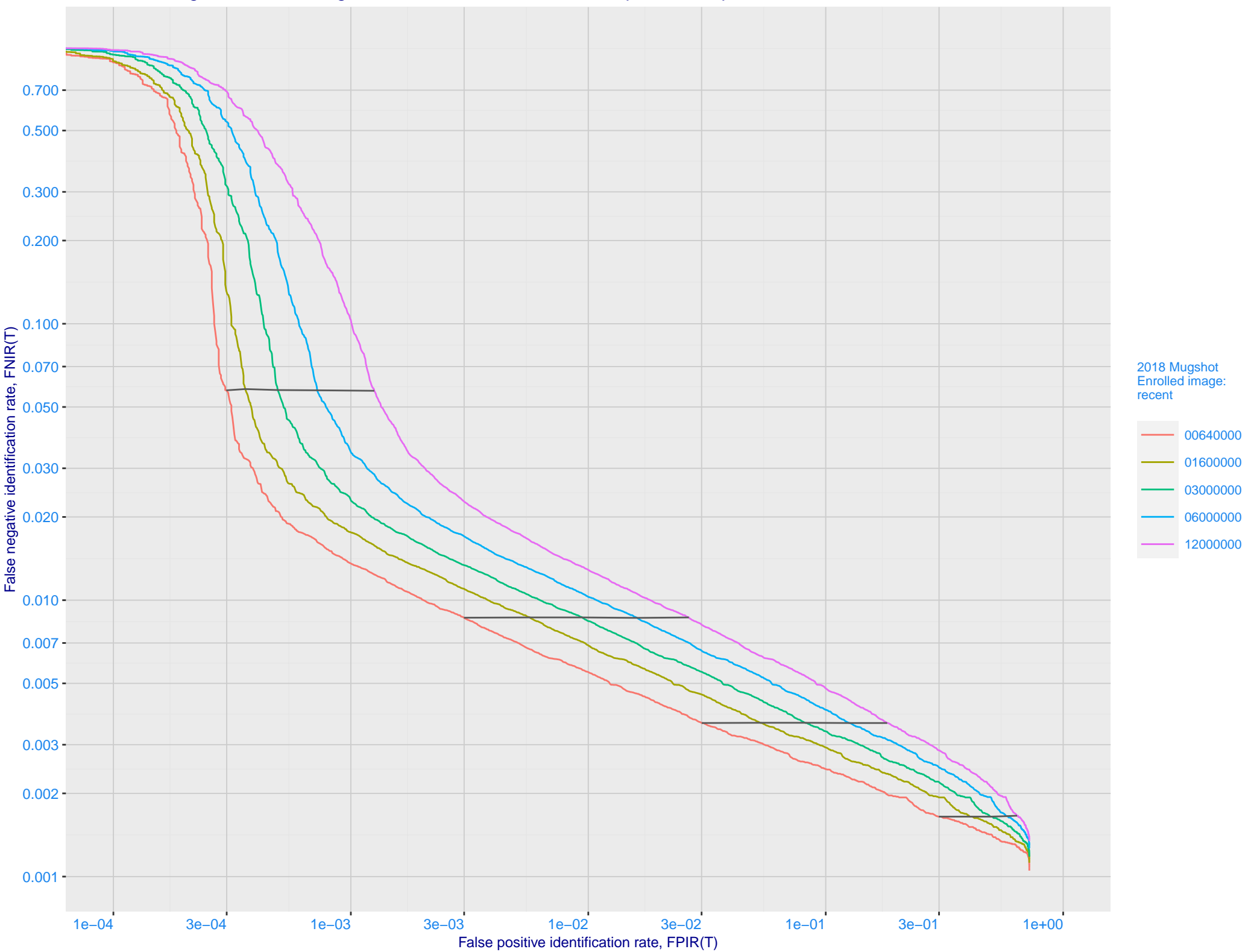
F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate



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

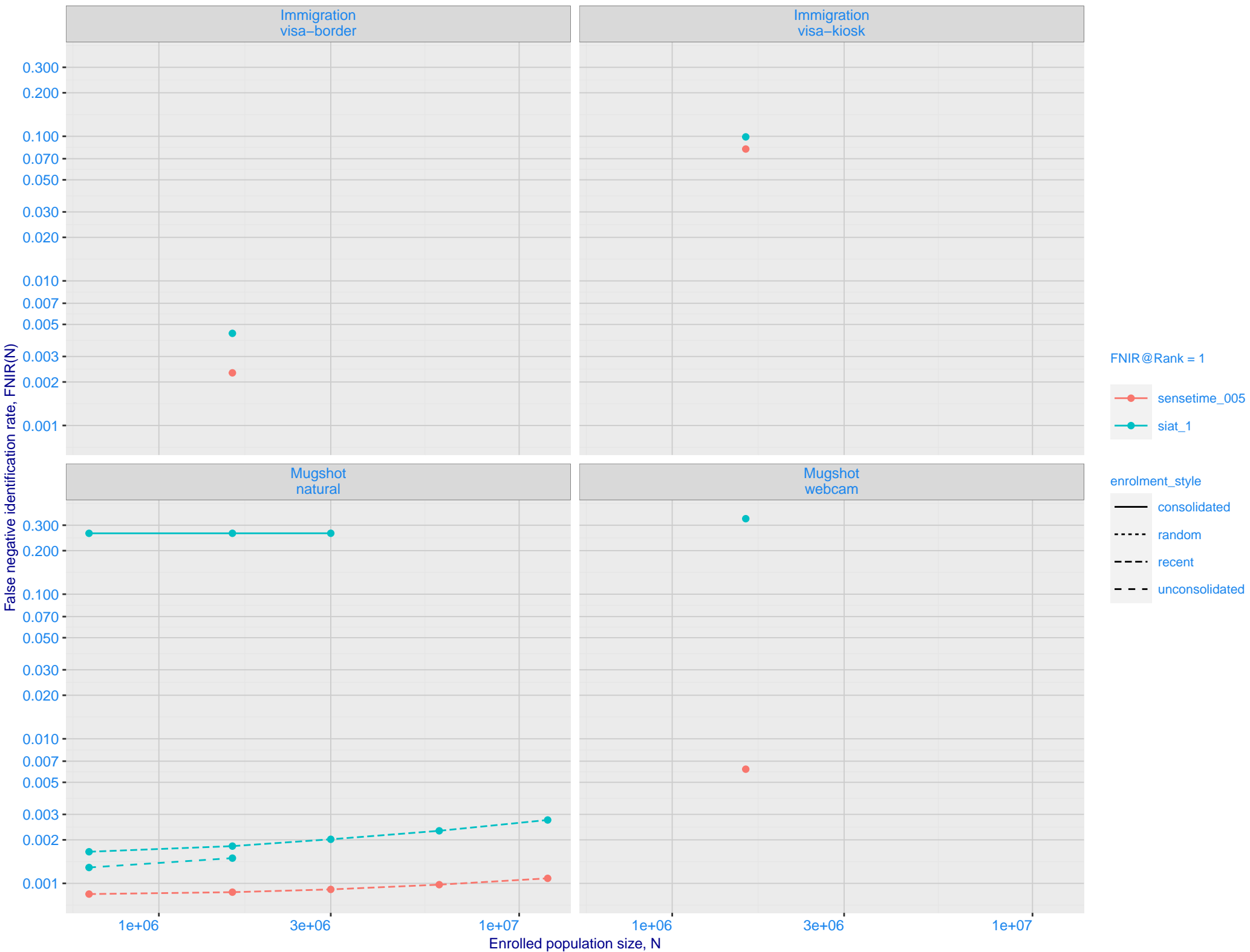


H: DET for Mugshot natural images and various N. Links connect points of equal threshold.

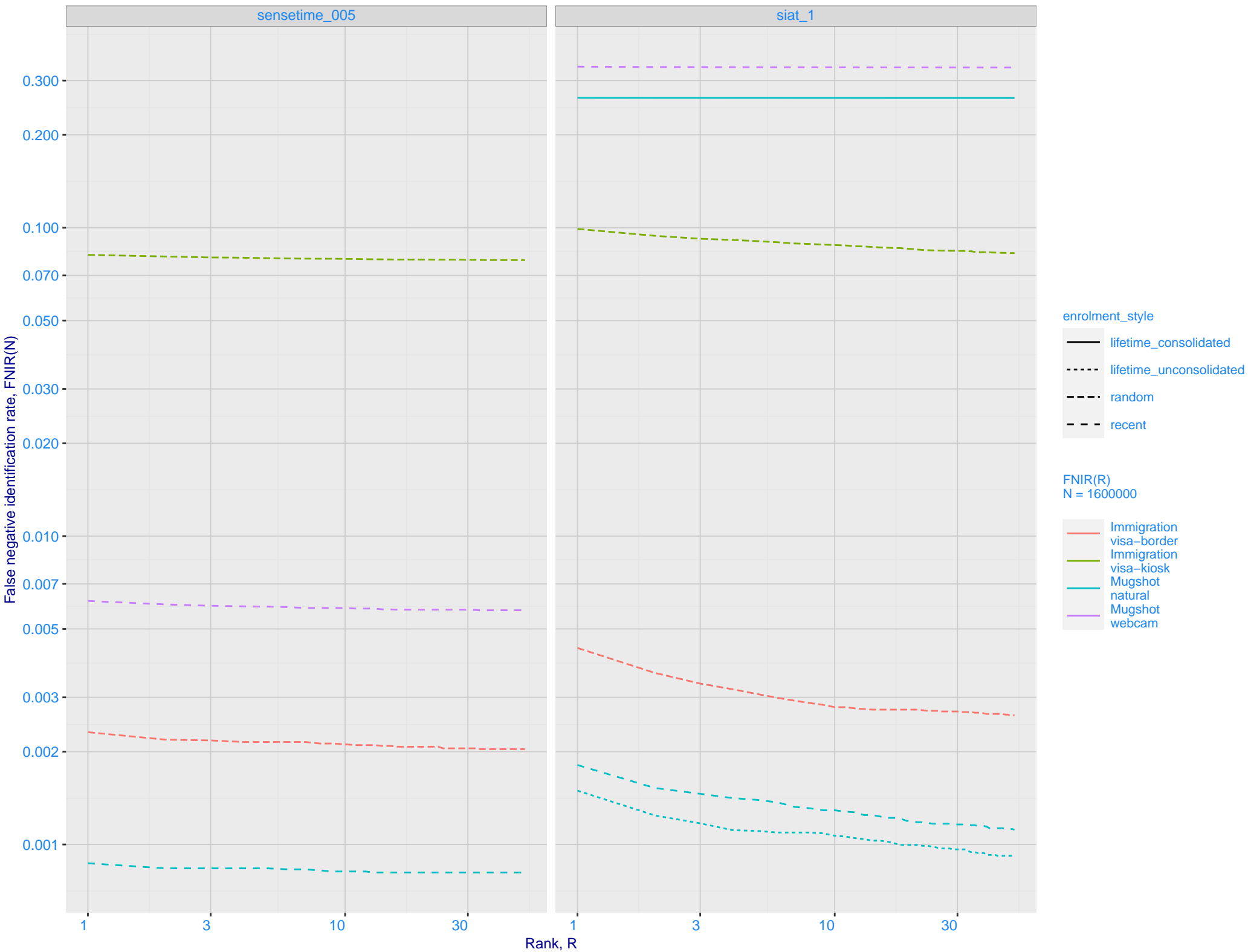




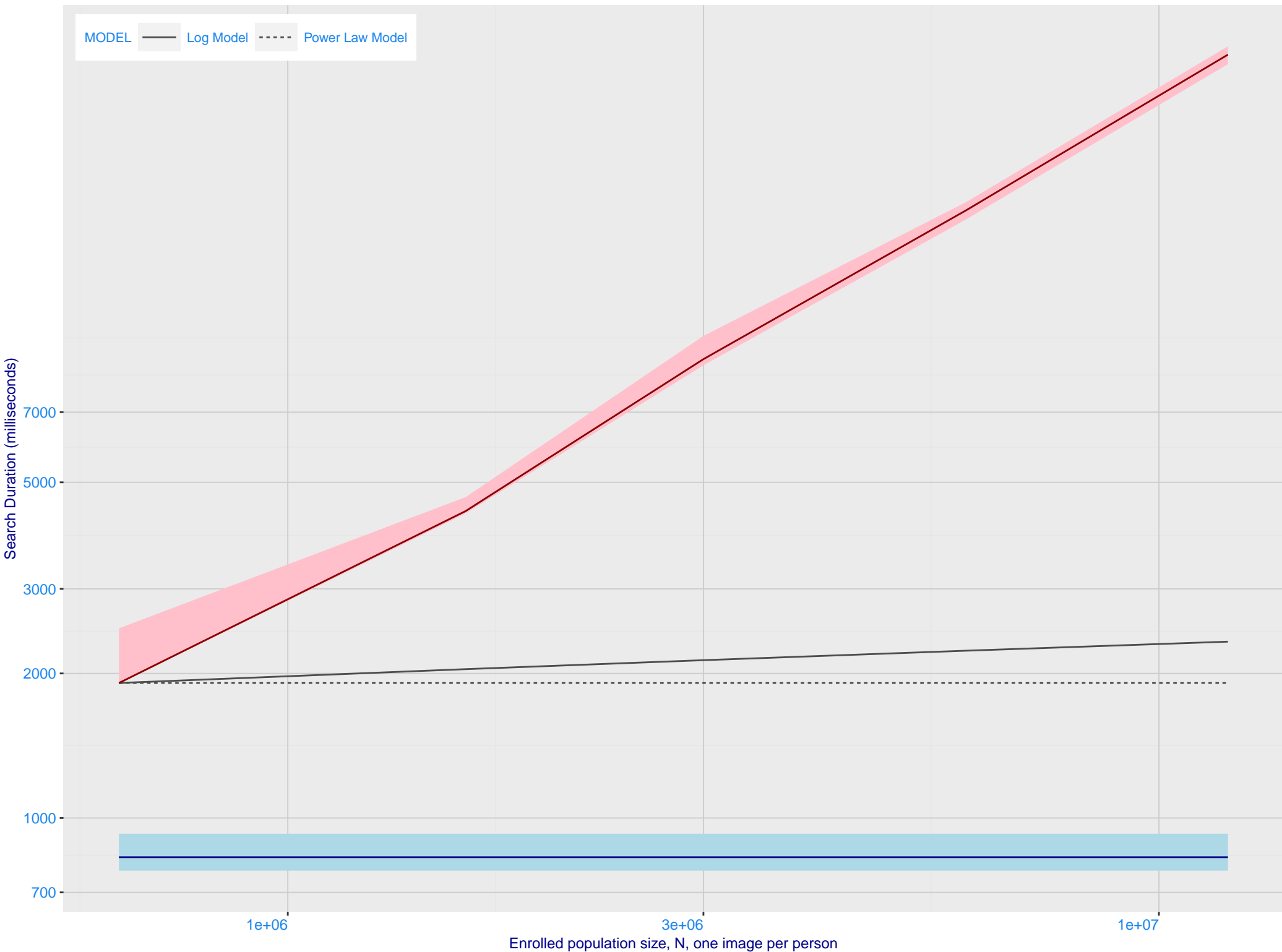
# I: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime\_005)



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

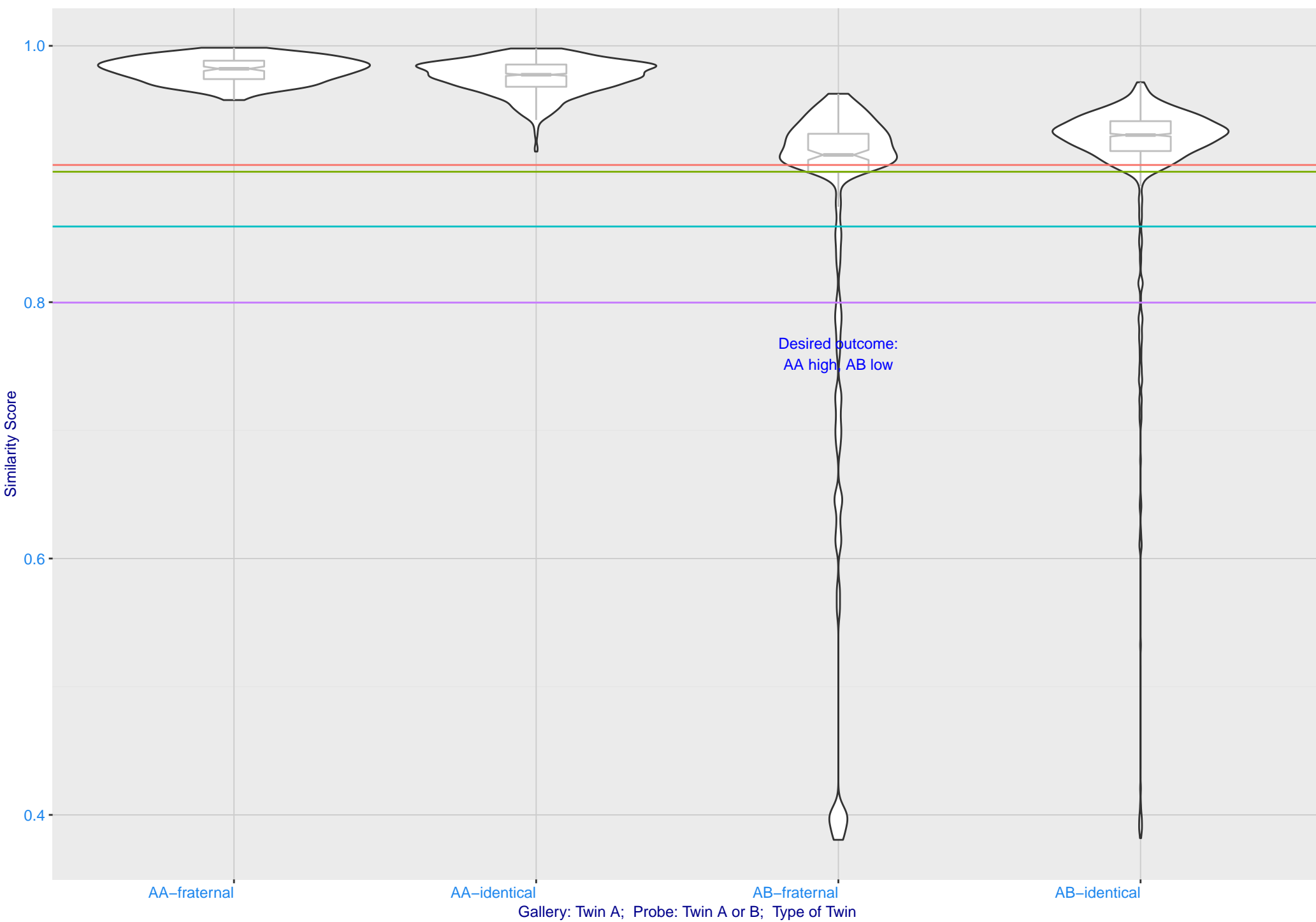


Template duration; search duration vs. N. The blue and pink ribbon covers 95 percent of observed measurements. The template generation time is independent of N. The log and power-law models are fit to the first two (N,T) observations



# Solo-Twin and Twin-Twin similarity scores

TVAL FPIR = 0.001 FPIR = 0.003 FPIR = 0.010 FPIR = 0.030



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

Dataset: 2018 Mugshot N = 3068801

