

A: Datasheet

Algorithm: microsoft_1

Developer: Microsoft

Submission Date: 2018_02_12

Template size: 1024 bytes

Template time (2.5 percentile): 341 msec

Template time (median): 348 msec

Template time (97.5 percentile): 362 msec

Investigation:

Frontal mugshot ranking 72 (out of 279) — FNIR(1600000, 0, 1) = 0.0035 vs. lowest 0.0009 from sensetime_005

Immigration visa–border ranking 66 (out of 168) — FNIR(1600000, 0, 1) = 0.0083 vs. lowest 0.0013 from visionlabs_010

Immigration visa–kiosk ranking 66 (out of 165) — FNIR(1600000, 0, 1) = 0.1351 vs. lowest 0.0568 from cloudwalk_hr_000

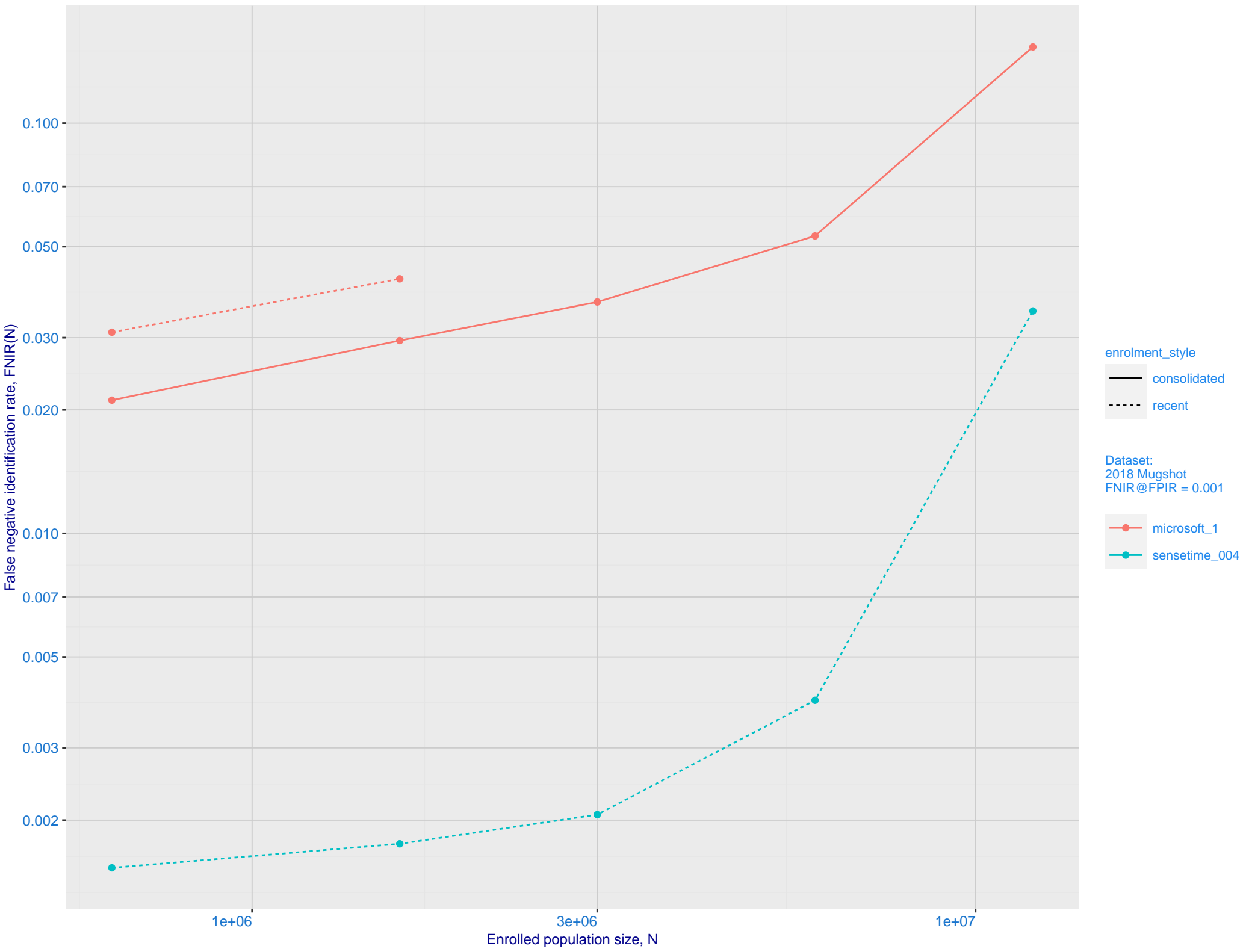
Identification:

Frontal mugshot ranking 74 (out of 279) — FNIR(1600000, T, L+1) = 0.0417, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

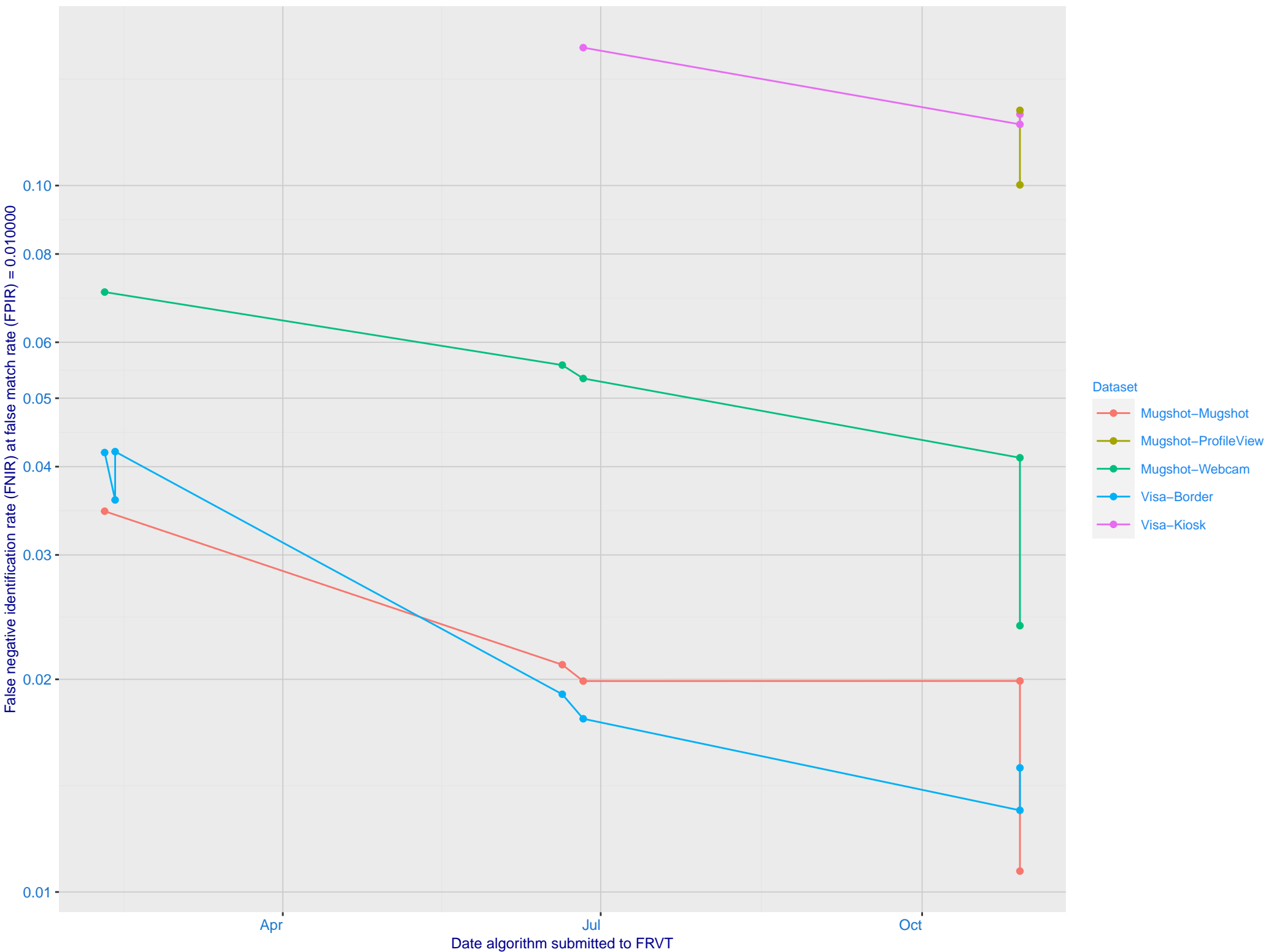
Immigration visa–border ranking 66 (out of 167) — FNIR(1600000, T, L+1) = 0.0662, FPIR=0.001000 vs. lowest 0.0047 from idemia_008

Immigration visa–kiosk ranking 39 (out of 162) — FNIR(1600000, T, L+1) = 0.2766, FPIR=0.001000 vs. lowest 0.0996 from cloudwalk_hr_000

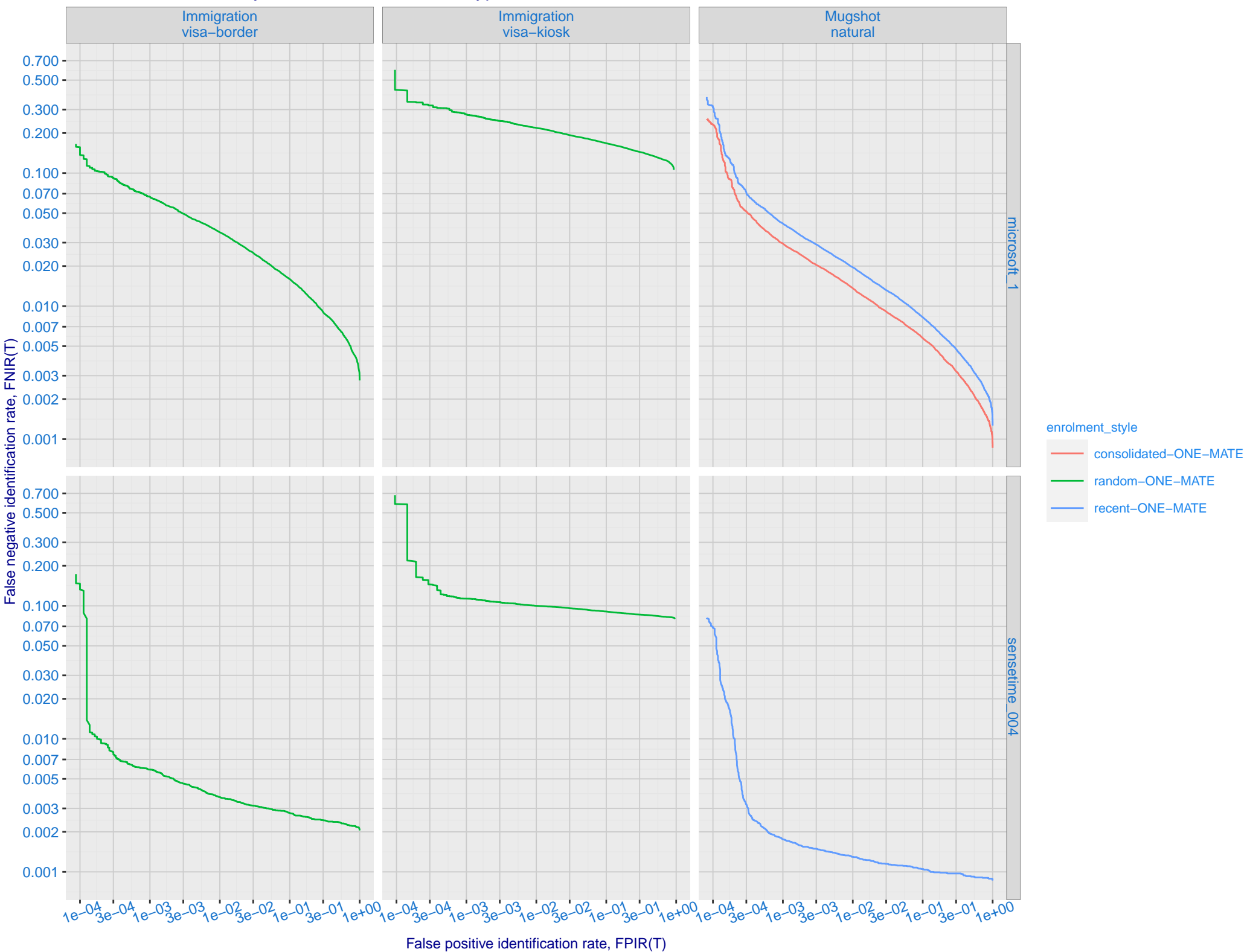
B: Mugshot natural images, identification mode: FNIR(N, L+1, T) vs. most accurate (sensitive_004)



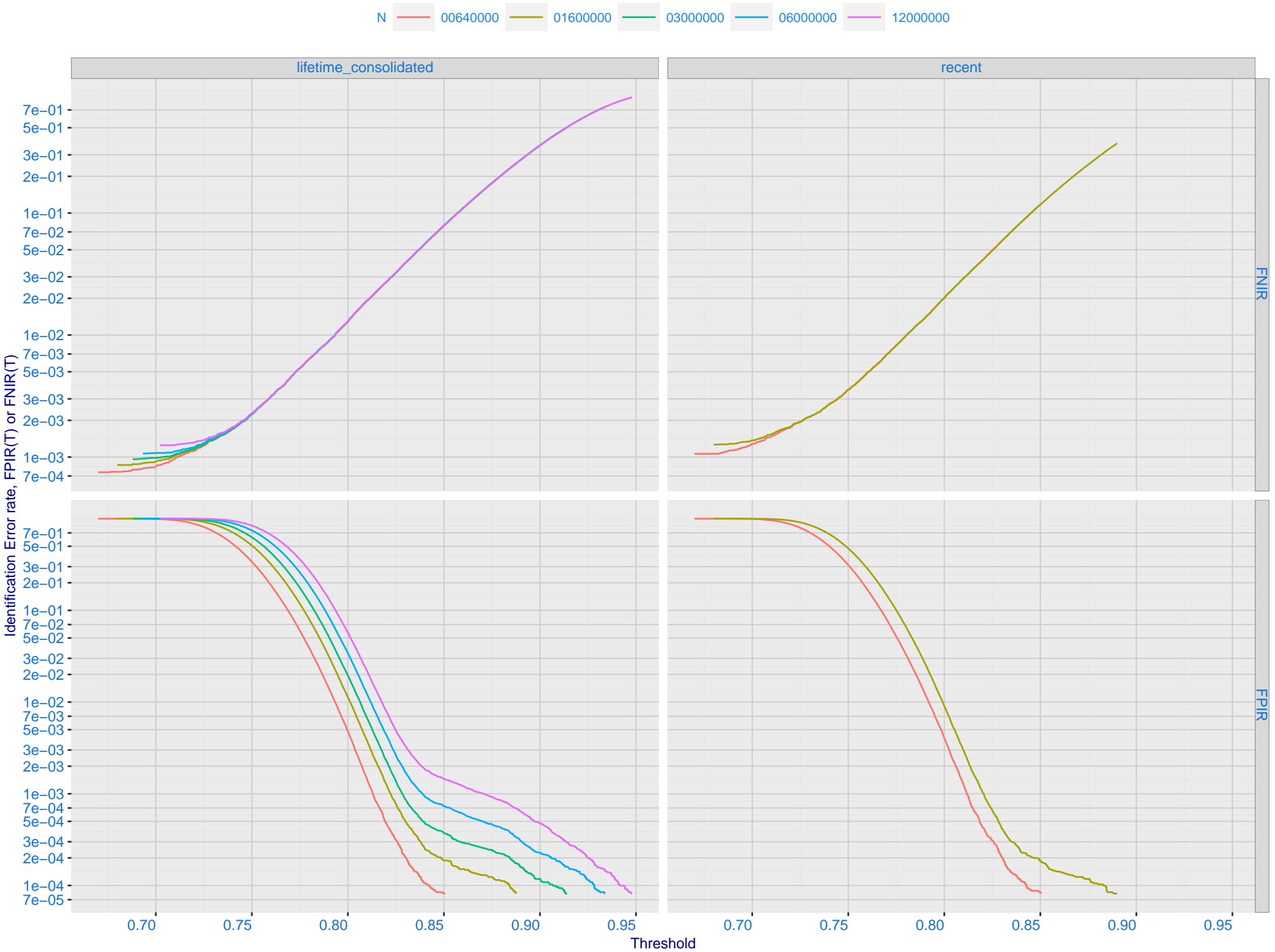
C: Evolution of accuracy for MICROSOFT algorithms on three datasets 2018 – present



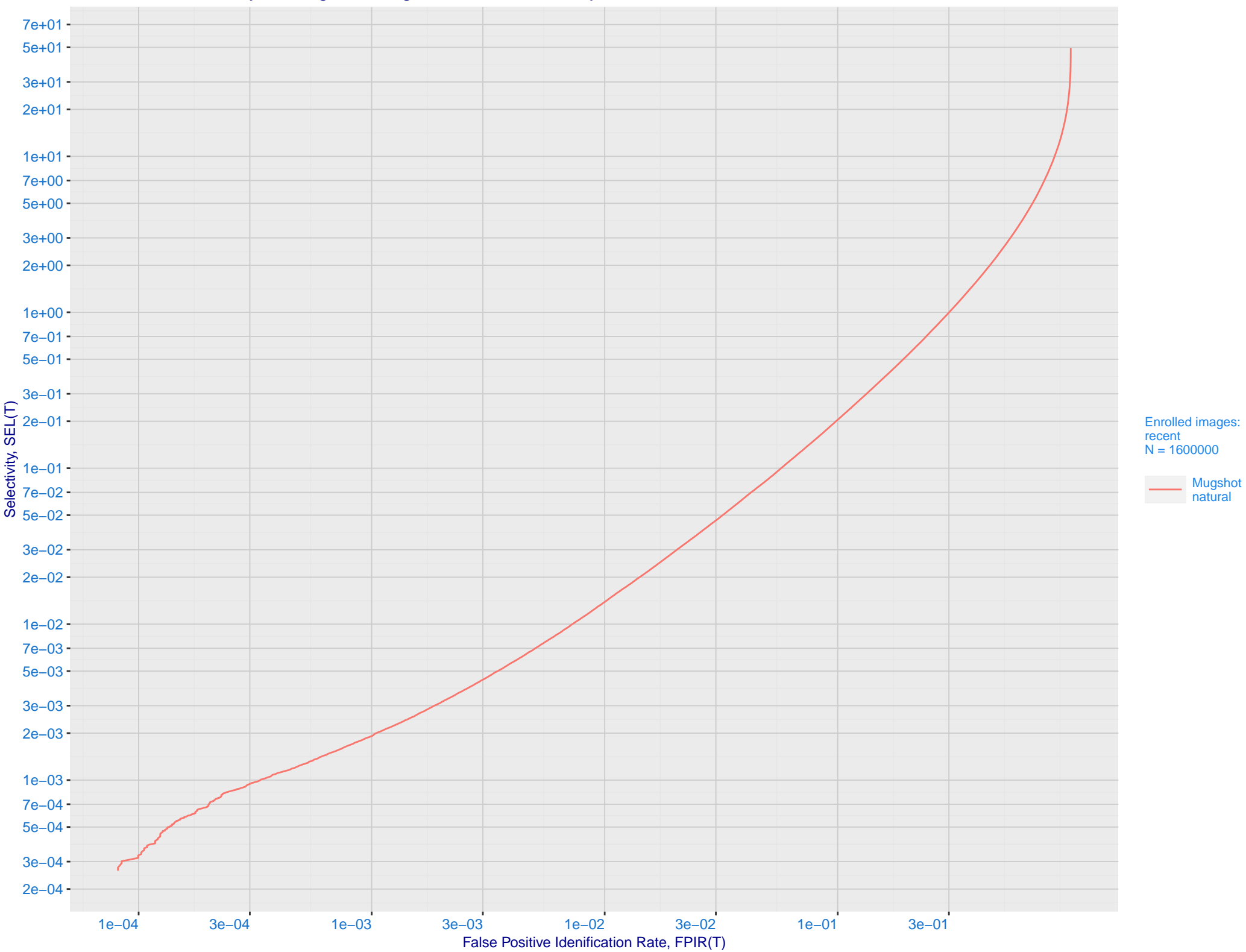
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals



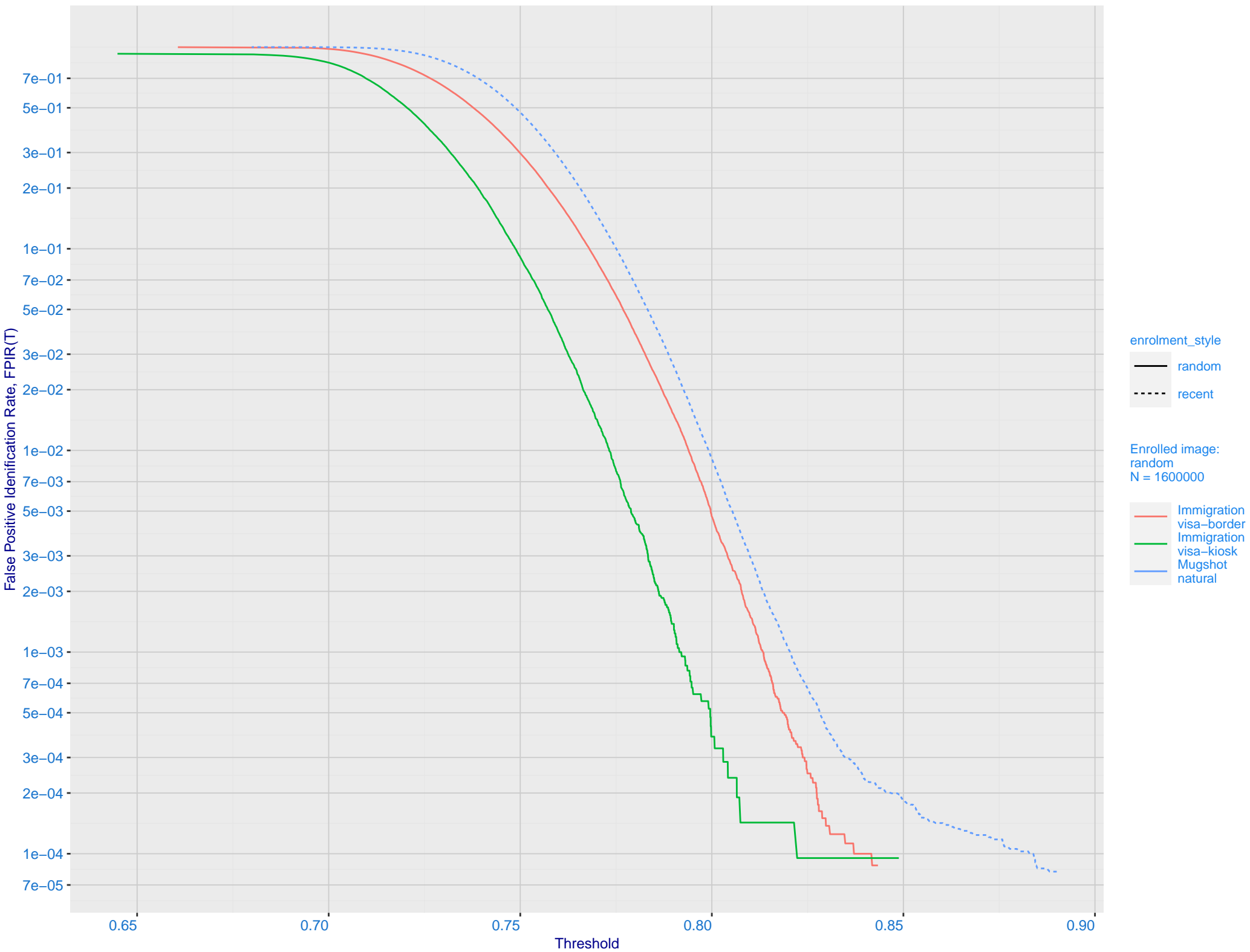
E: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images



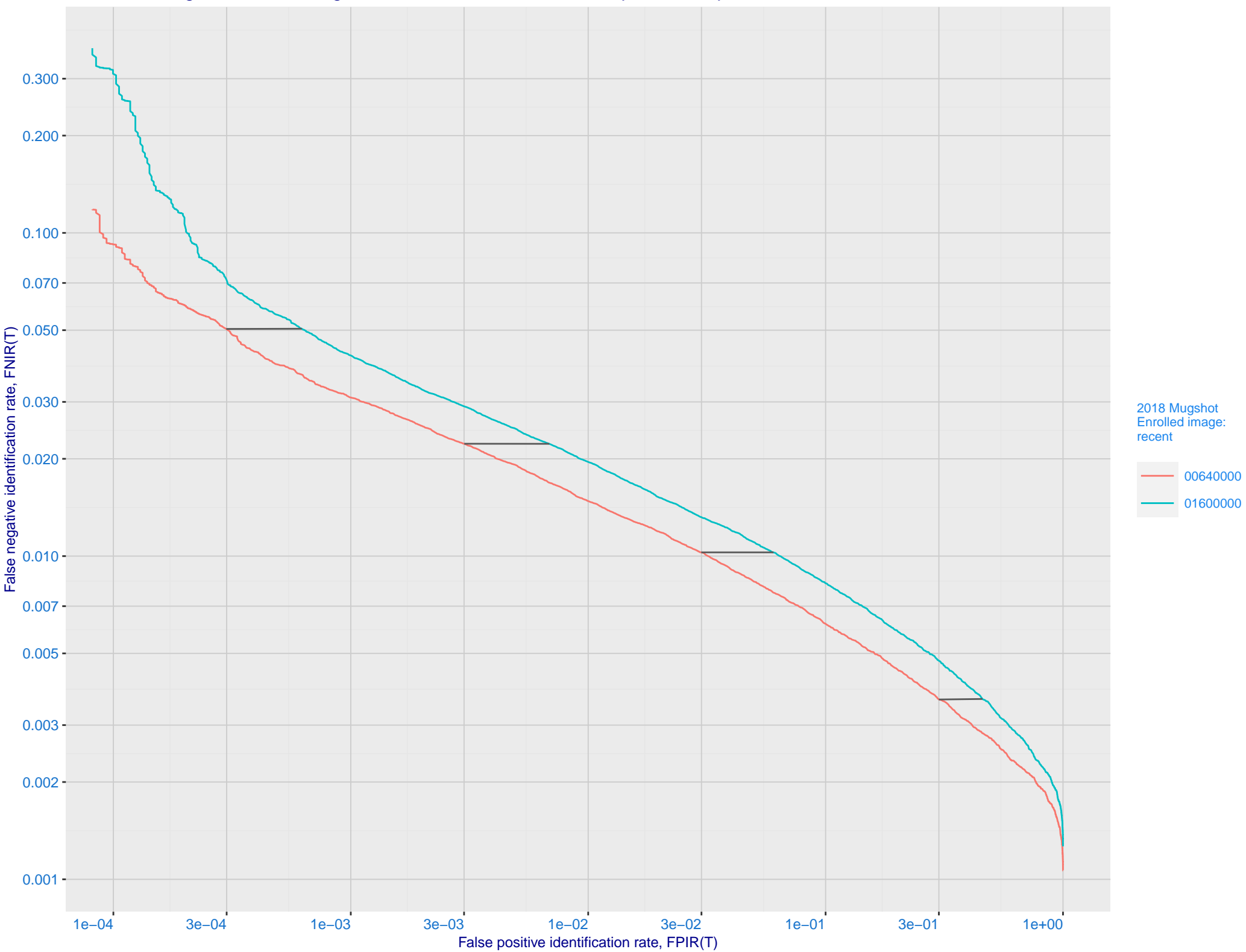
F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate



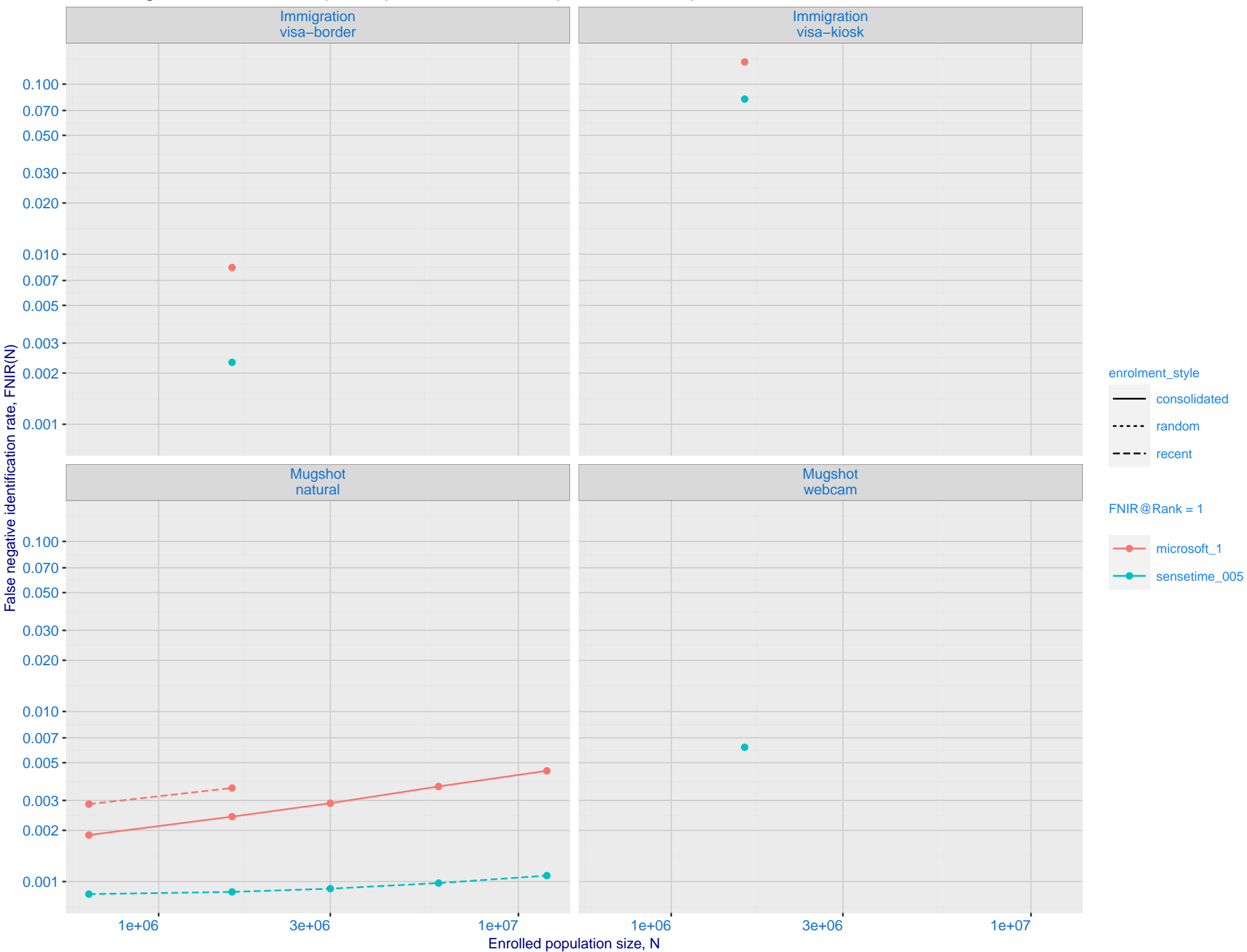
G: FPIR dependence on T by probe type for N = 1600000 subjects



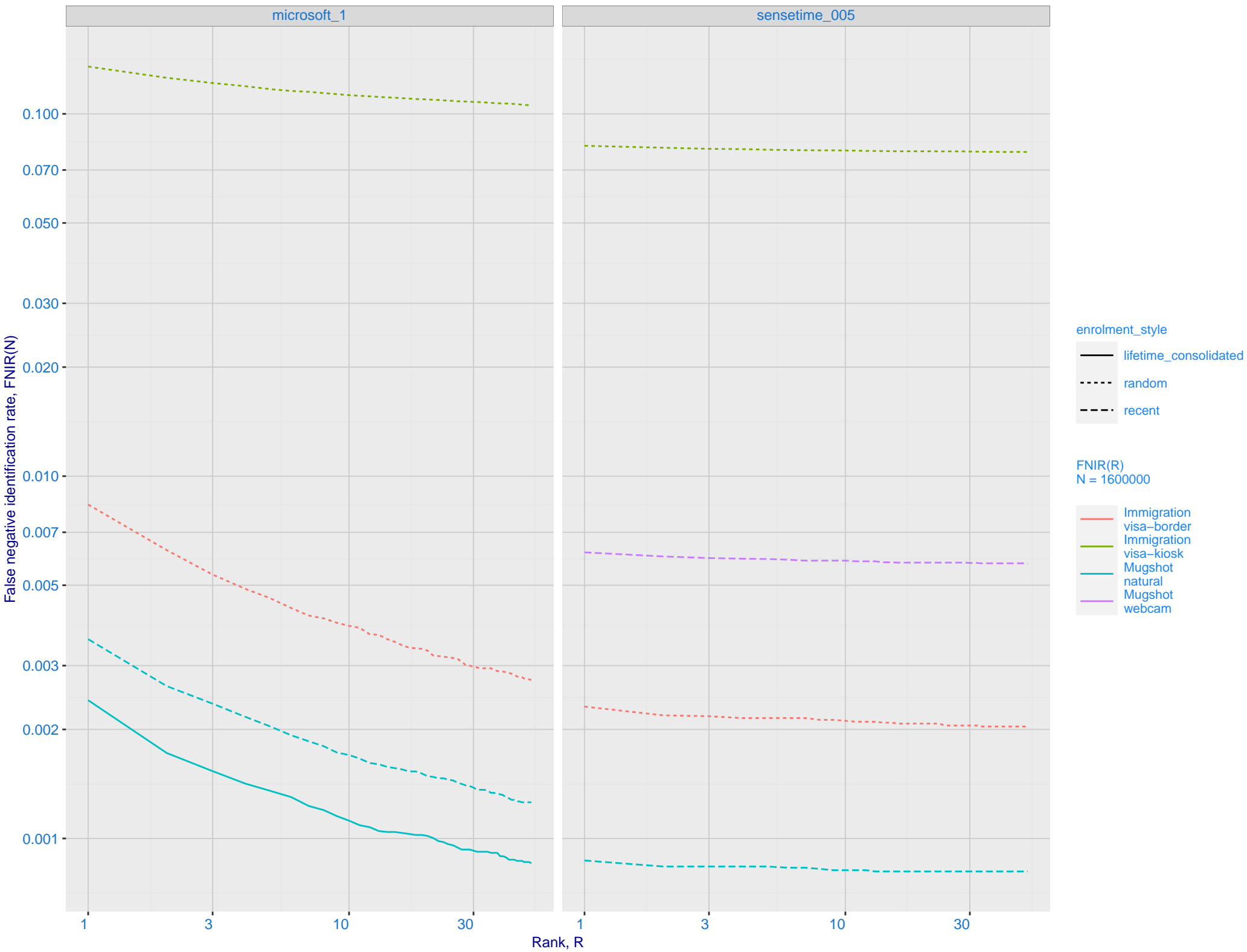
J: DET for Mugshot natural images and various N. Links connect points of equal threshold.



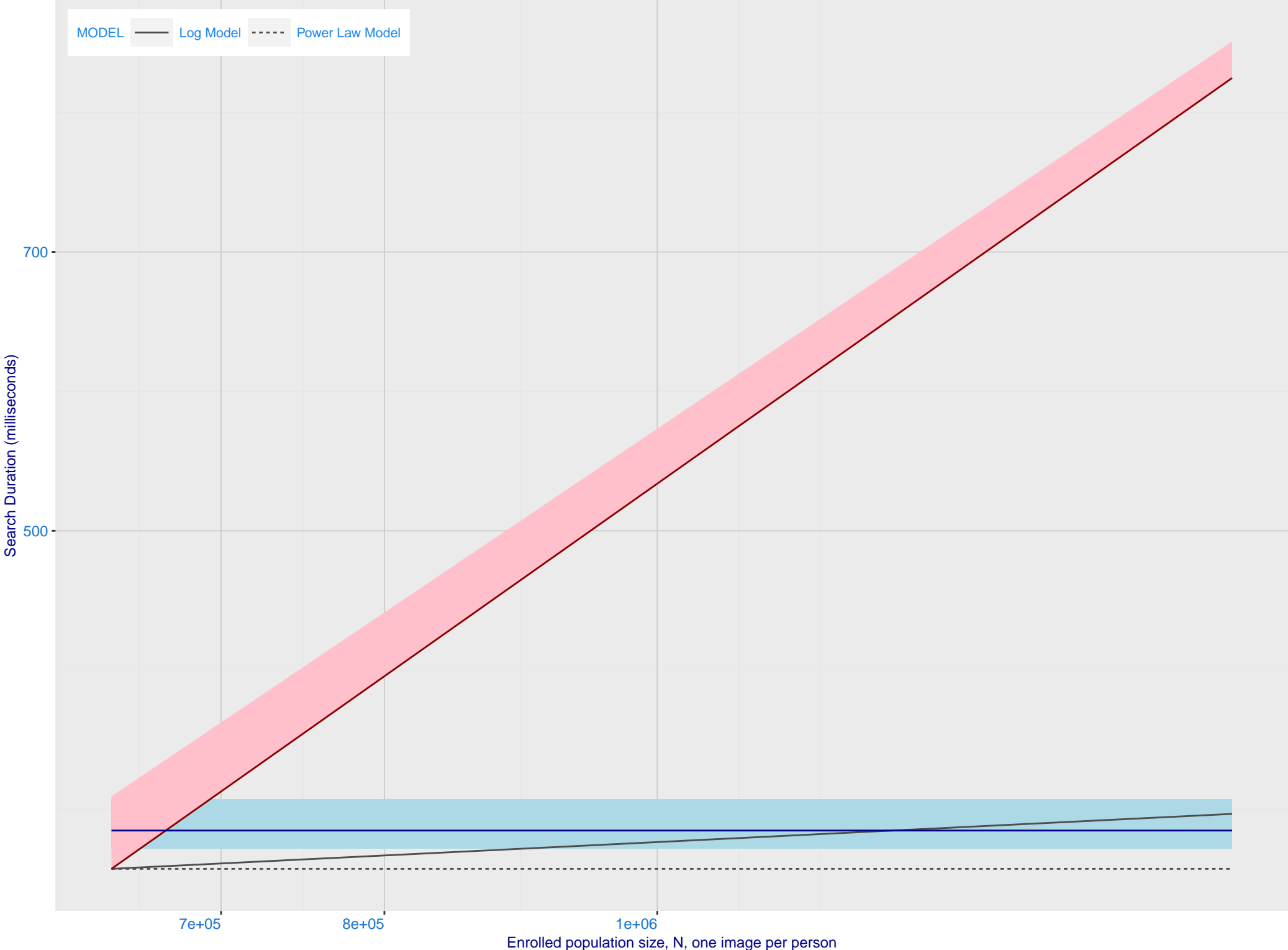
K: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005)



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

Dataset: 2018 Mugshot N = 3068801

