

A: Datasheet

Algorithm: f8_001

Developer: FarBar Inc

Submission Date: 2019_10_03

Investigation:

Frontal mugshot ranking 155 (out of 279) -- FNIR(1600000, 0, 1) = 0.0120 vs. lowest 0.0009 from sensetime_005

Mugshot profile ranking 82 (out of 210) -- FNIR(1600000, 0, 1) = 0.6689 vs. lowest 0.0587 from xforwardai_002

Immigration visa-border ranking 165 (out of 168) -- FNIR(1600000, 0, 1) = 1.0000 vs. lowest 0.0013 from visionlabs_010

Immigration visa-kiosk ranking 163 (out of 165) -- FNIR(1600000, 0, 1) = 1.0000 vs. lowest 0.0568 from cloudwalk_hr_000

Identification:

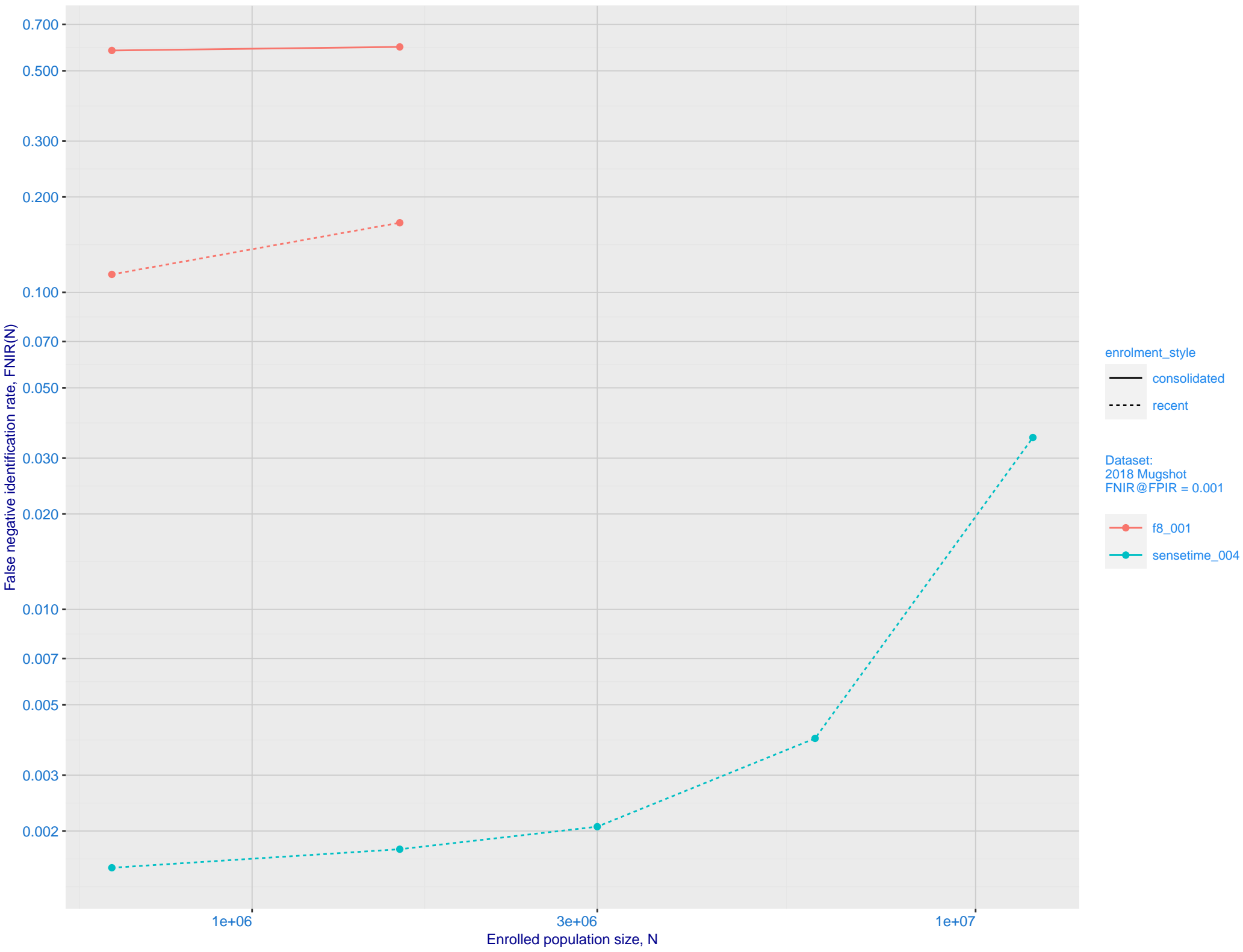
Frontal mugshot ranking 176 (out of 279) -- FNIR(1600000, T, L+1) = 0.1658, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

Mugshot profile ranking 132 (out of 209) -- FNIR(1600000, T, L+1) = 0.9985, FPIR=0.001000 vs. lowest 0.1331 from cloudwalk_hr_000

Immigration visa-border ranking 162 (out of 167) -- FNIR(1600000, T, L+1) = 1.0000, FPIR=0.001000 vs. lowest 0.0047 from idemia_008

Immigration visa-kiosk ranking 154 (out of 162) -- FNIR(1600000, T, L+1) = 1.0000, FPIR=0.001000 vs. lowest 0.0996 from cloudwalk_hr_000

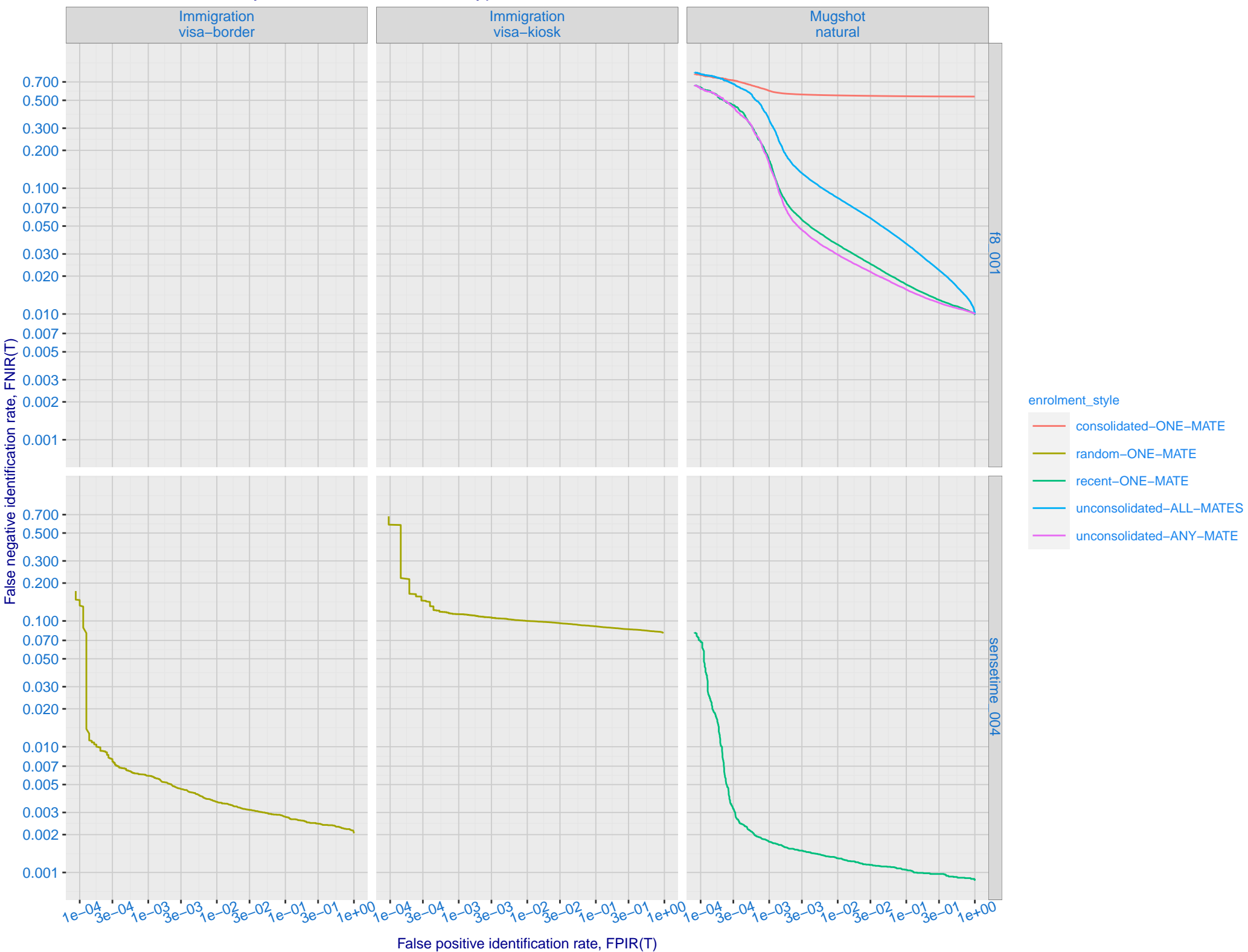
B: Mugshot natural images, identification mode: FNIR(N, L+1, T) vs. most accurate (sensetime_004)



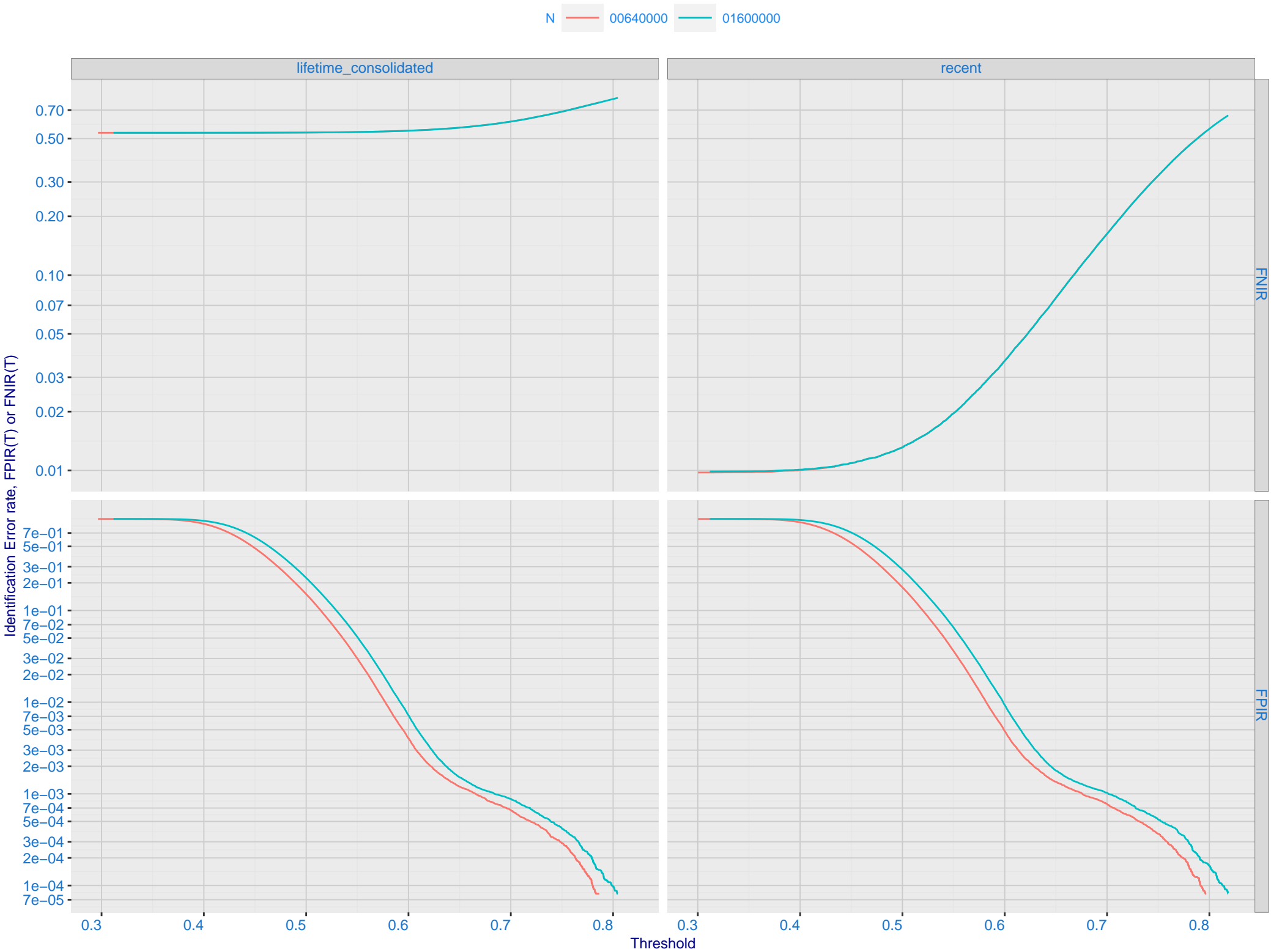
C: Evolution of accuracy for F8 algorithms on three datasets 2018 – present



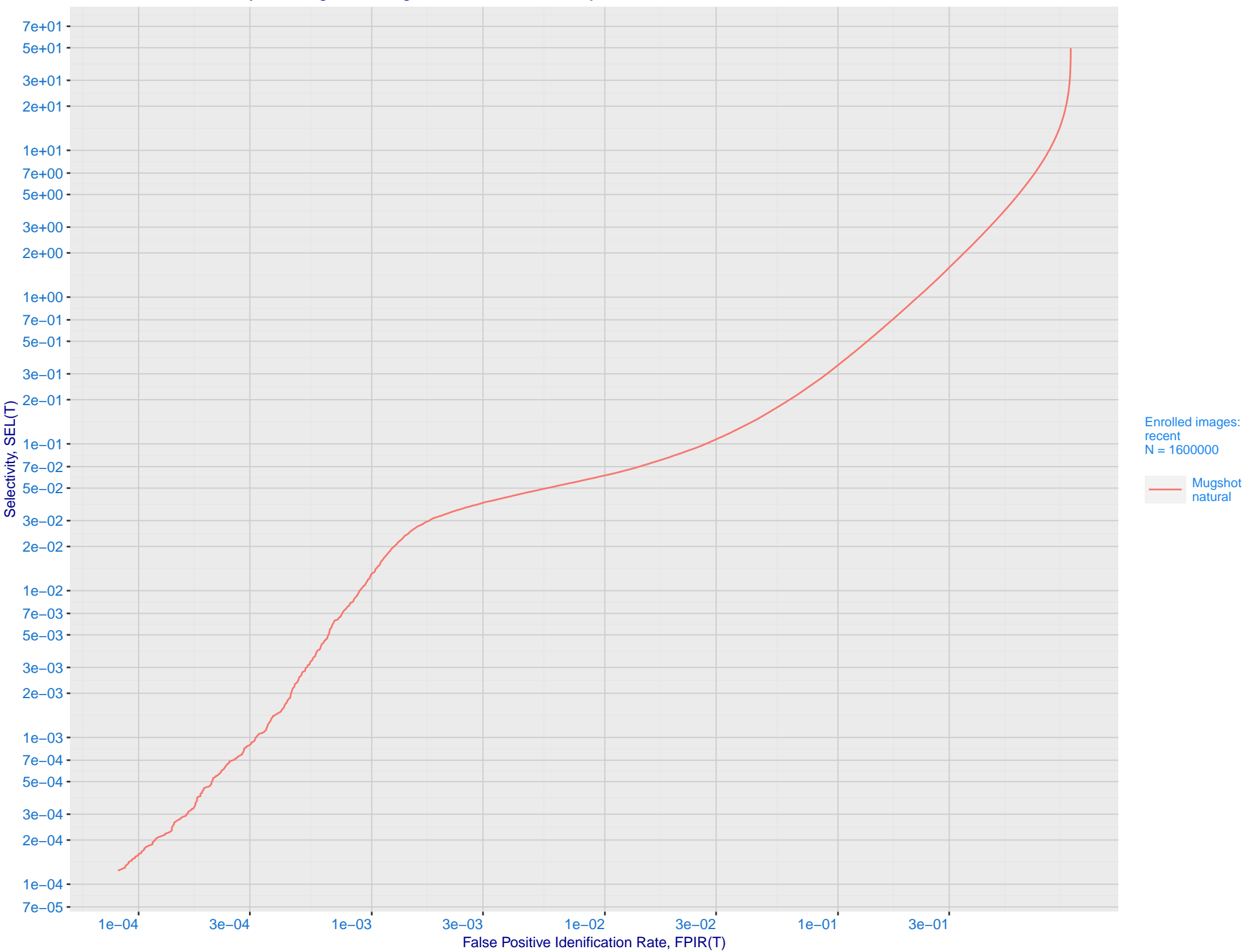
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals



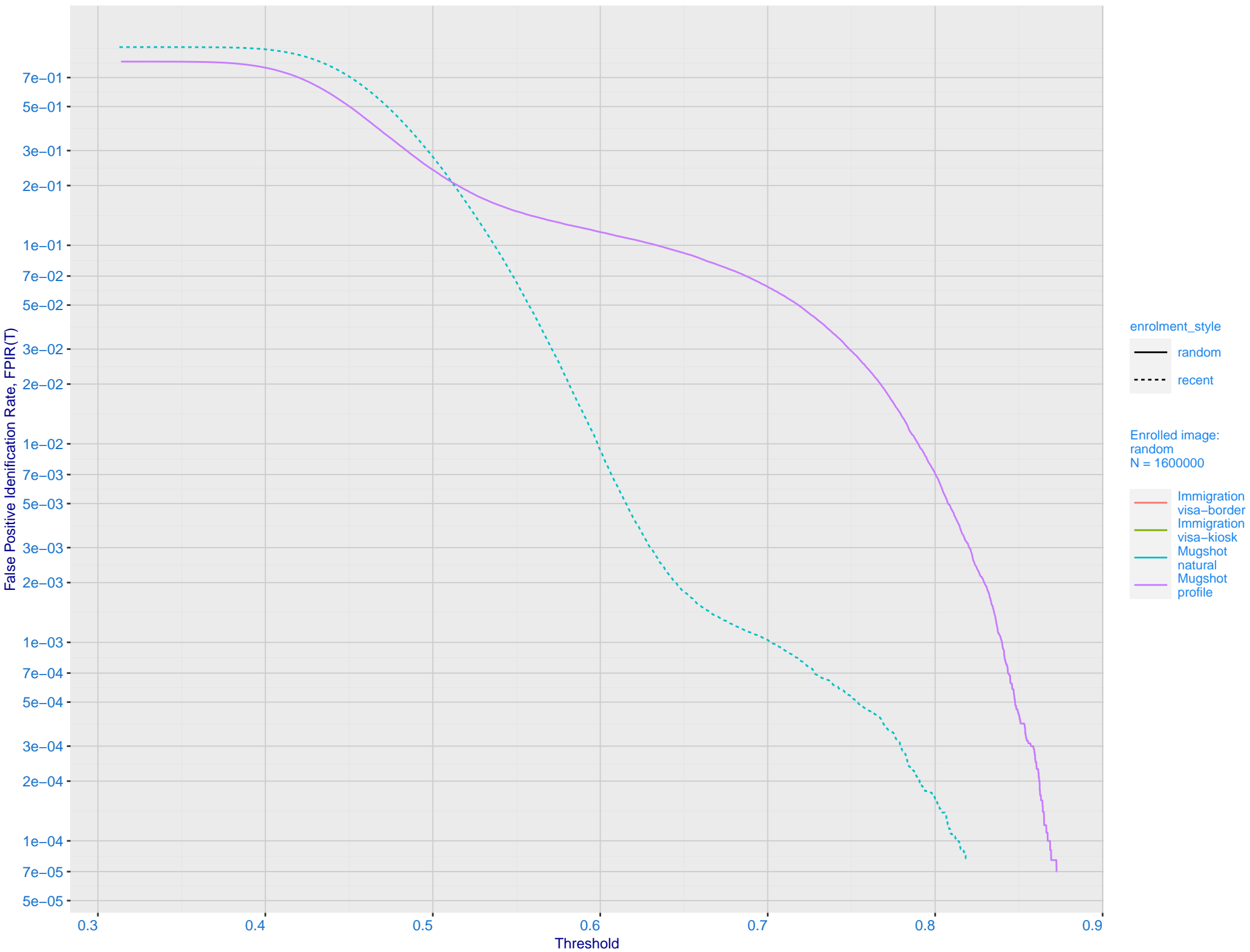
E: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images



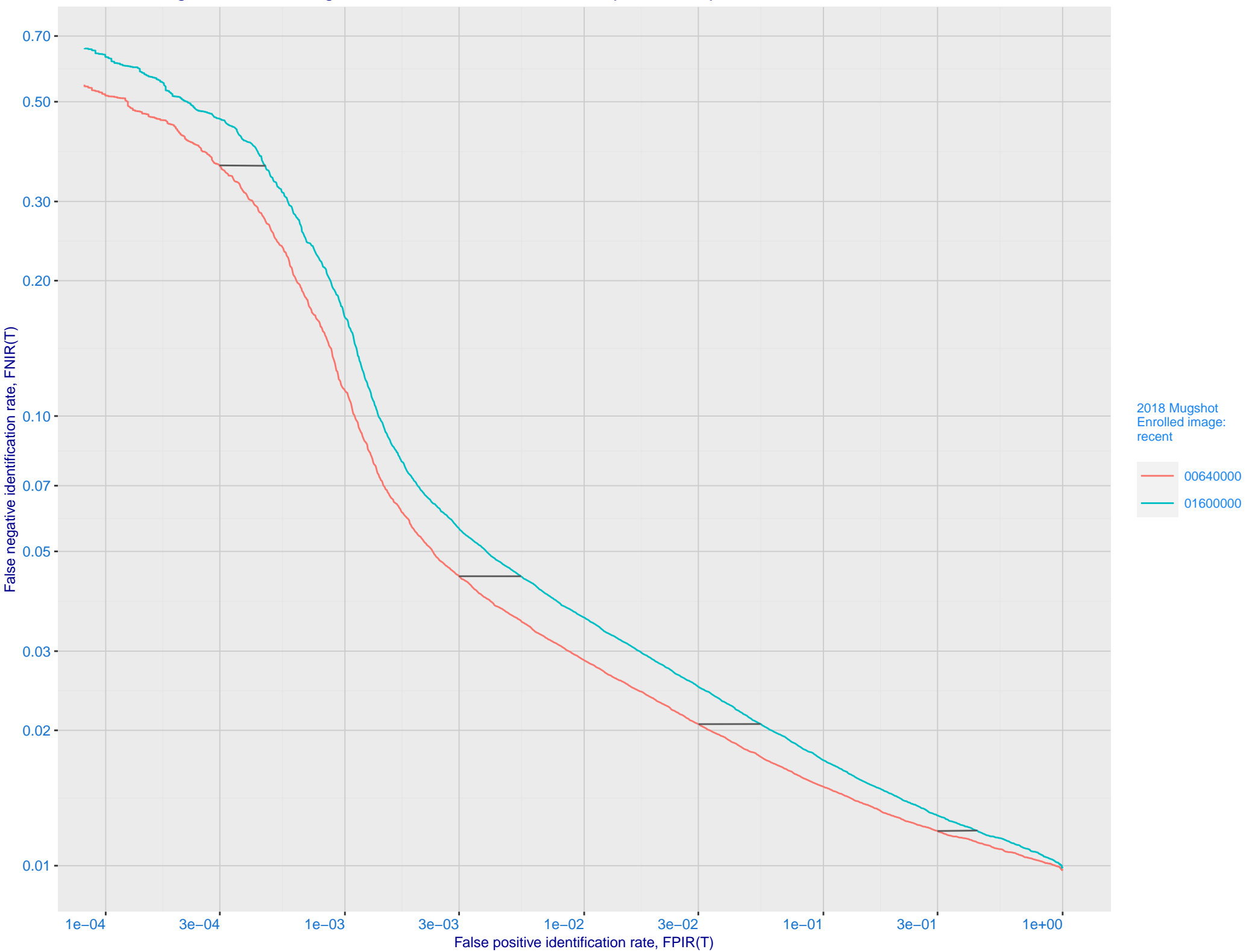
F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate



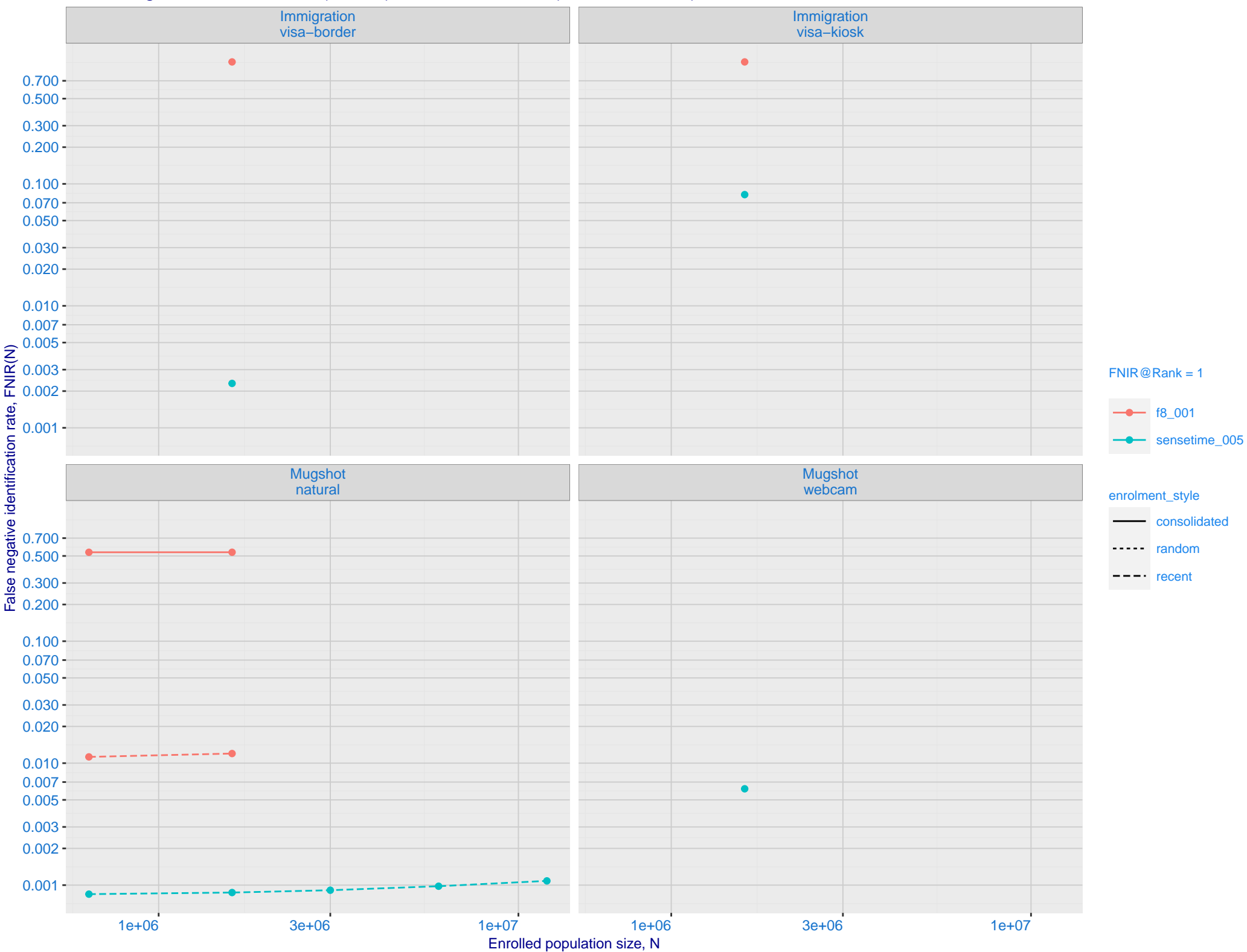
G: FPIR dependence on T by probe type for N = 1600000 subjects



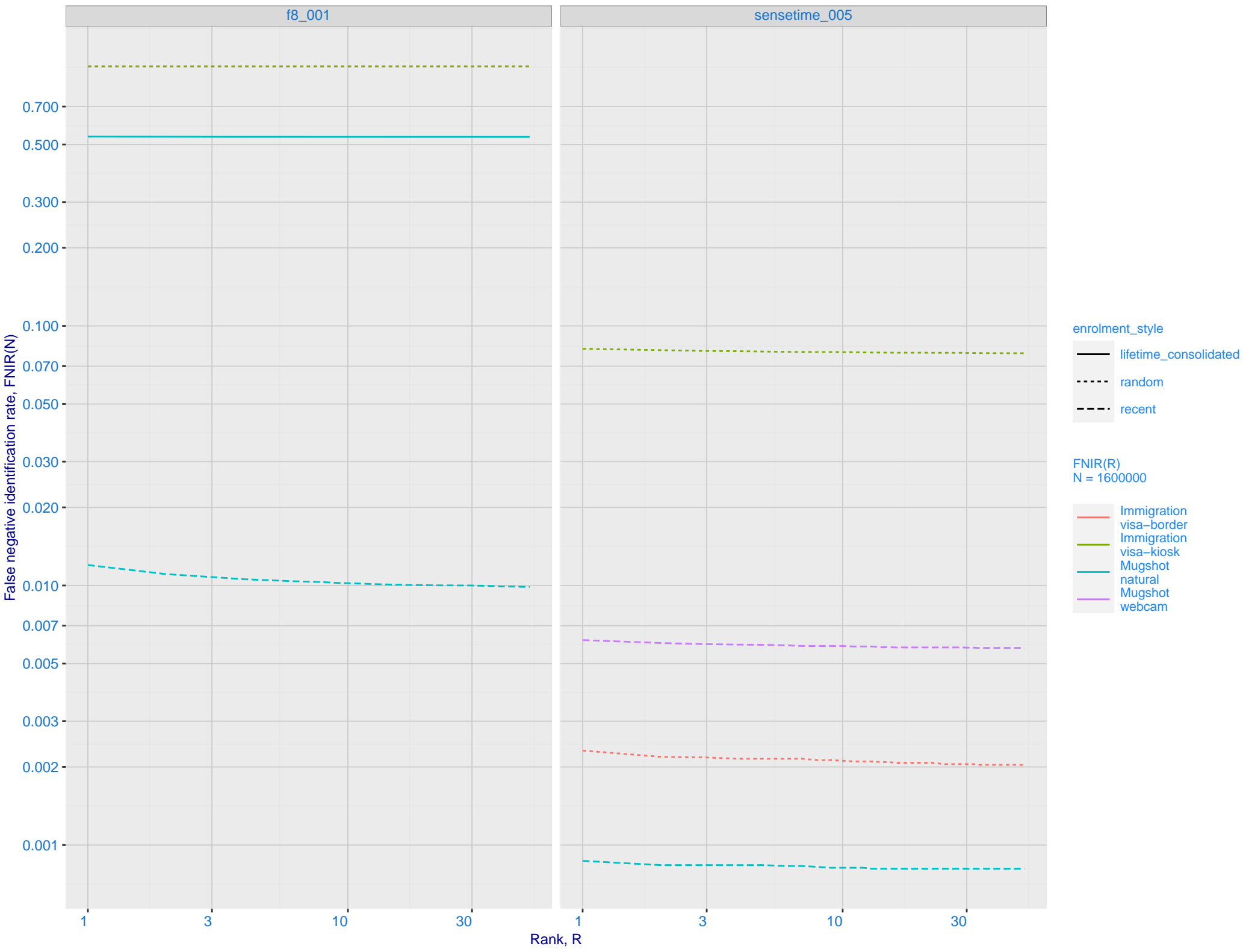
J: DET for Mugshot natural images and various N. Links connect points of equal threshold.



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

Search Duration (milliseconds)

Enrolled population size, N, one image per person

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

Dataset: 2018 Mugshot N = 3068801

