

A: Datasheet

Algorithm: vigilantsolutions\_1

Developer: Vigilant Solutions

Submission Date: 2018\_02\_14

Template size: 2056 bytes

Template time (2.5 percentile): 726 msec

Template time (median): 735 msec

Template time (97.5 percentile): 783 msec

Investigation:

Frontal mugshot ranking 252 (out of 279) -- FNIR(1600000, 0, 1) = 0.2017 vs. lowest 0.0009 from sensetime\_005

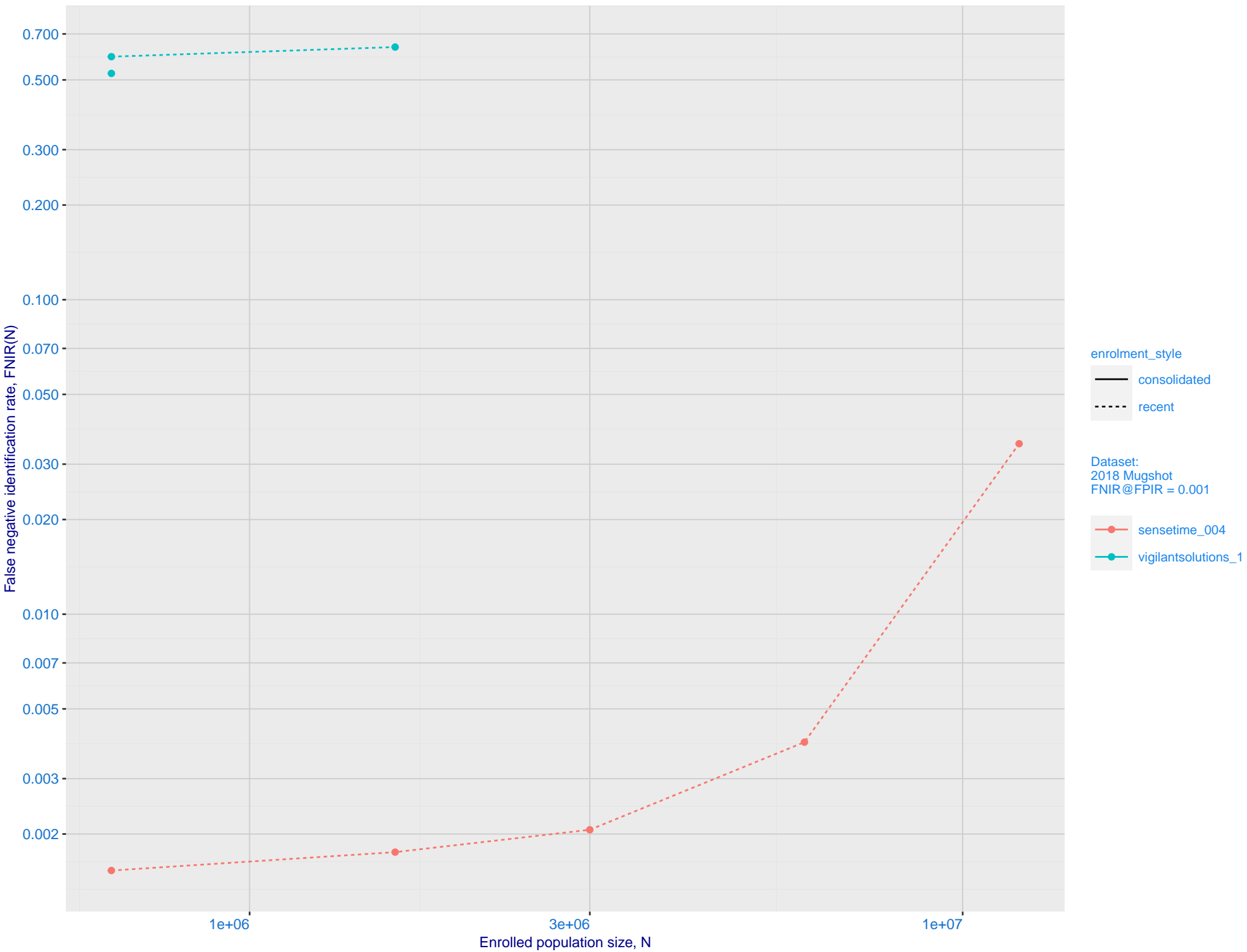
Mugshot profile ranking 189 (out of 210) -- FNIR(1600000, 0, 1) = 0.9748 vs. lowest 0.0587 from xforwardai\_002

Identification:

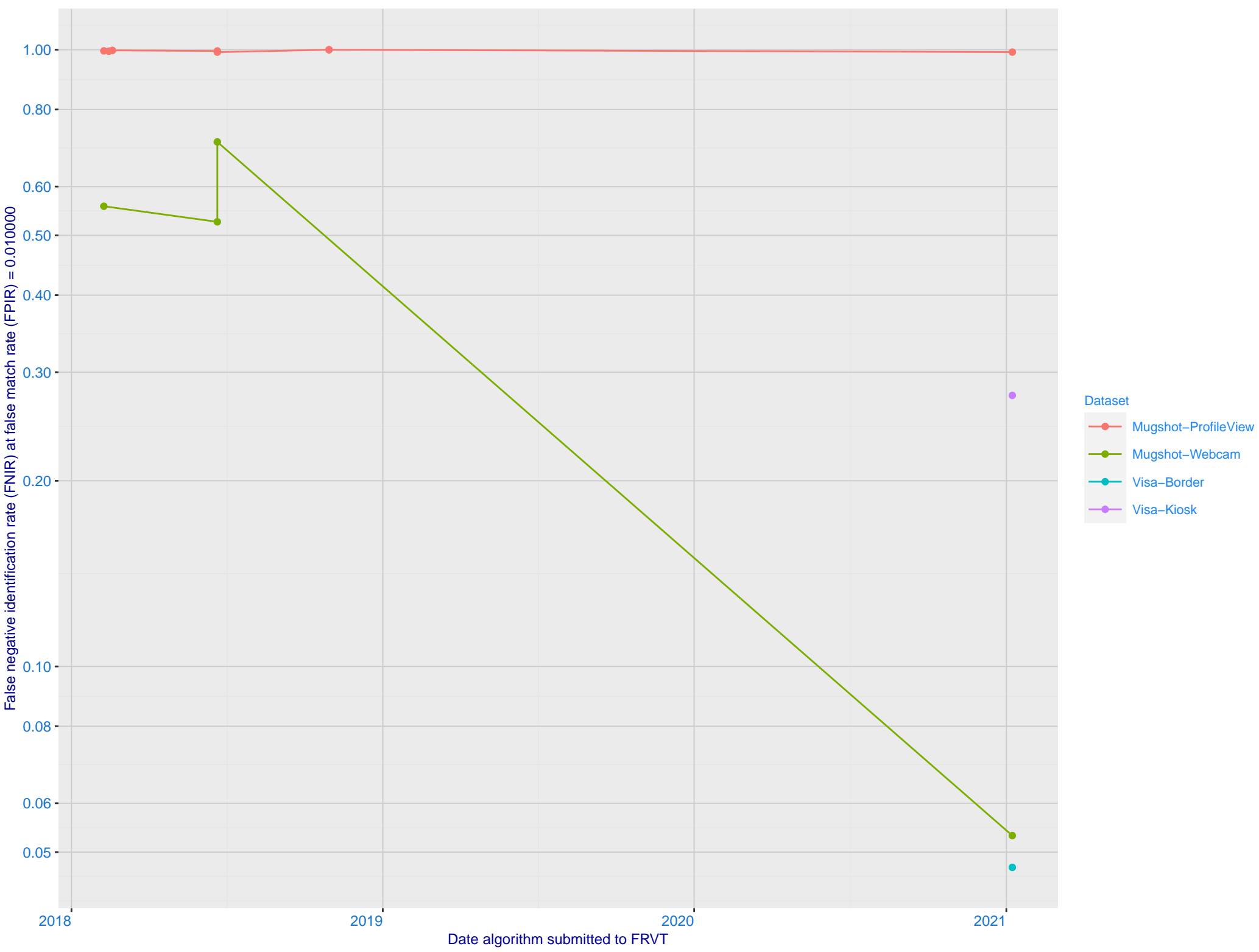
Frontal mugshot ranking 246 (out of 279) -- FNIR(1600000, T, L+1) = 0.6359, FPIR=0.001000 vs. lowest 0.0018 from sensetime\_004

Mugshot profile ranking 162 (out of 209) -- FNIR(1600000, T, L+1) = 0.9997, FPIR=0.001000 vs. lowest 0.1331 from cloudwalk\_hr\_000

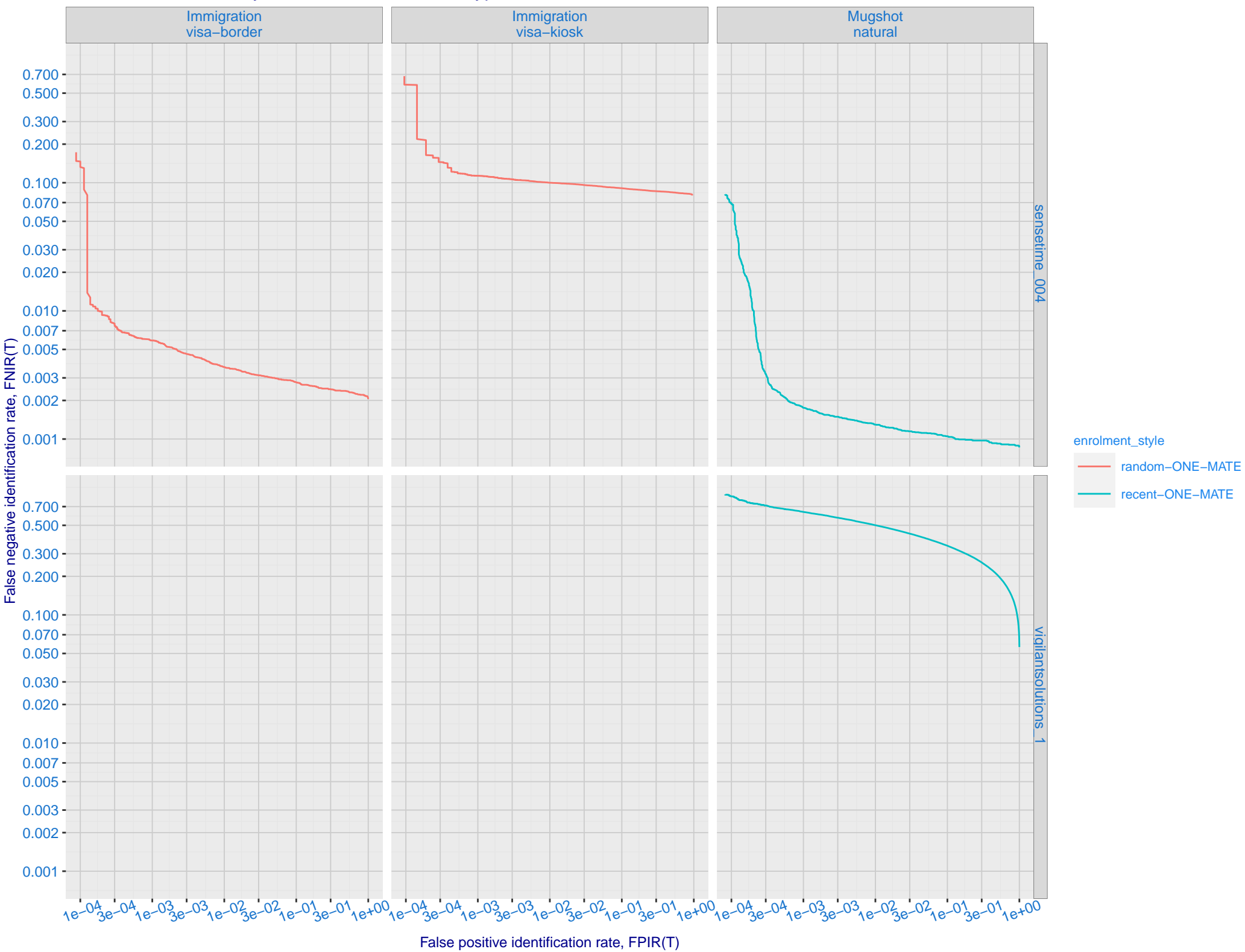
B: Mugshot natural images, identification mode: FNIR(N, L+1, T) vs. most accurate (sensetime\_004)



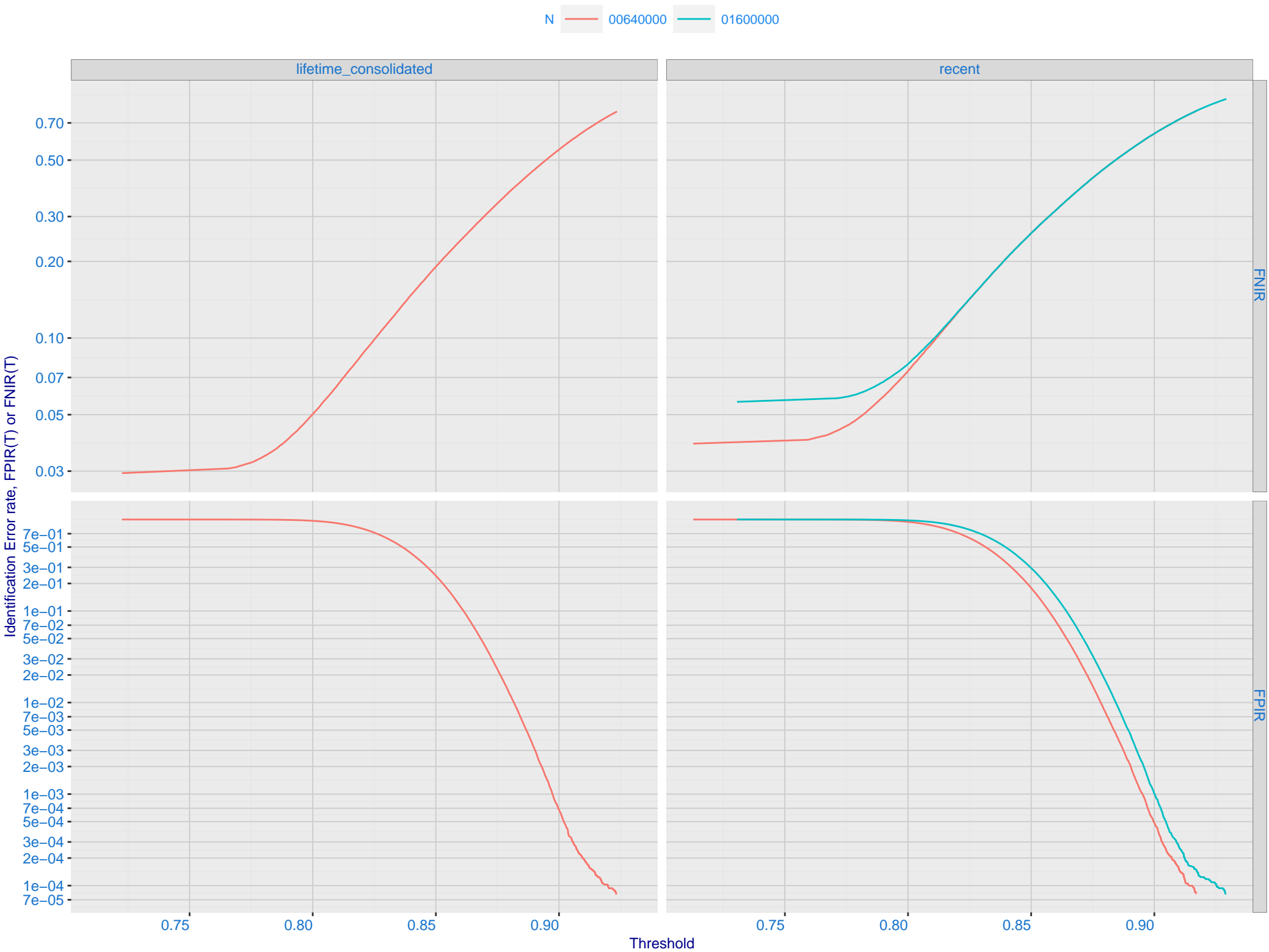
C: Evolution of accuracy for VIGILANTSOLUTIONS algorithms on three datasets 2018 – present



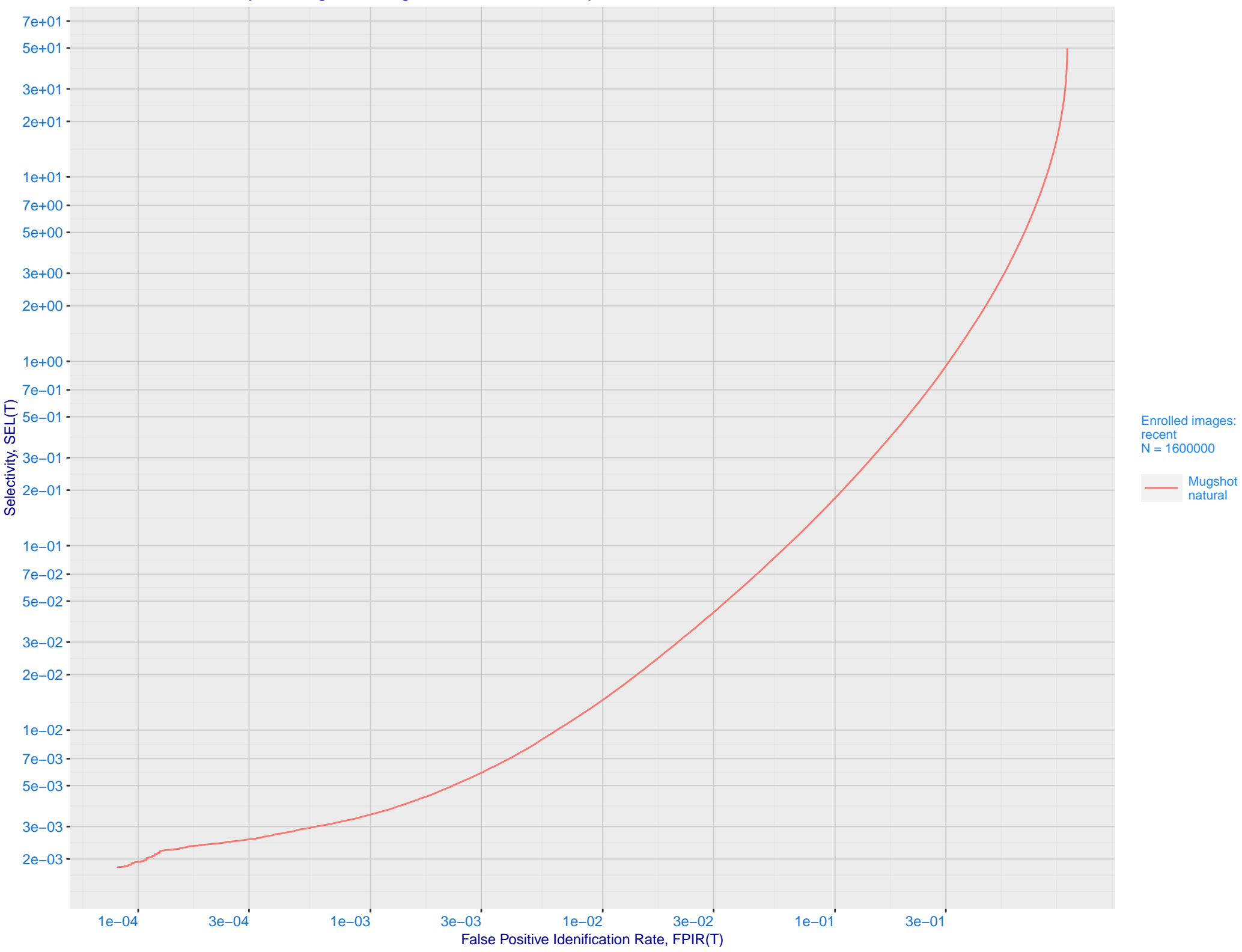
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals



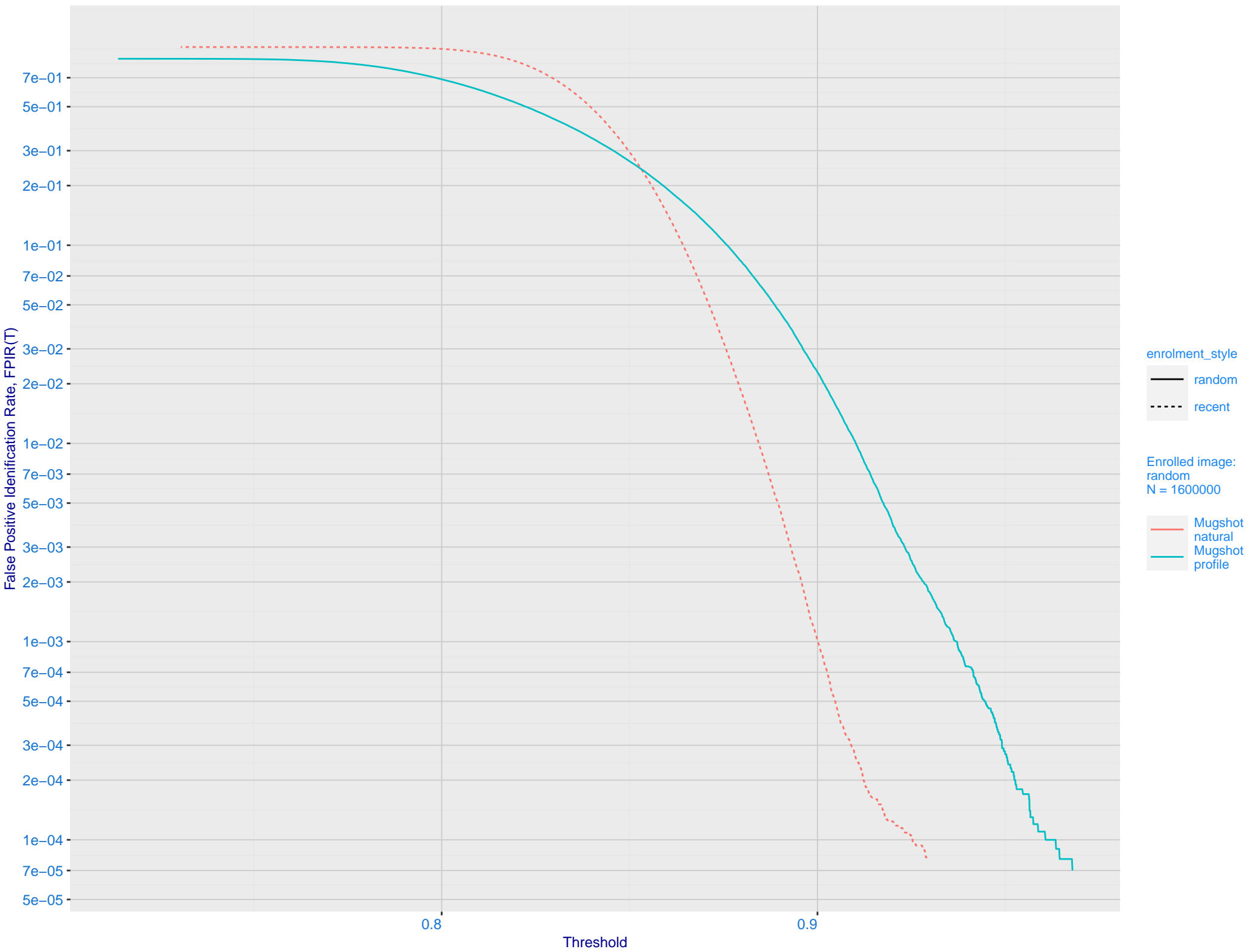
E: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images



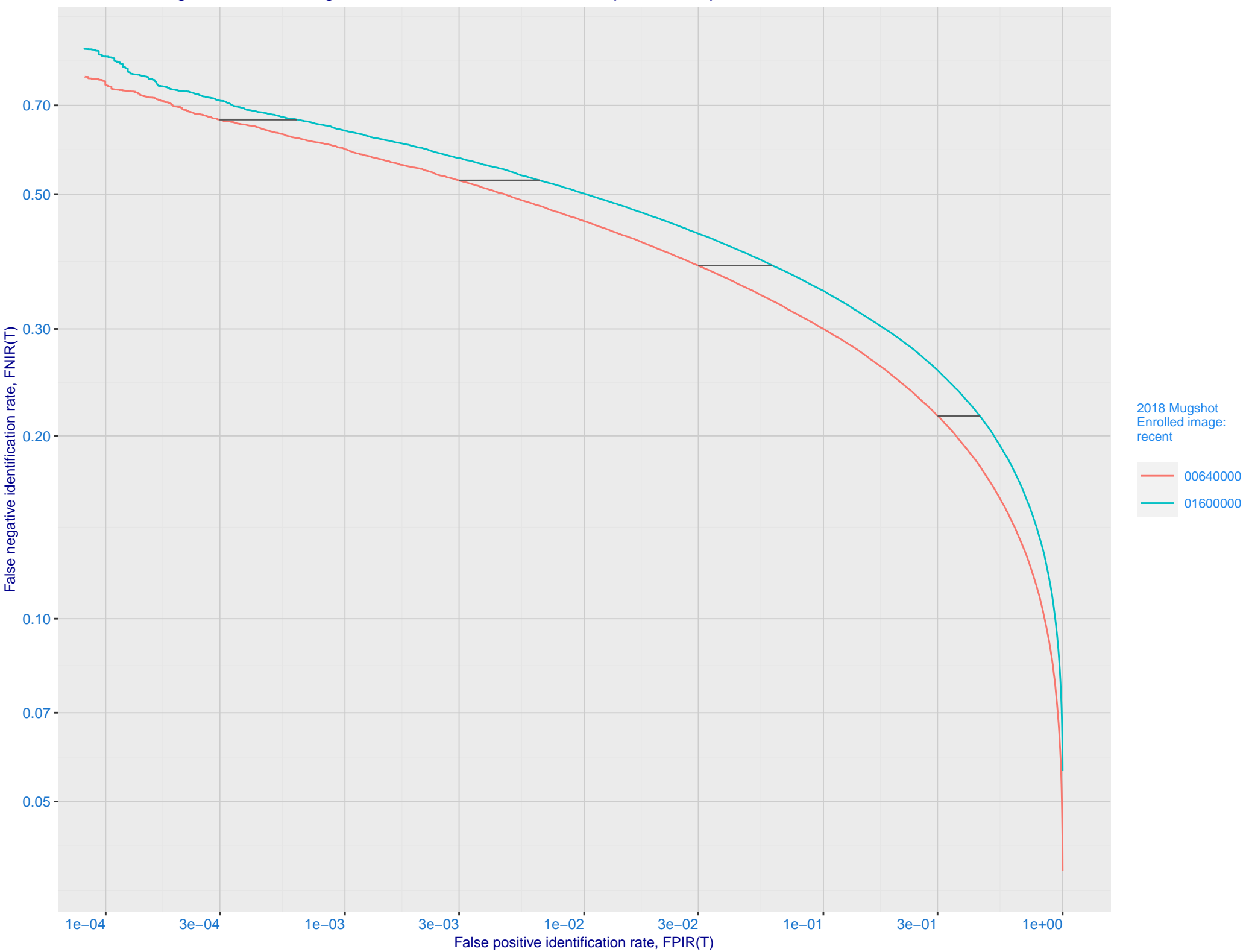
F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate



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

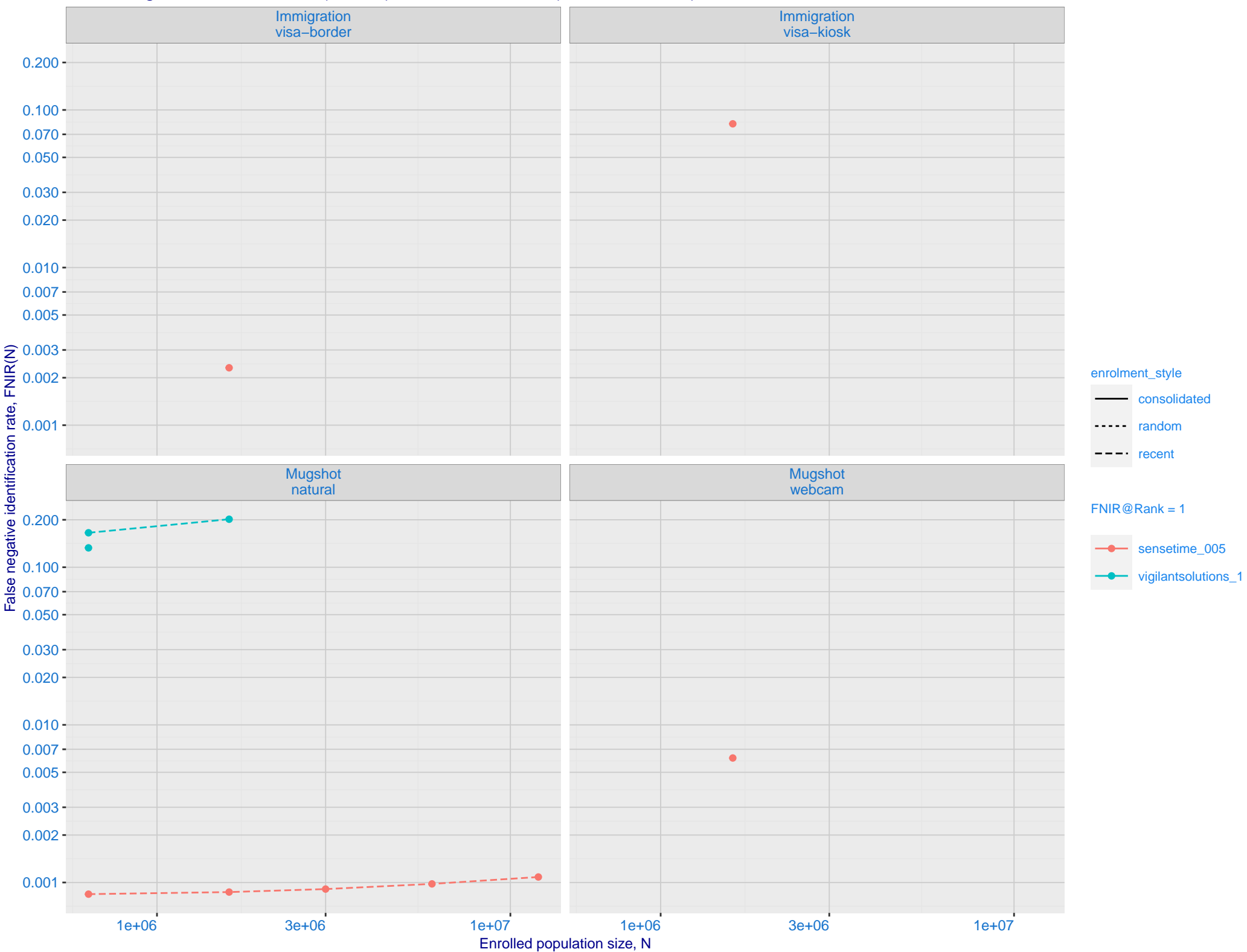


J: DET for Mugshot natural images and various N. Links connect points of equal threshold.

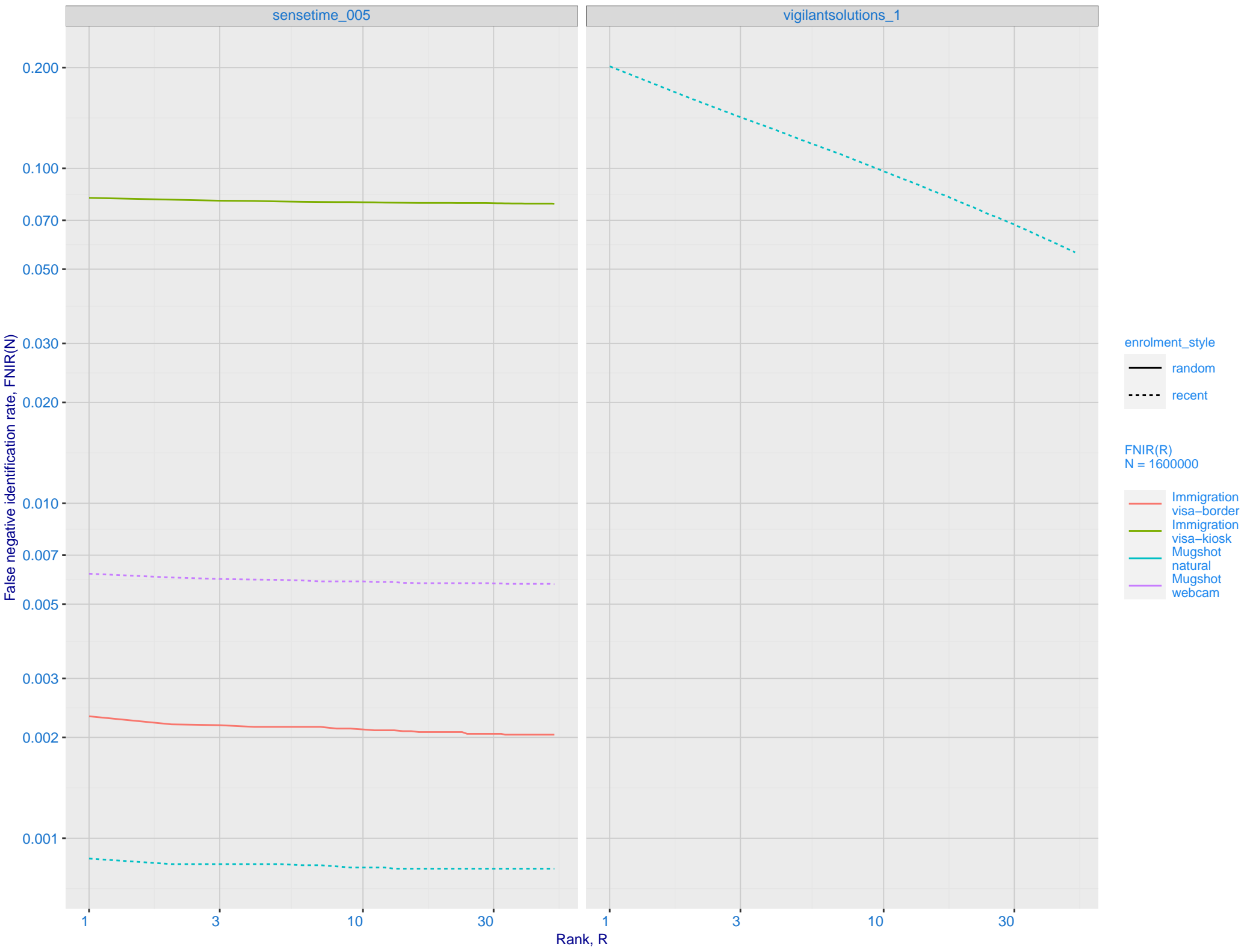




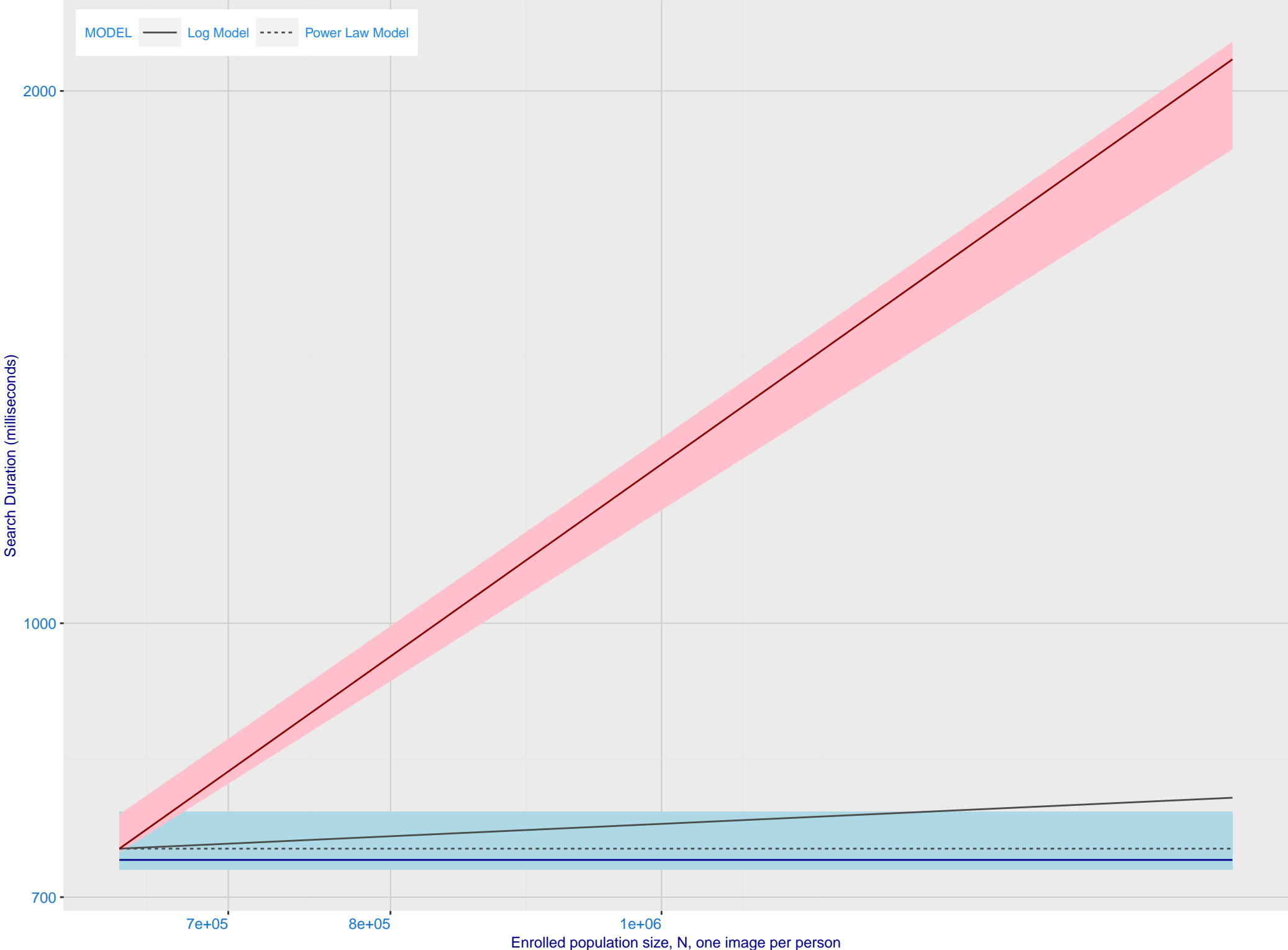
# K: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime\_005)



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

