

A: Datasheet

Algorithm: megvii\_2

Developer: Megvii/Face++

Submission Date: 2018\_10\_28

Template size: 4096 bytes

Template time (2.5 percentile): 634 msec

Template time (median): 635 msec

Template time (97.5 percentile): 692 msec

Investigation:

Frontal mugshot ranking 135 (out of 259) -- FNIR(1600000, 0, 1) = 0.0118 vs. lowest 0.0009 from sensetime\_005

Mugshot webcam ranking 56 (out of 221) -- FNIR(1600000, 0, 1) = 0.0173 vs. lowest 0.0062 from sensetime\_005

Mugshot profile ranking 36 (out of 190) -- FNIR(1600000, 0, 1) = 0.4501 vs. lowest 0.0591 from sensetime\_005

Immigration visa-border ranking 139 (out of 142) -- FNIR(1600000, 0, 1) = 1.0000 vs. lowest 0.0014 from visionlabs\_009

Identification:

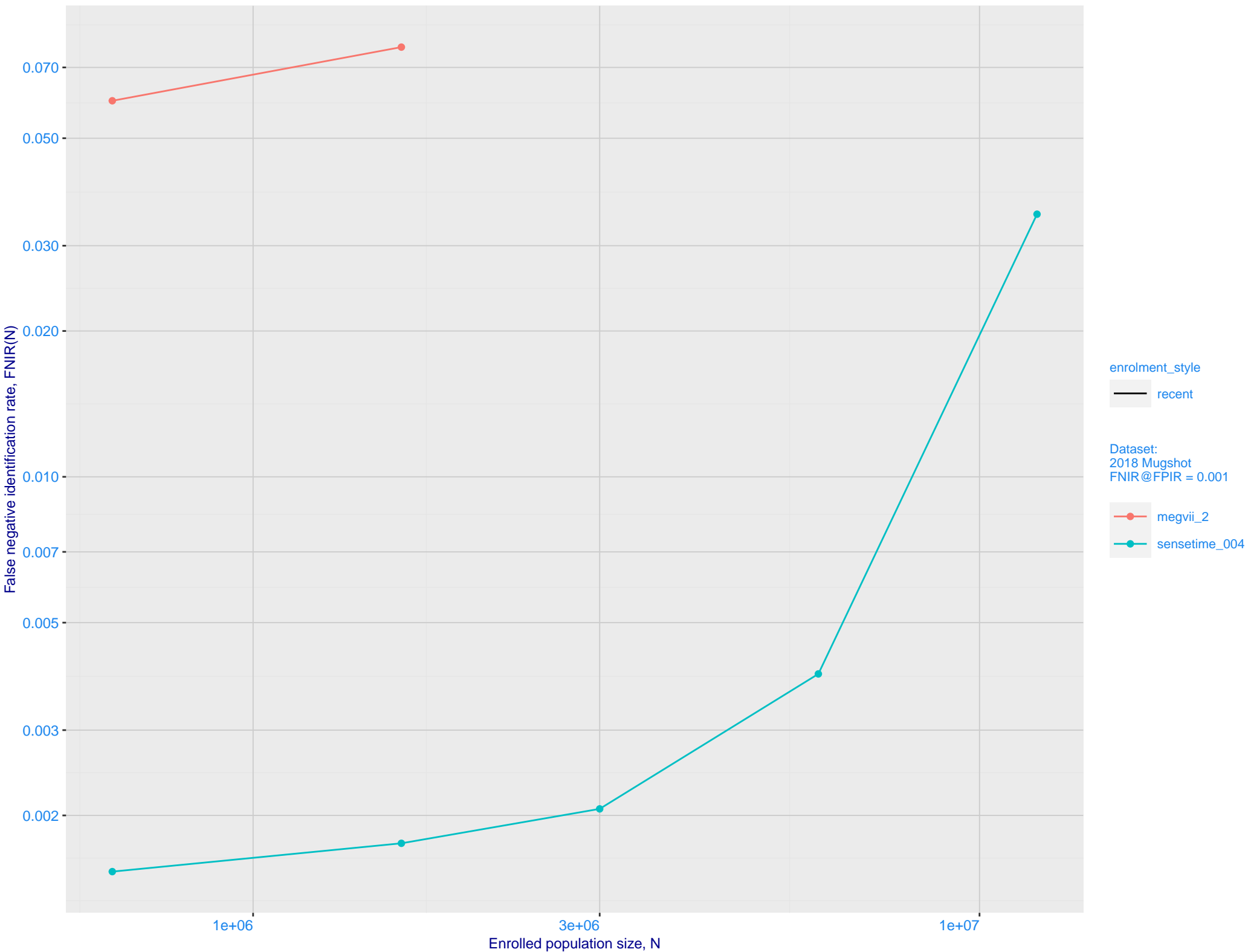
Frontal mugshot ranking 108 (out of 259) -- FNIR(1600000, T, L+1) = 0.0771, FPIR=0.001000 vs. lowest 0.0018 from sensetime\_004

Mugshot webcam ranking 57 (out of 219) -- FNIR(1600000, T, L+1) = 0.0959, FPIR=0.001000 vs. lowest 0.0122 from sensetime\_003

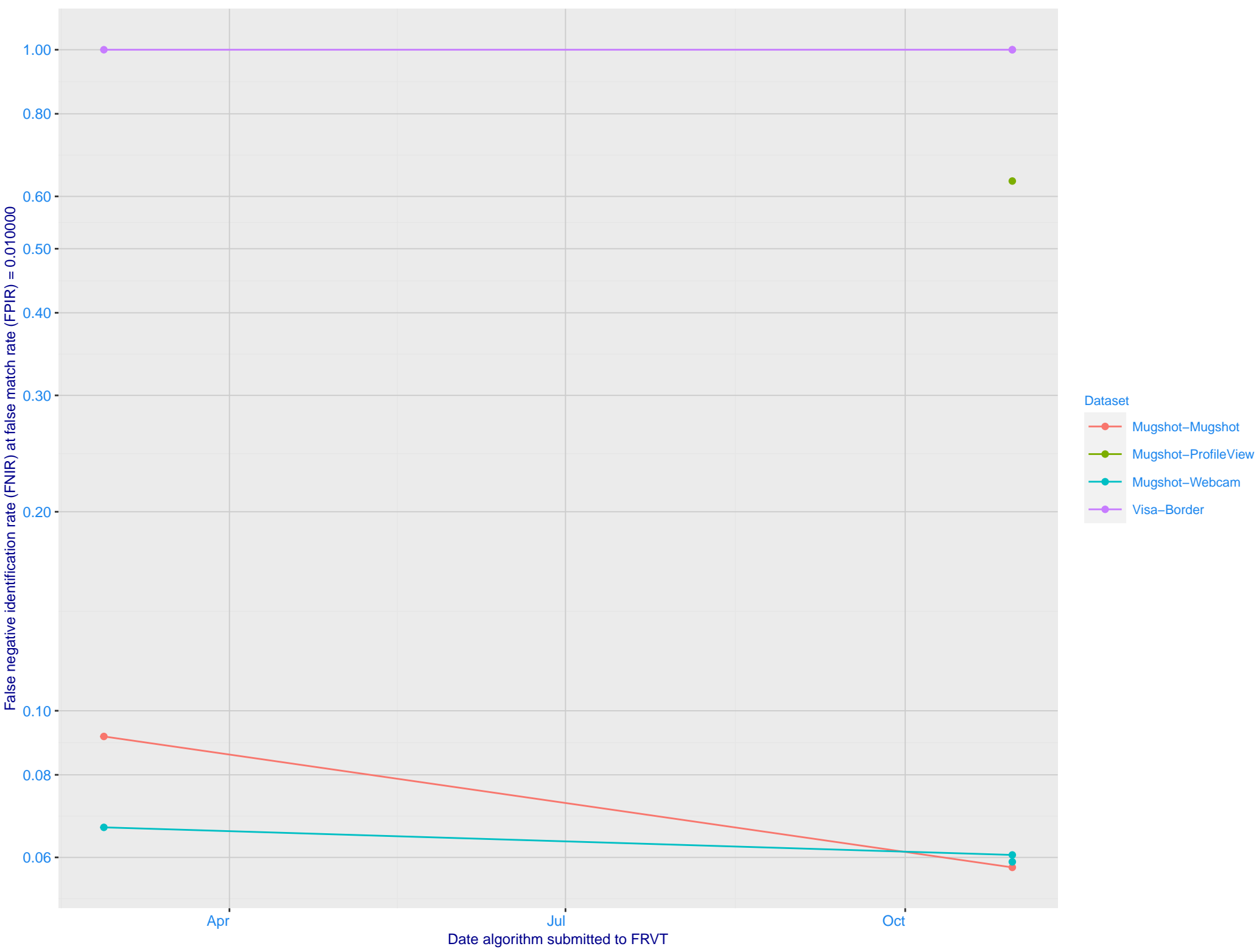
Mugshot profile ranking 118 (out of 189) -- FNIR(1600000, T, L+1) = 0.9984, FPIR=0.001000 vs. lowest 0.1733 from sensetime\_005

Immigration visa-border ranking 134 (out of 139) -- FNIR(1600000, T, L+1) = 1.0000, FPIR=0.001000 vs. lowest 0.0059 from sensetime\_004

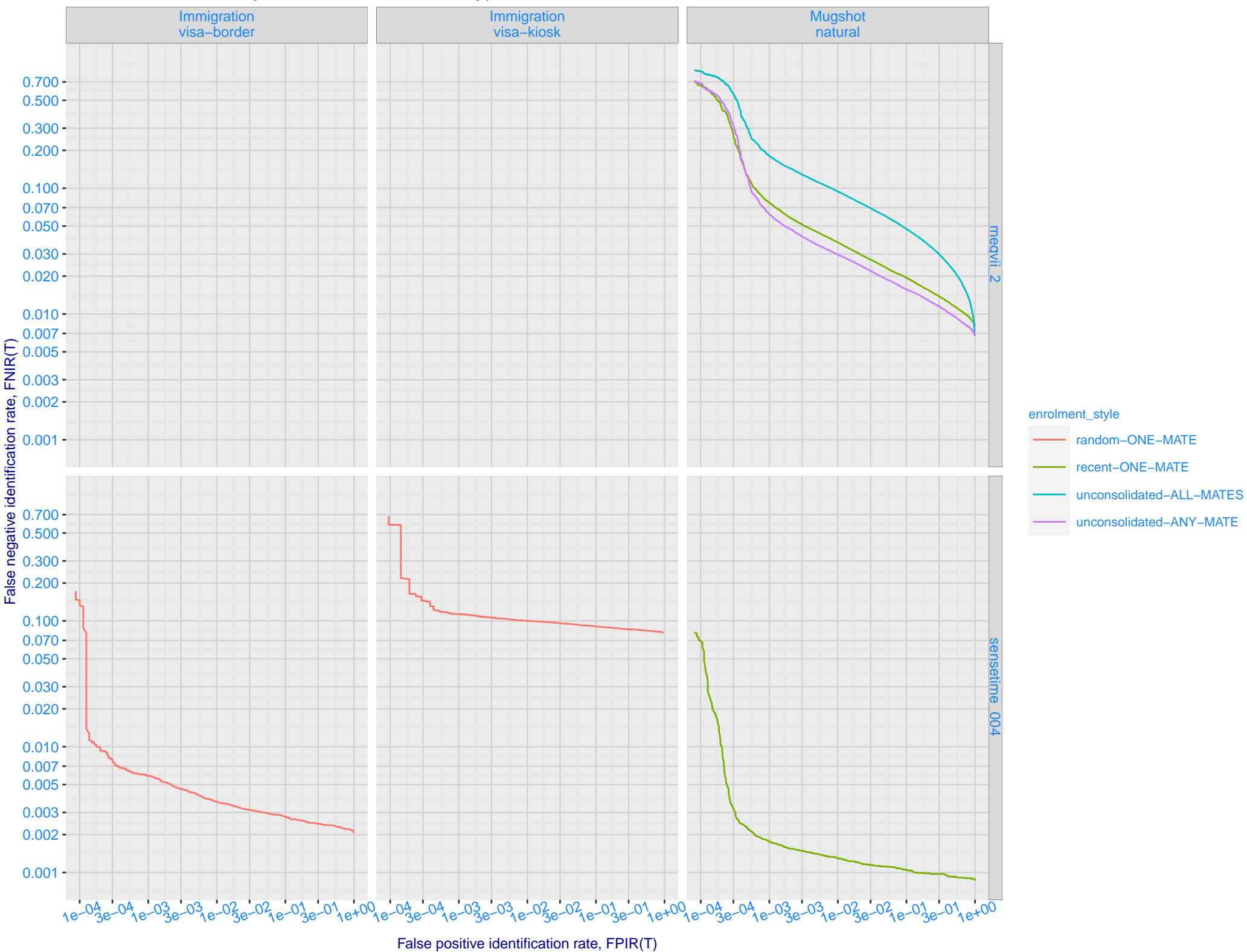
B: Mugshot natural images, identification mode: FNIR(N, L+1, T) vs. most accurate (sensetime\_004)



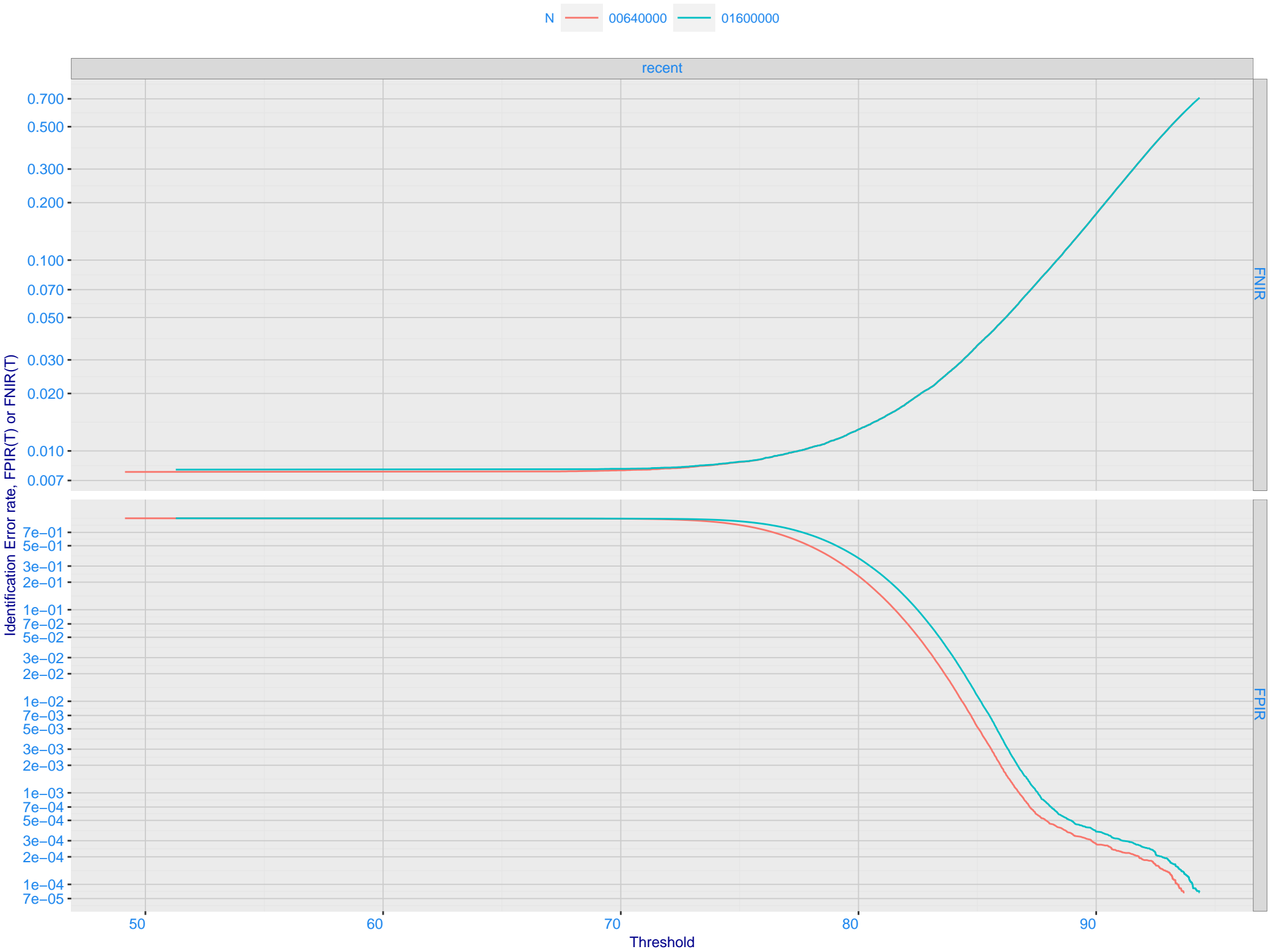
C: Evolution of accuracy for MEGVII algorithms on three datasets 2018 – present



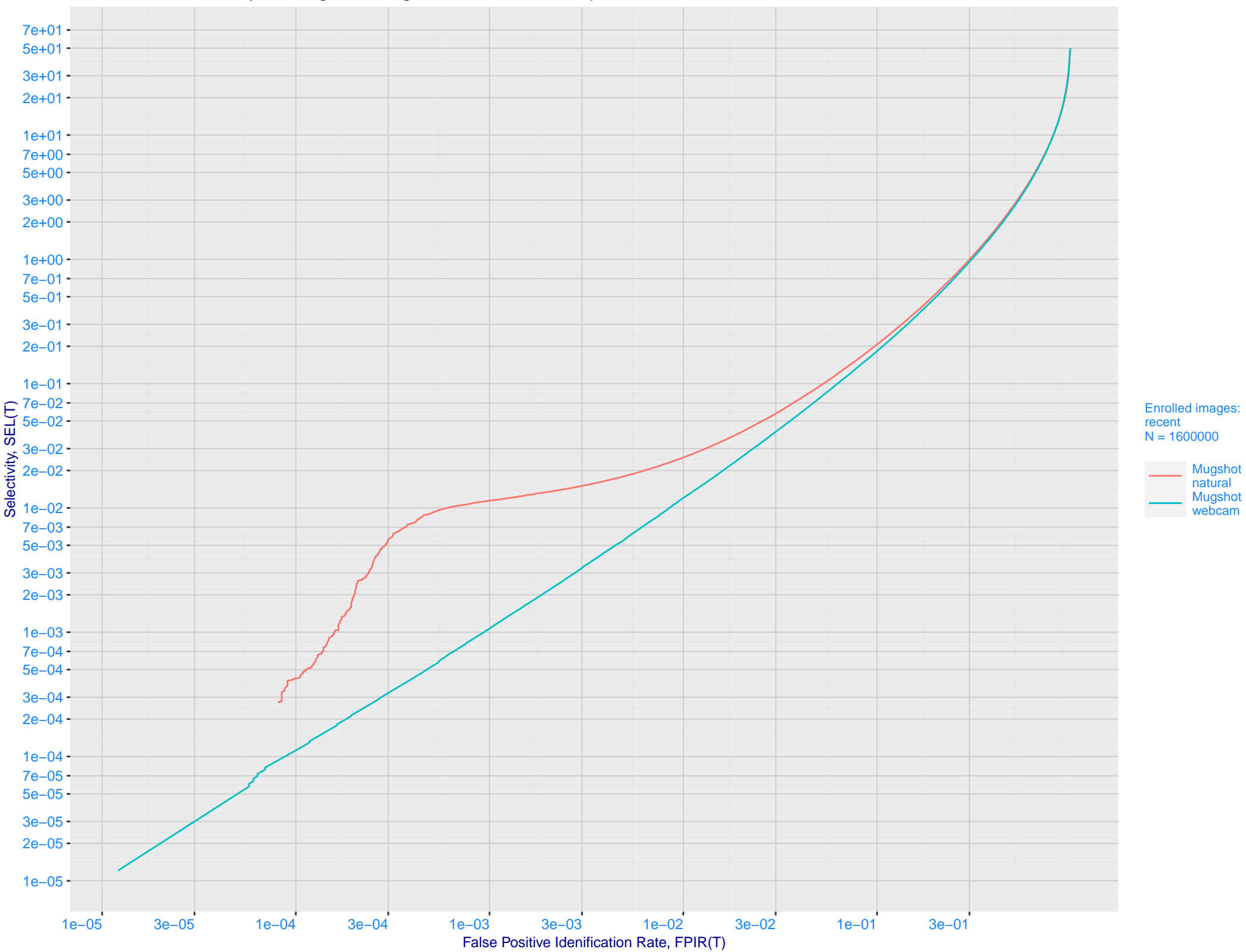
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals



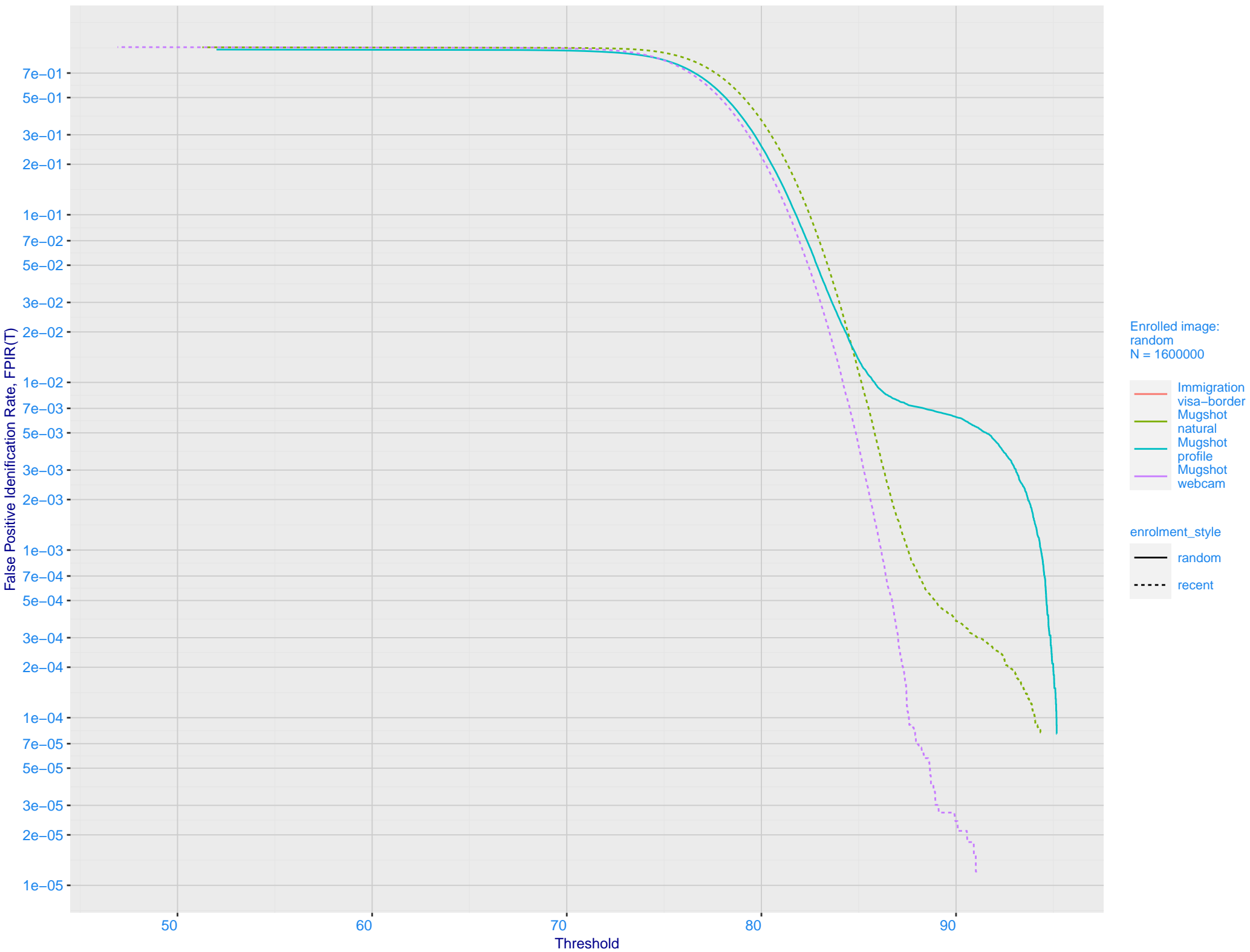
E: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images



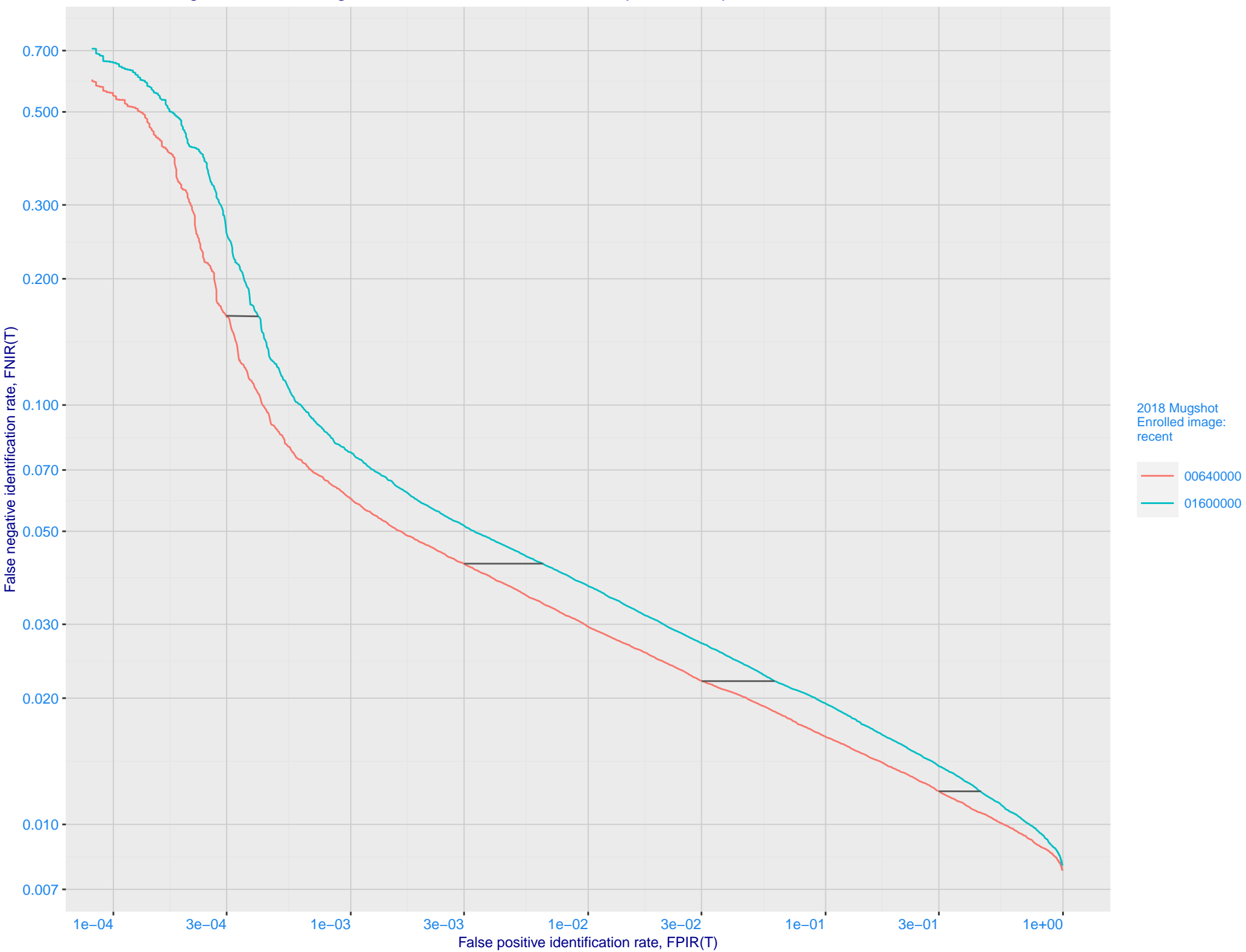
F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate



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

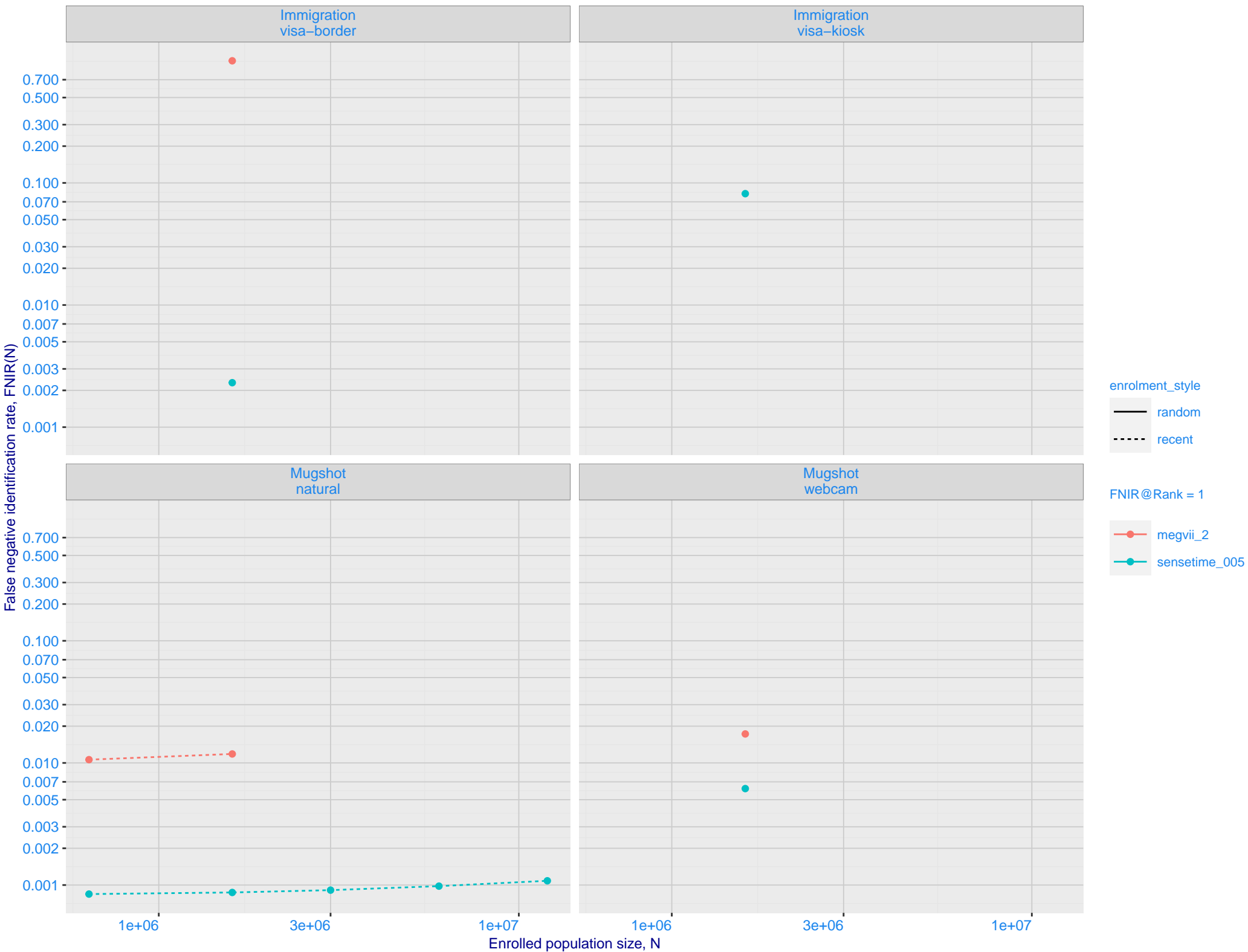


H: DET for Mugshot natural images and various N. Links connect points of equal threshold.

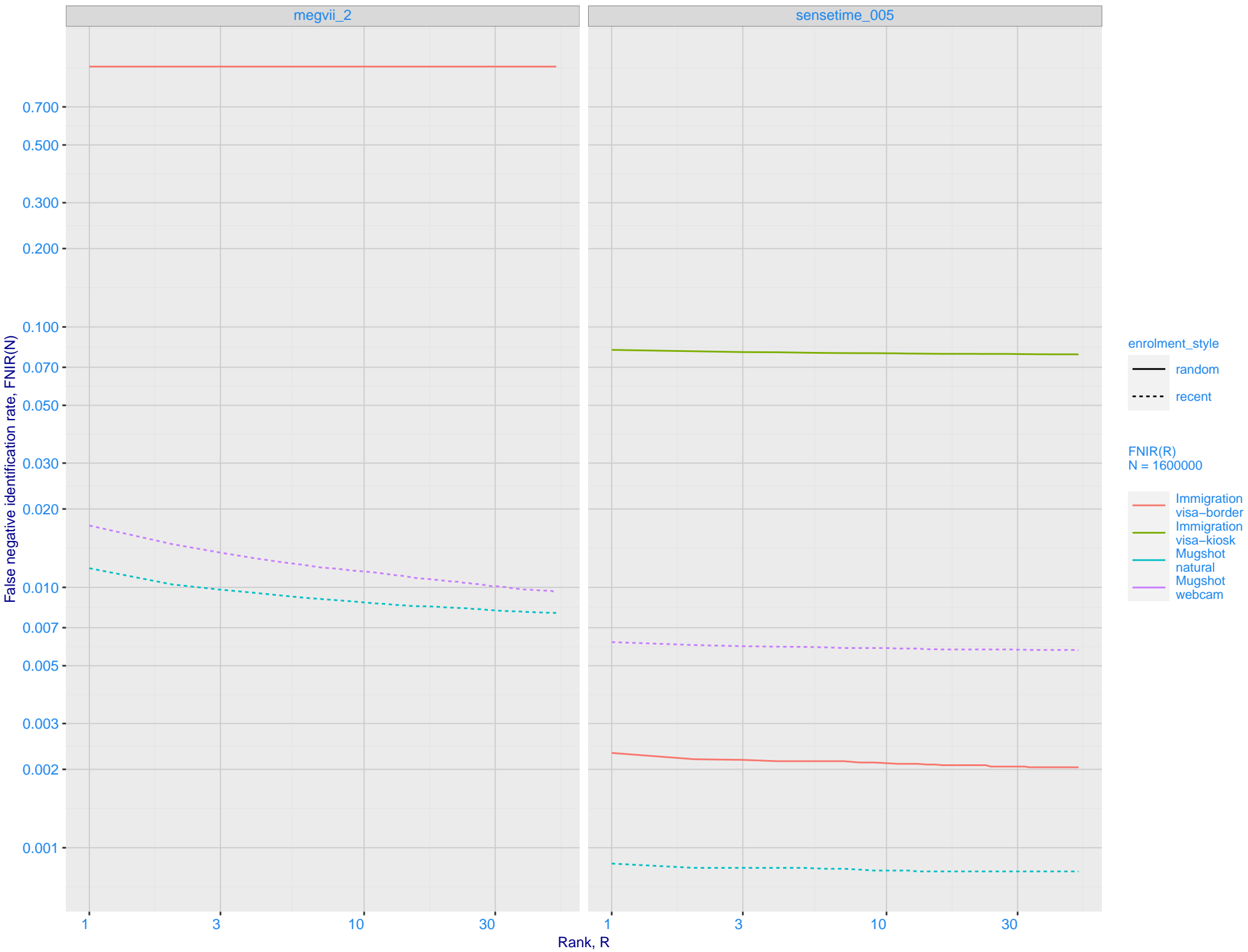




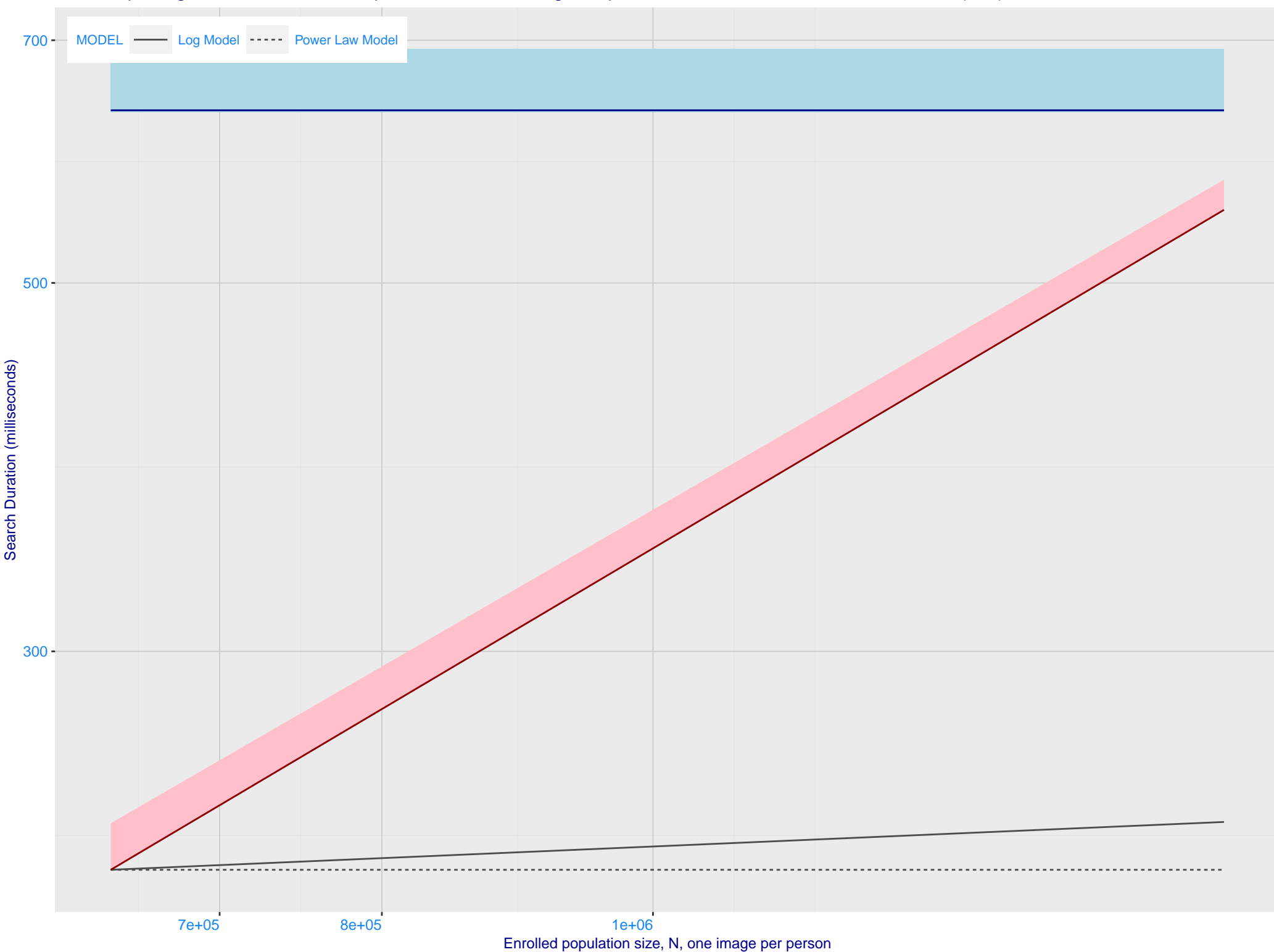
# I: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime\_005)



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

