

A: Datasheet

Algorithm: yitu_2

Developer: Shanghai Yitu Technology

Submission Date: 2018_06_21

Template size: 4138 bytes

Template time (2.5 percentile): 802 msec

Template time (median): 871 msec

Template time (97.5 percentile): 966 msec

Investigation:

Frontal mugshot ranking 27 (out of 279) -- FNIR(1600000, 0, 1) = 0.0018 vs. lowest 0.0009 from sensetime_005

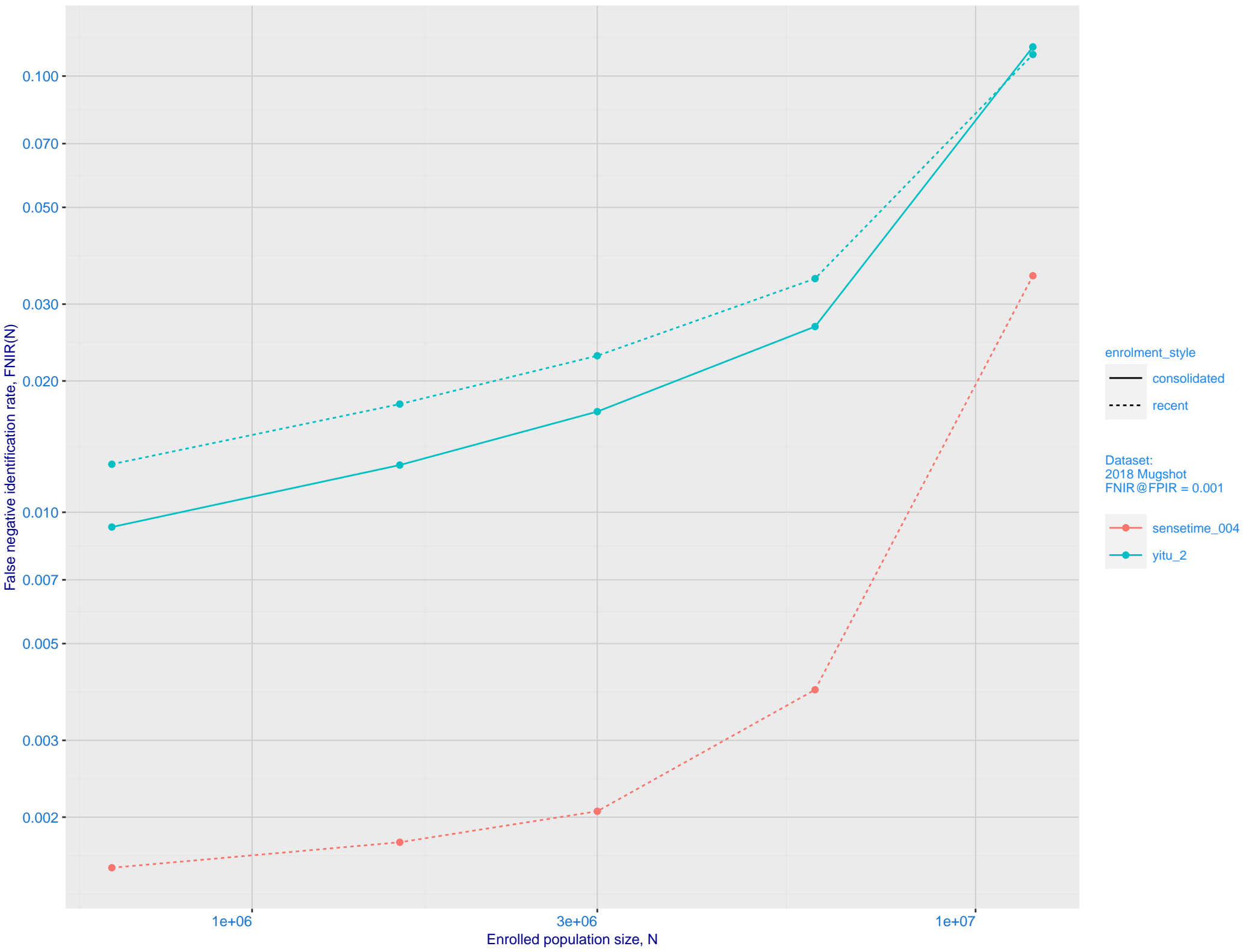
Mugshot webcam ranking 20 (out of 241) -- FNIR(1600000, 0, 1) = 0.0102 vs. lowest 0.0062 from sensetime_005

Identification:

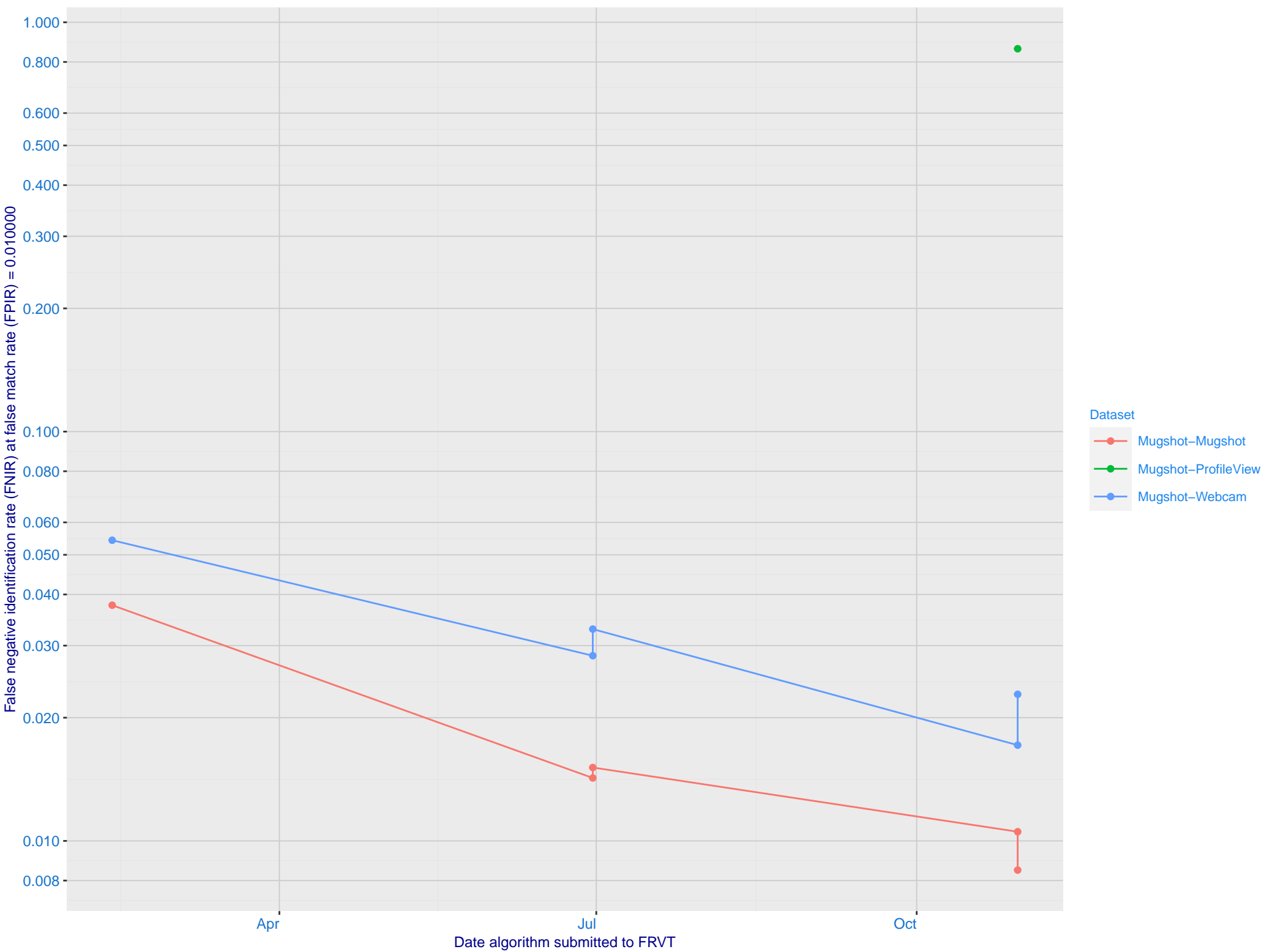
Frontal mugshot ranking 35 (out of 279) -- FNIR(1600000, T, L+1) = 0.0177, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004

Mugshot webcam ranking 27 (out of 236) -- FNIR(1600000, T, L+1) = 0.0485, FPIR=0.001000 vs. lowest 0.0122 from sensetime_003

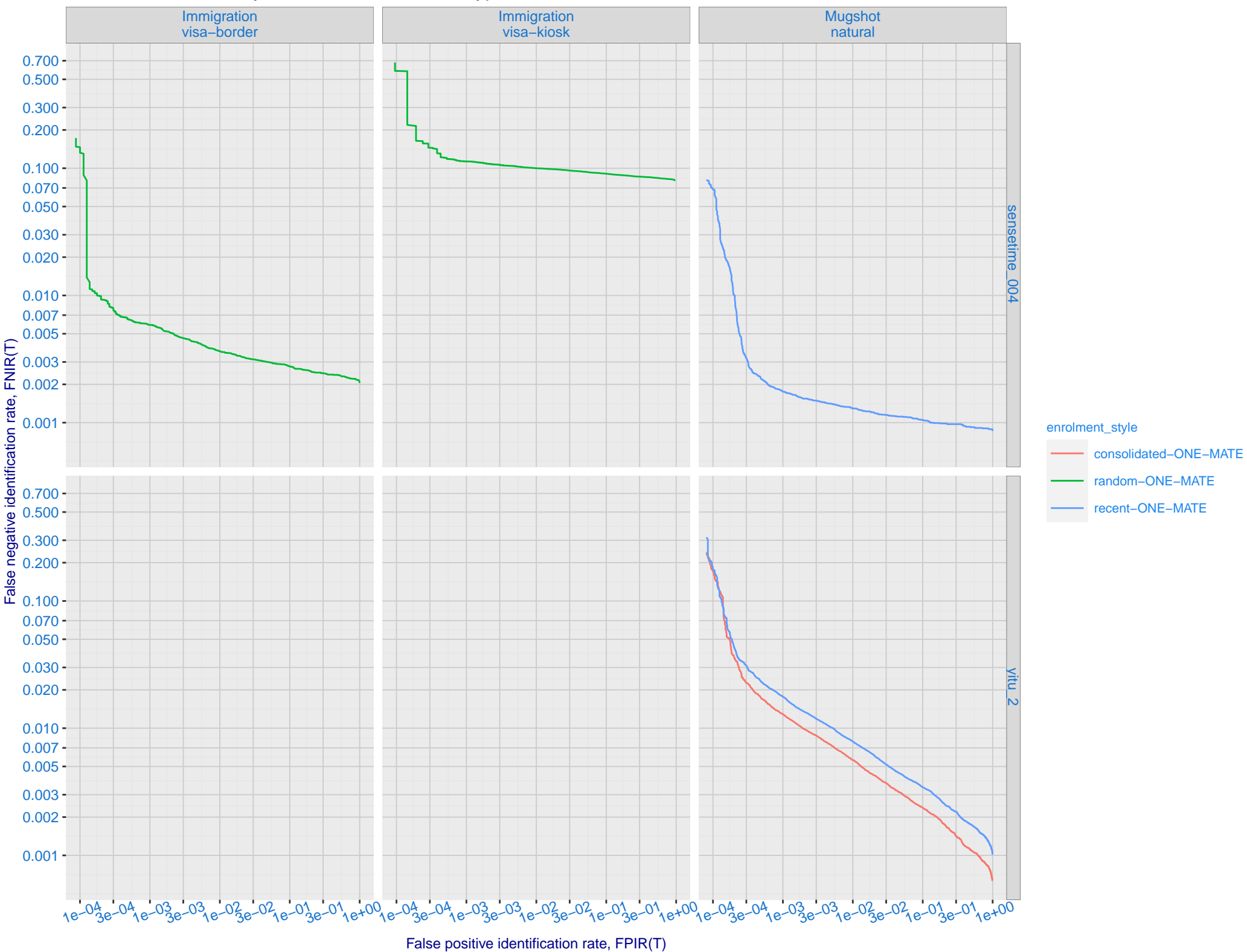
B: Mugshot natural images, identification mode: FNIR(N, L+1, T) vs. most accurate (sensetime_004)



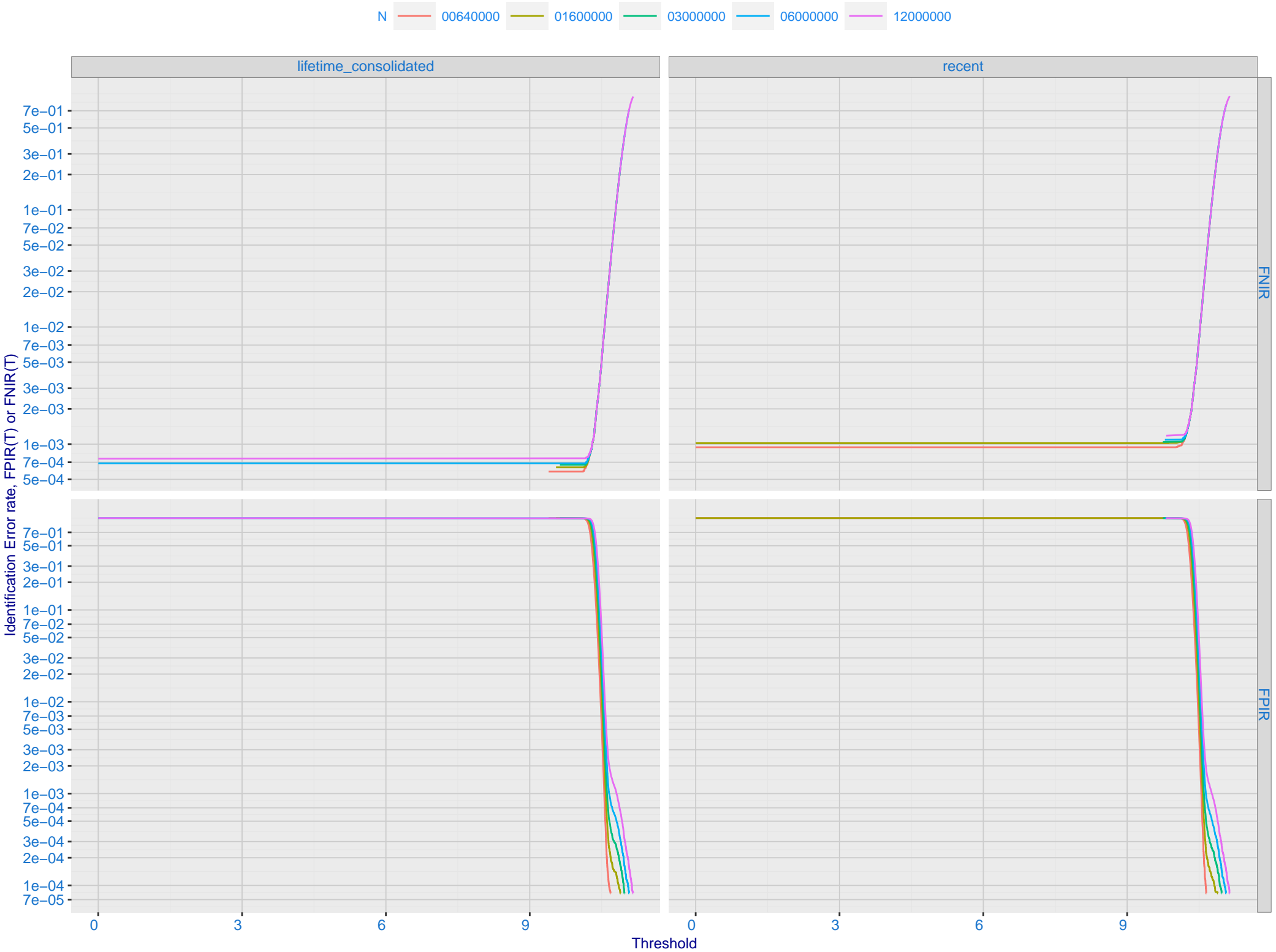
C: Evolution of accuracy for YITU algorithms on three datasets 2018 – present



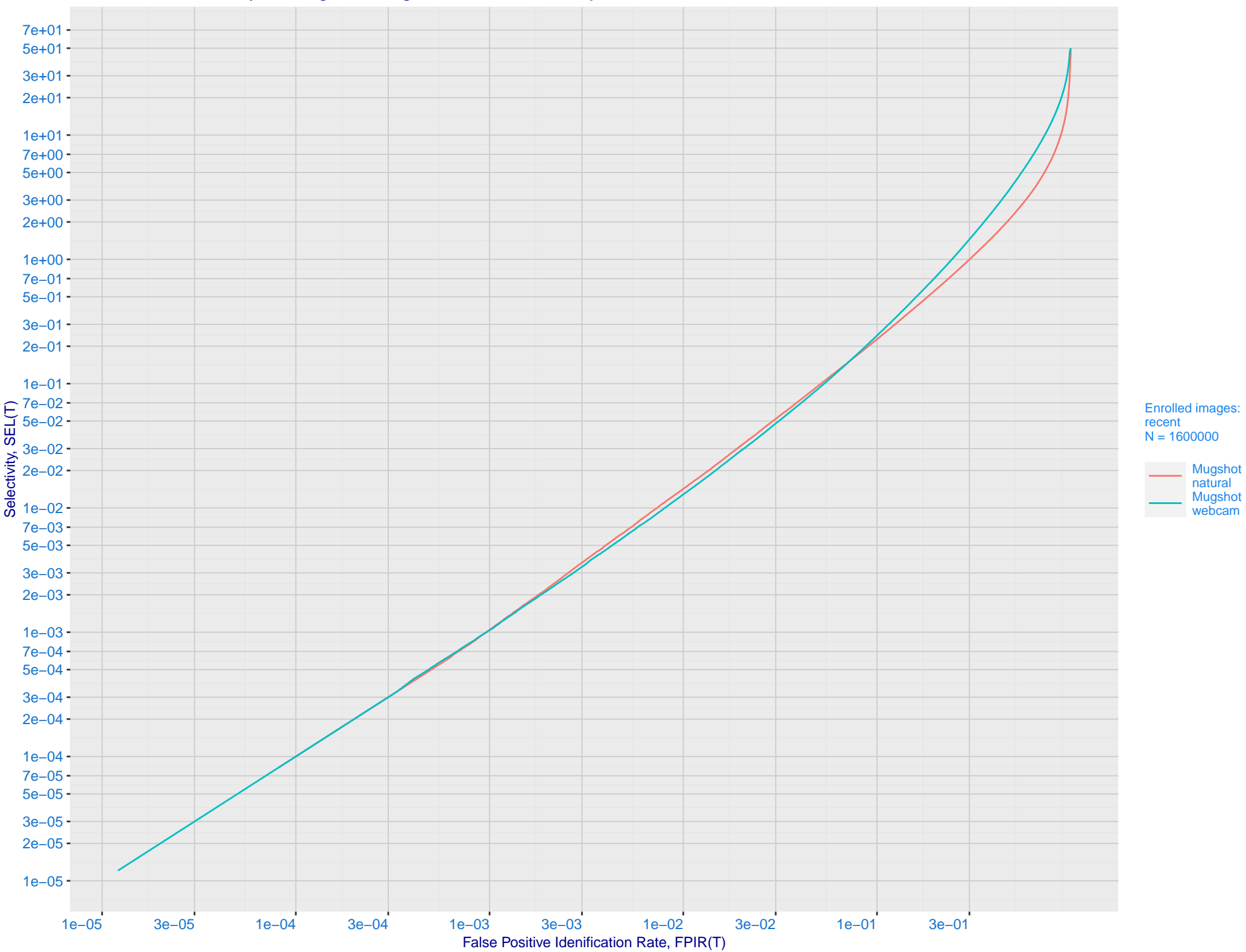
D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals



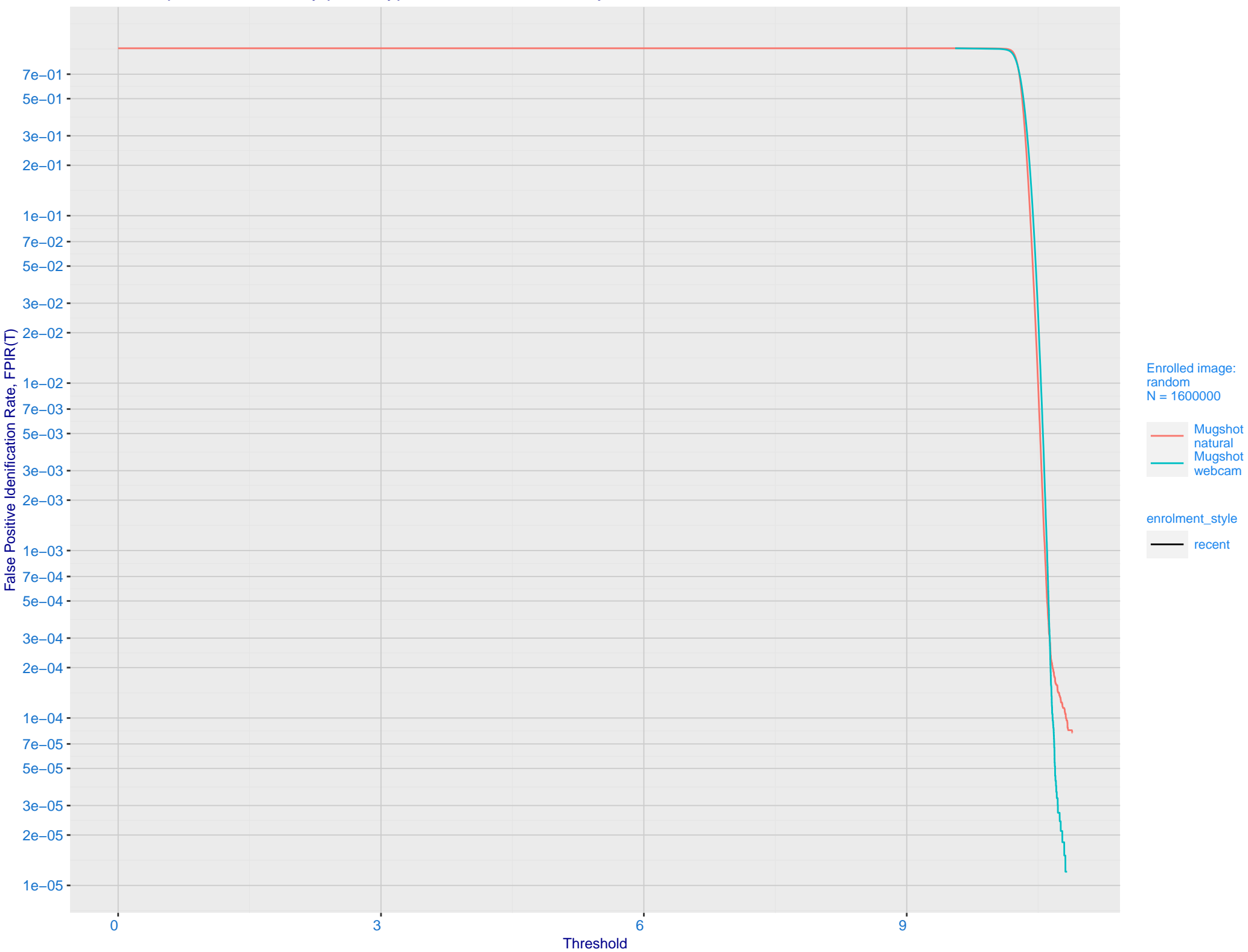
E: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images



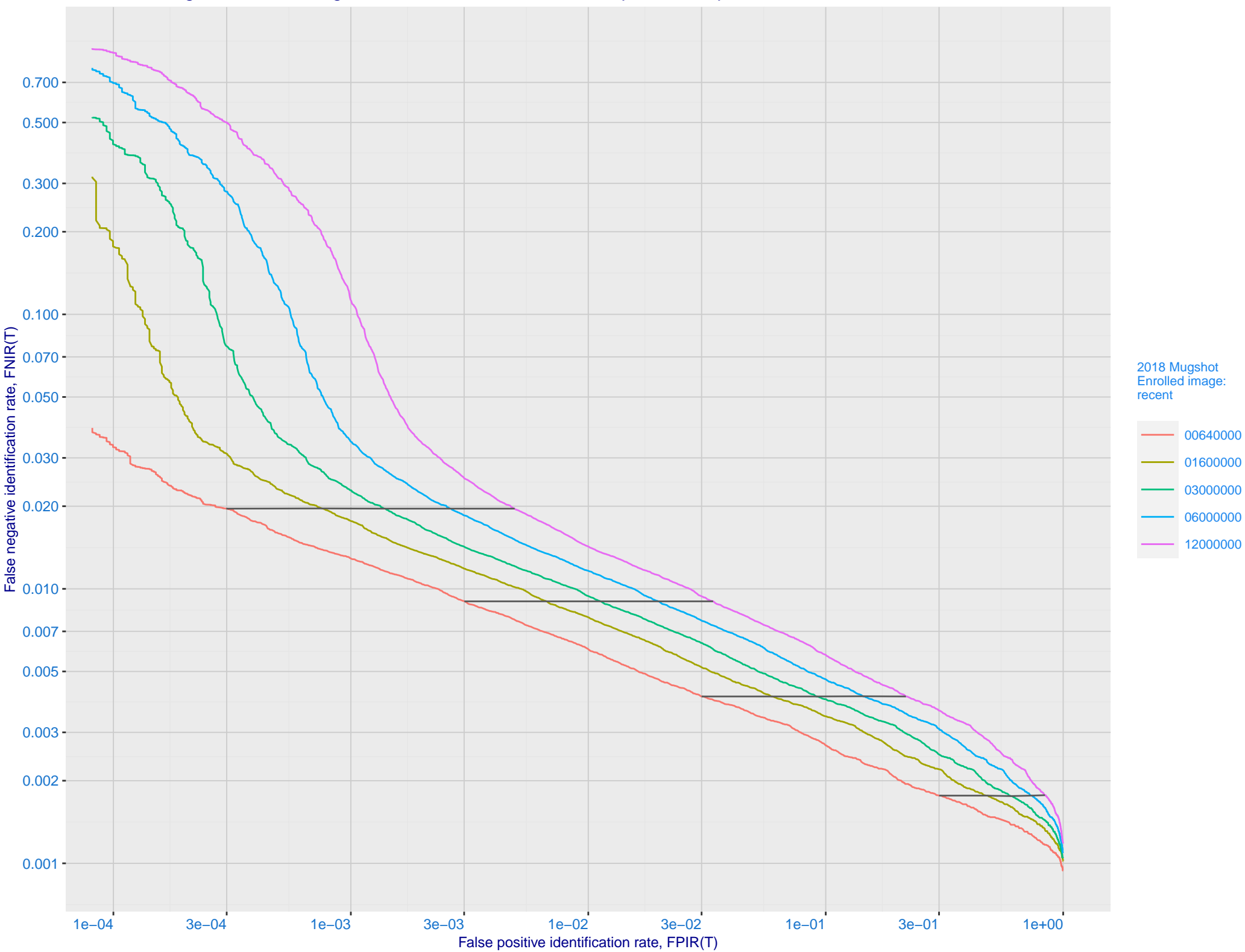
F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate



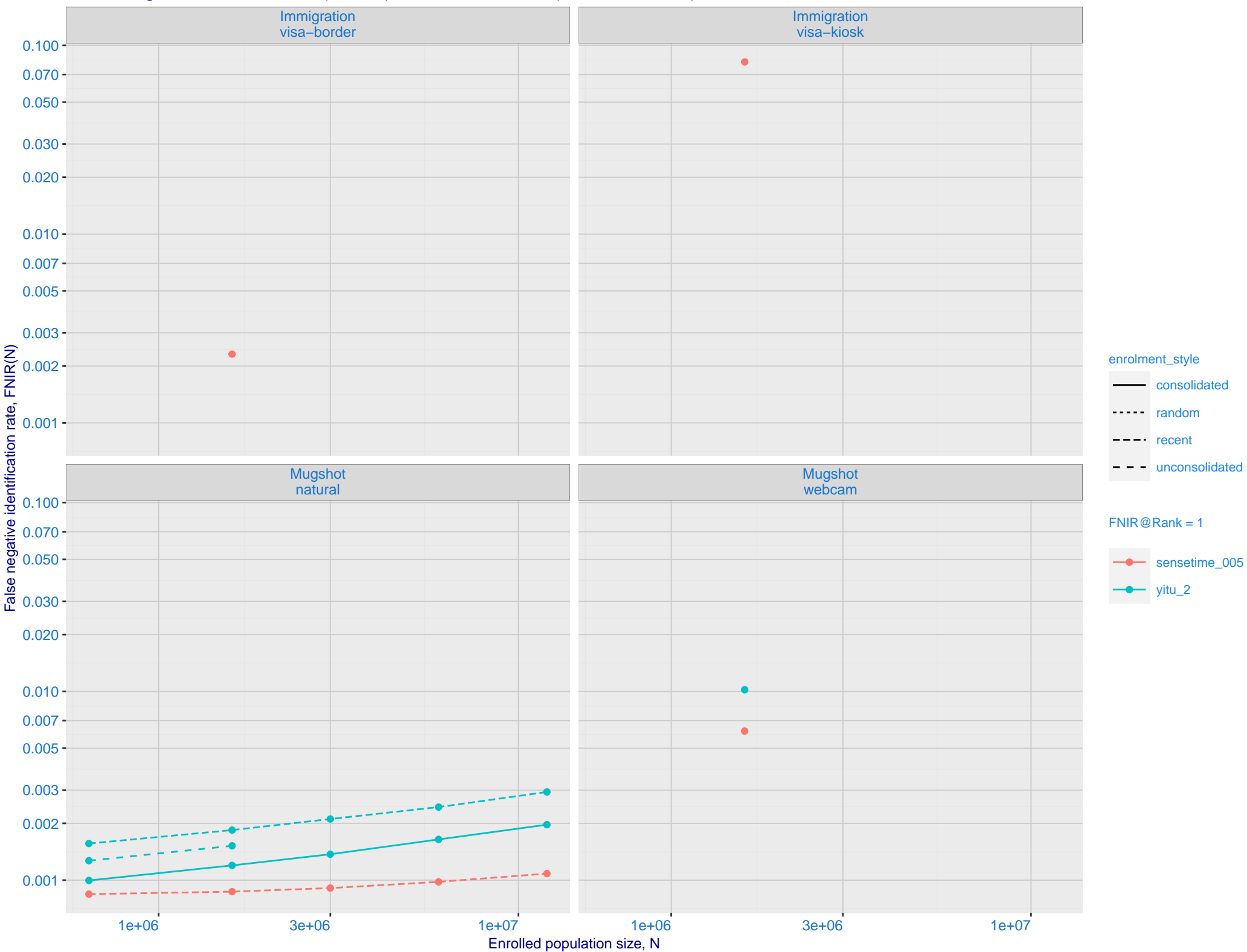
G: FPIR dependence on T by probe type for N = 1600000 subjects



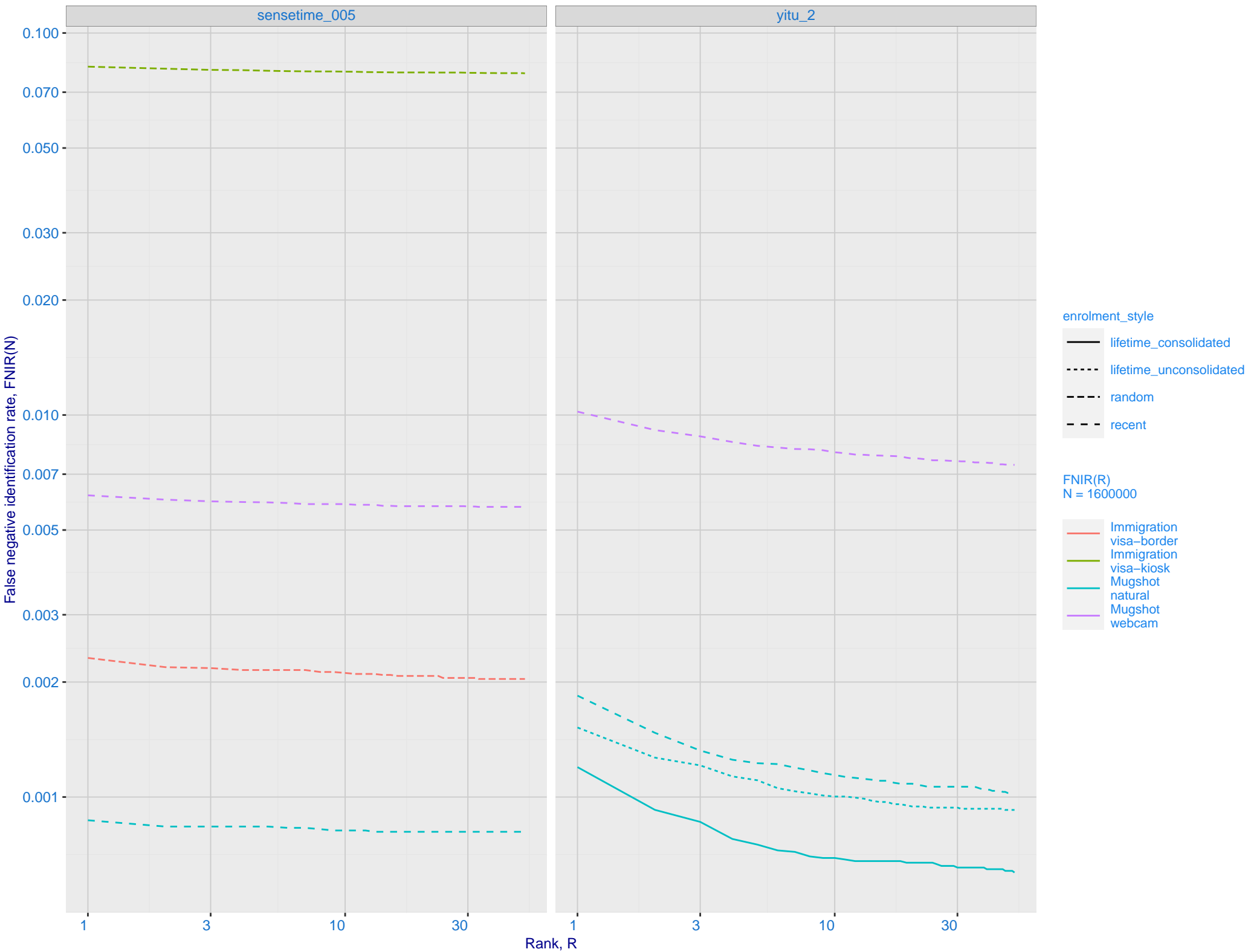
J: DET for Mugshot natural images and various N. Links connect points of equal threshold.



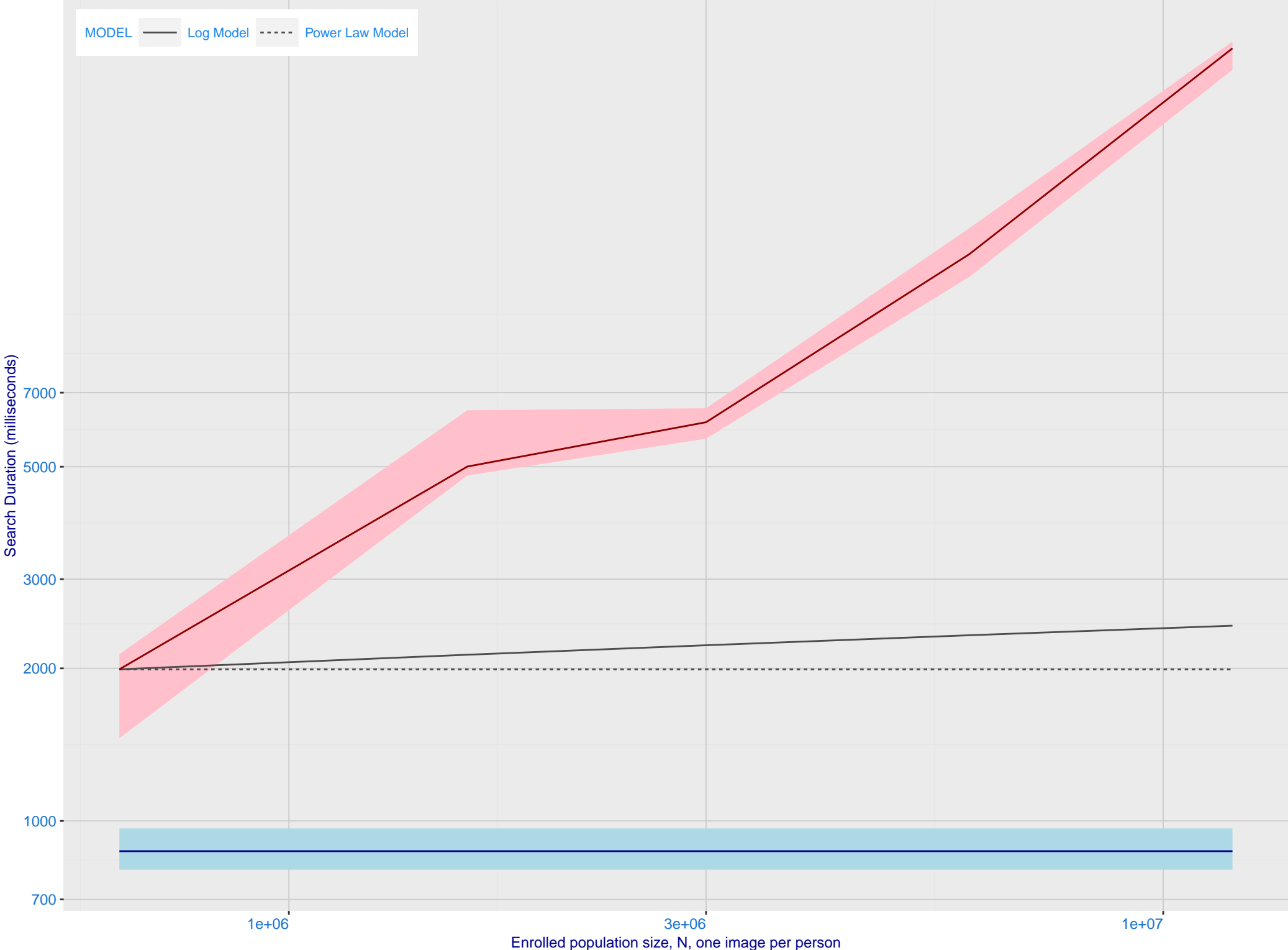
K: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005)



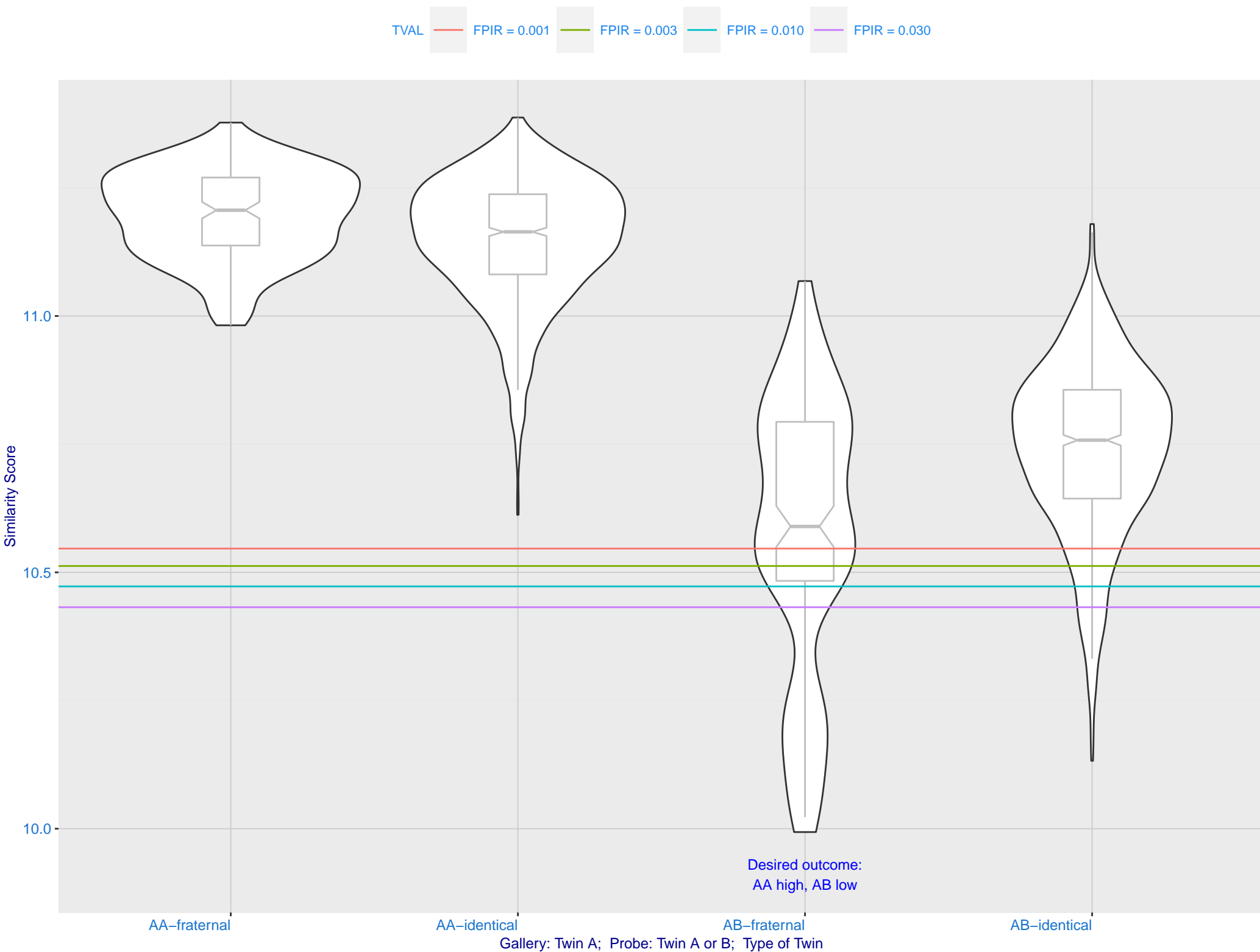
L: Investigational mode: FNIR(1600000, R, 0) by probe type



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

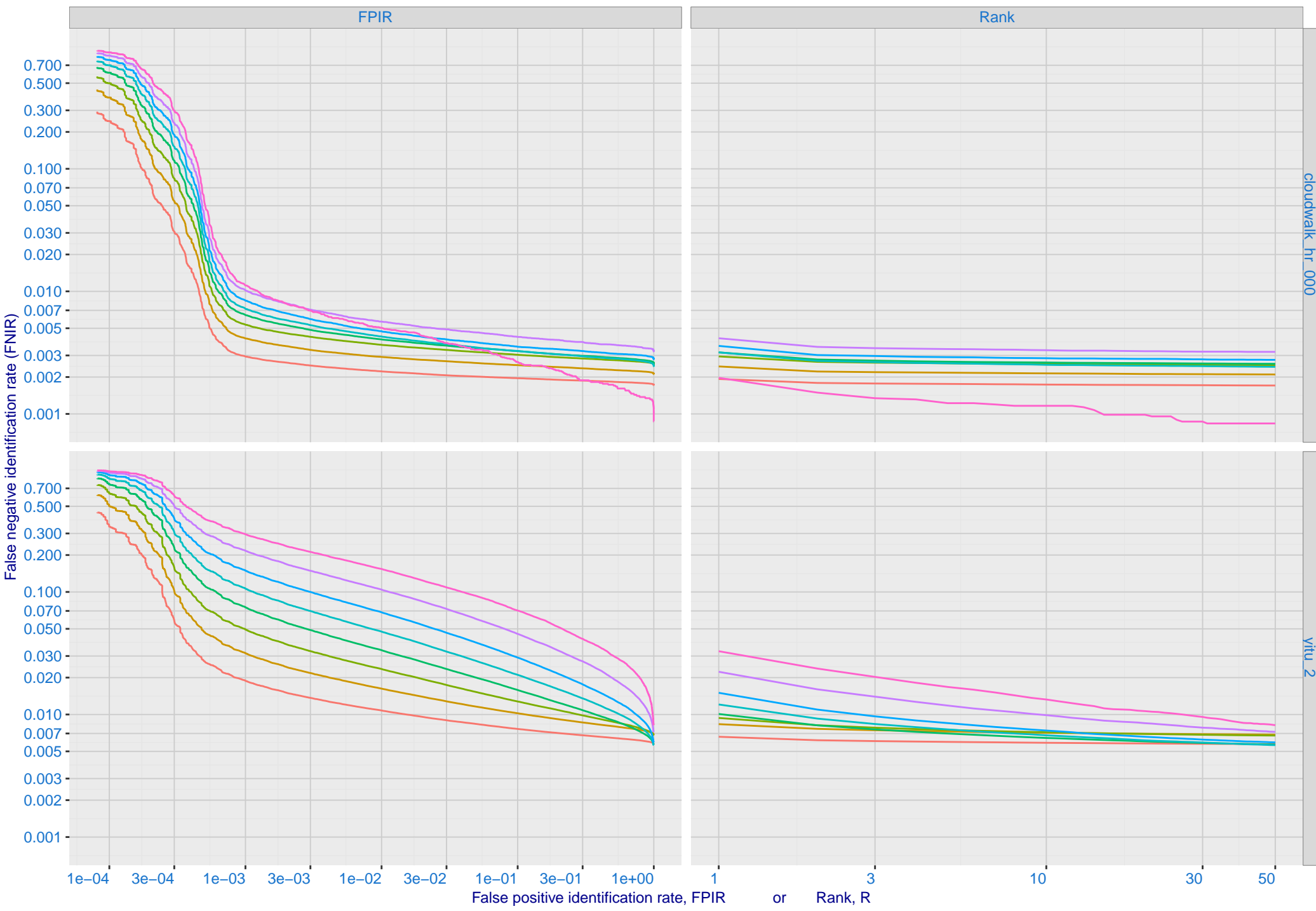


N: Solo-Twin and Twin-Twin similarity scores



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

Dataset: 2018 Mugshot N = 3068801



R: Decline of genuine scores with ageing, with some eventually dropping below typical thresholds shown by the horizontal lines

