A: Datasheet

Algorithm: smilart_0

Developer: Smilart

Submission Date: 2018_02_15

Template size: 1024 bytes

Template time (2.5 percentile): 154 msec

Template time (median): 169 msec

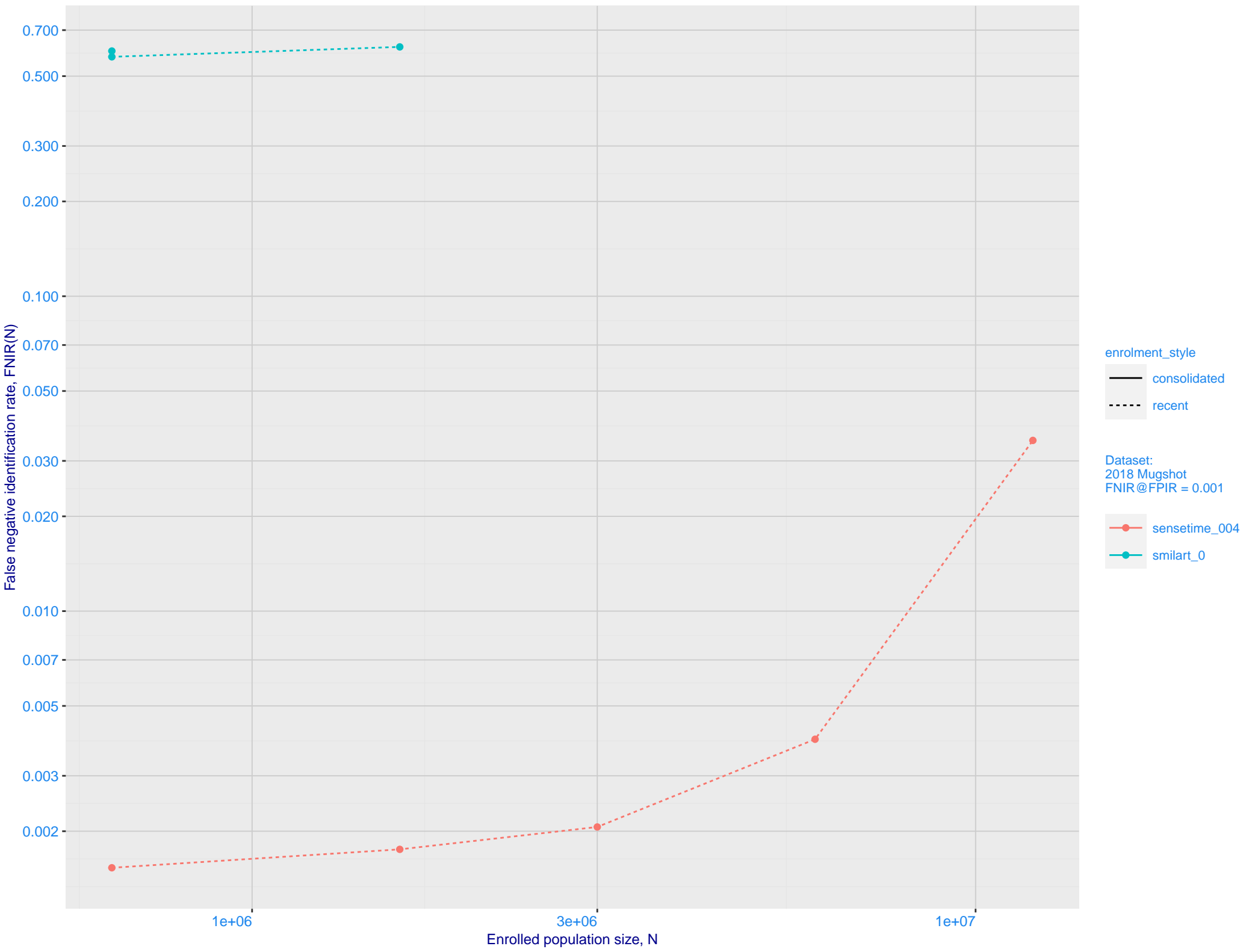Template time (97.5 percentile): 183 msec

Investigation:

Frontal mugshot ranking 235 (out of 265) –– FNIR(1600000, 0, 1) = 0.1910 vs. lowest 0.0009 from sensetime_005

Mugshot webcam ranking 204 (out of 227) –– FNIR(1600000, 0, 1) = 0.3252 vs. lowest 0.0062 from sensetime_005
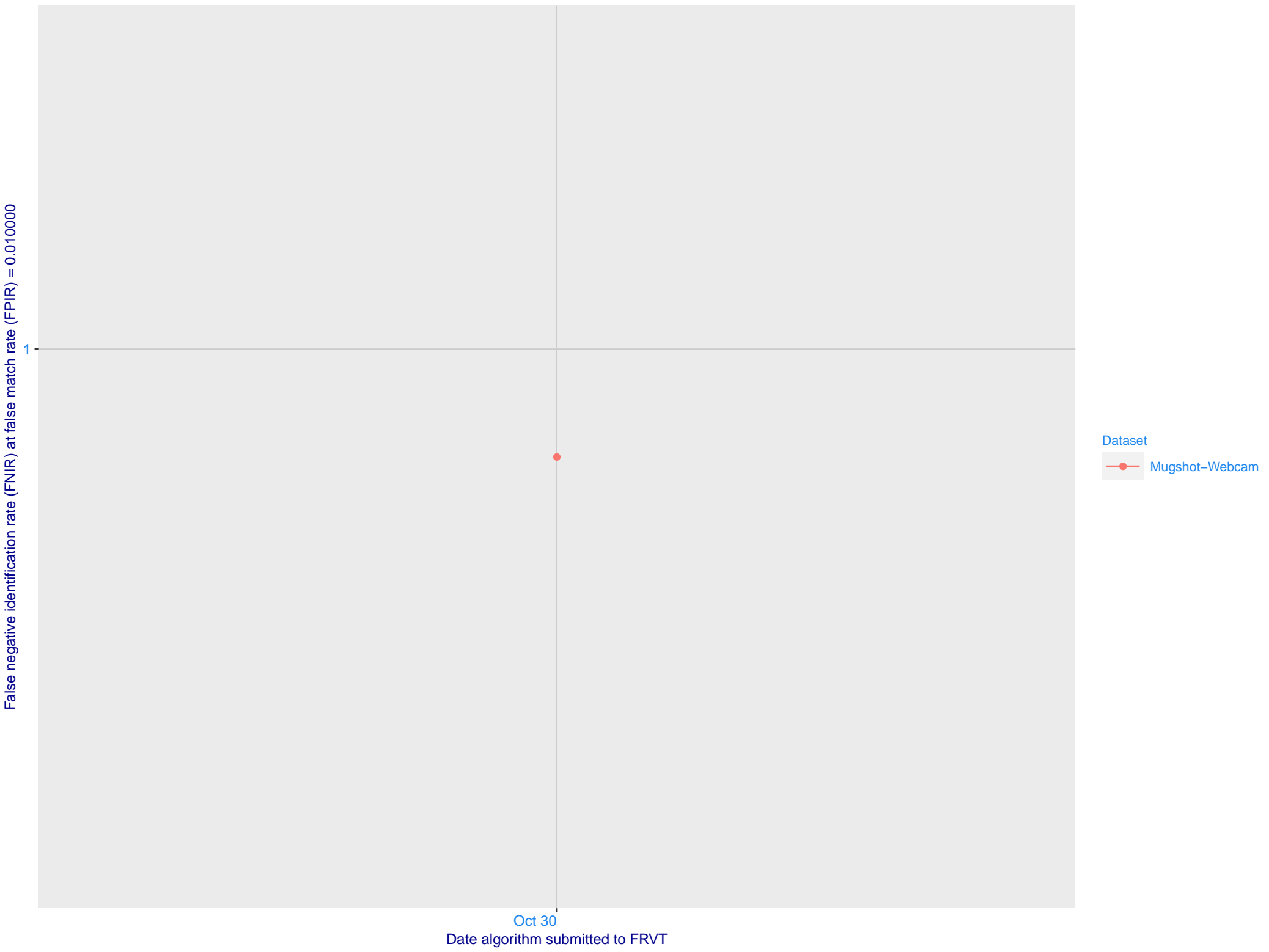
Identification:

Frontal mugshot ranking 229 (out of 265) –– FNIR(1600000, T, L+1) = 0.6192, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004
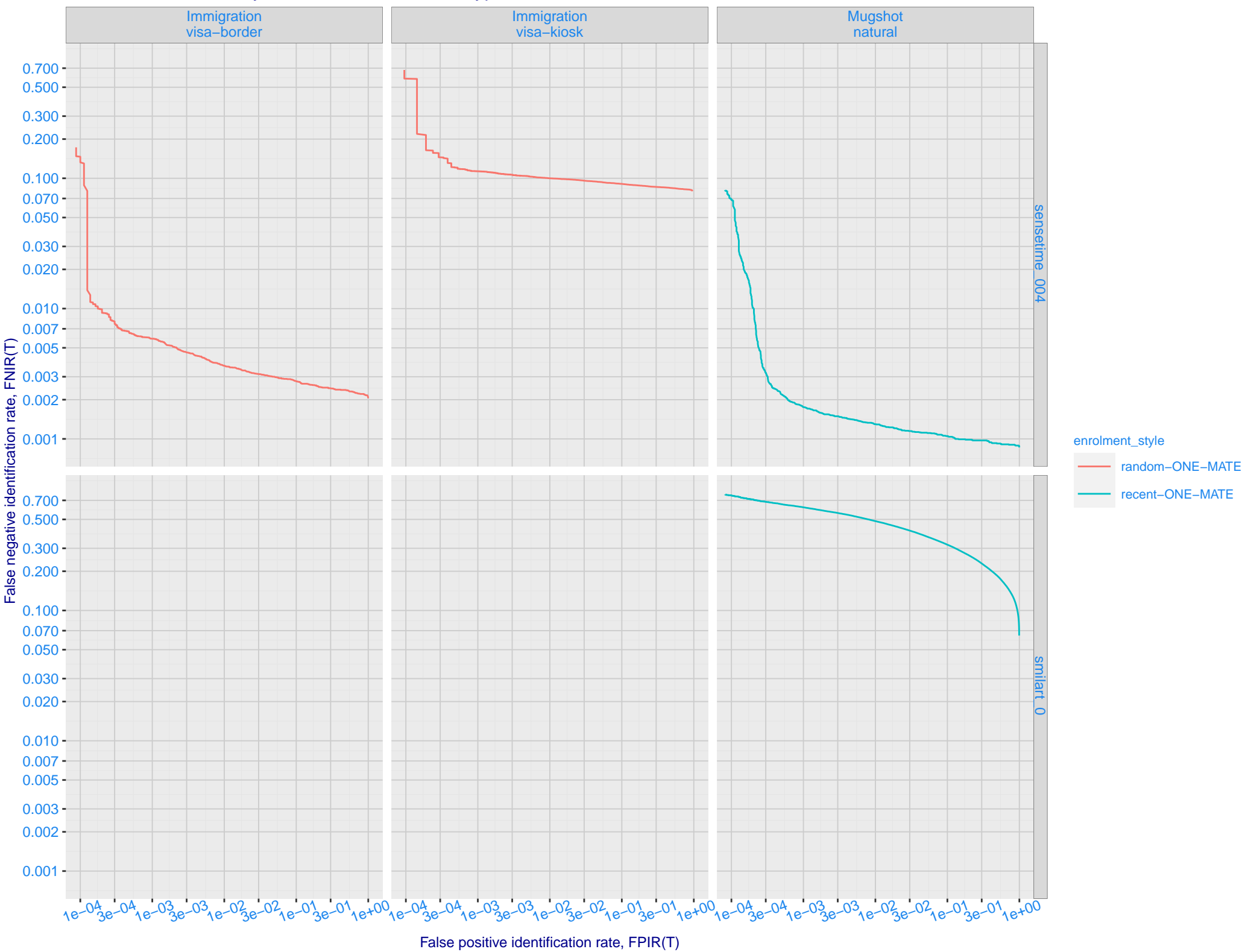
B: Mugshot natural images, identification mode: FNIR(N, L+1, T) vs. most accurate (sensetime_004)
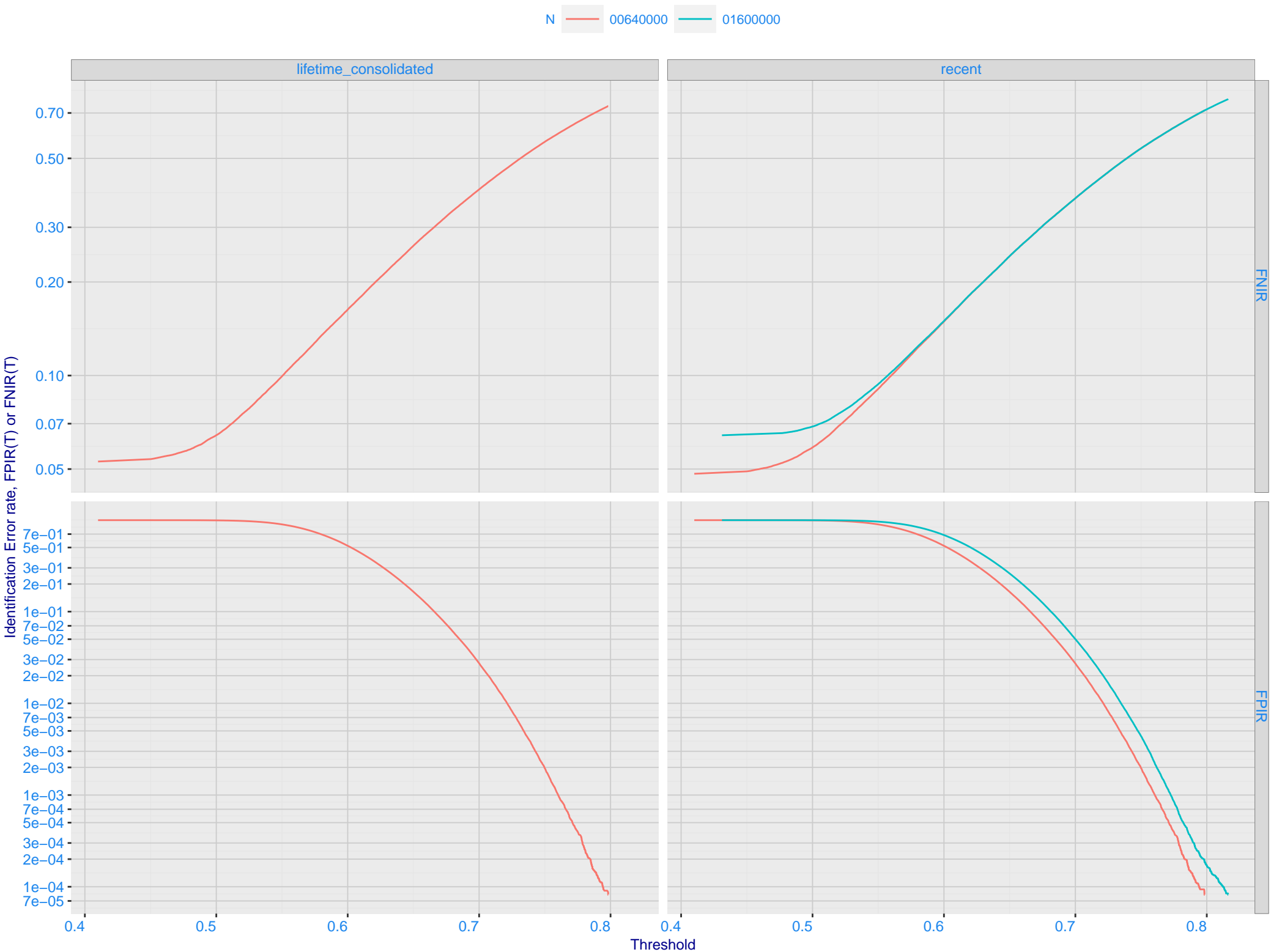
C: Evolution of accuracy for SMILART algorithms on three datasets 2018 – present

False negative identification rate (FNIR) at false match rate (FPIR) = 0.010000

1

Dataset

Mugshot−Webcam

Oct 30
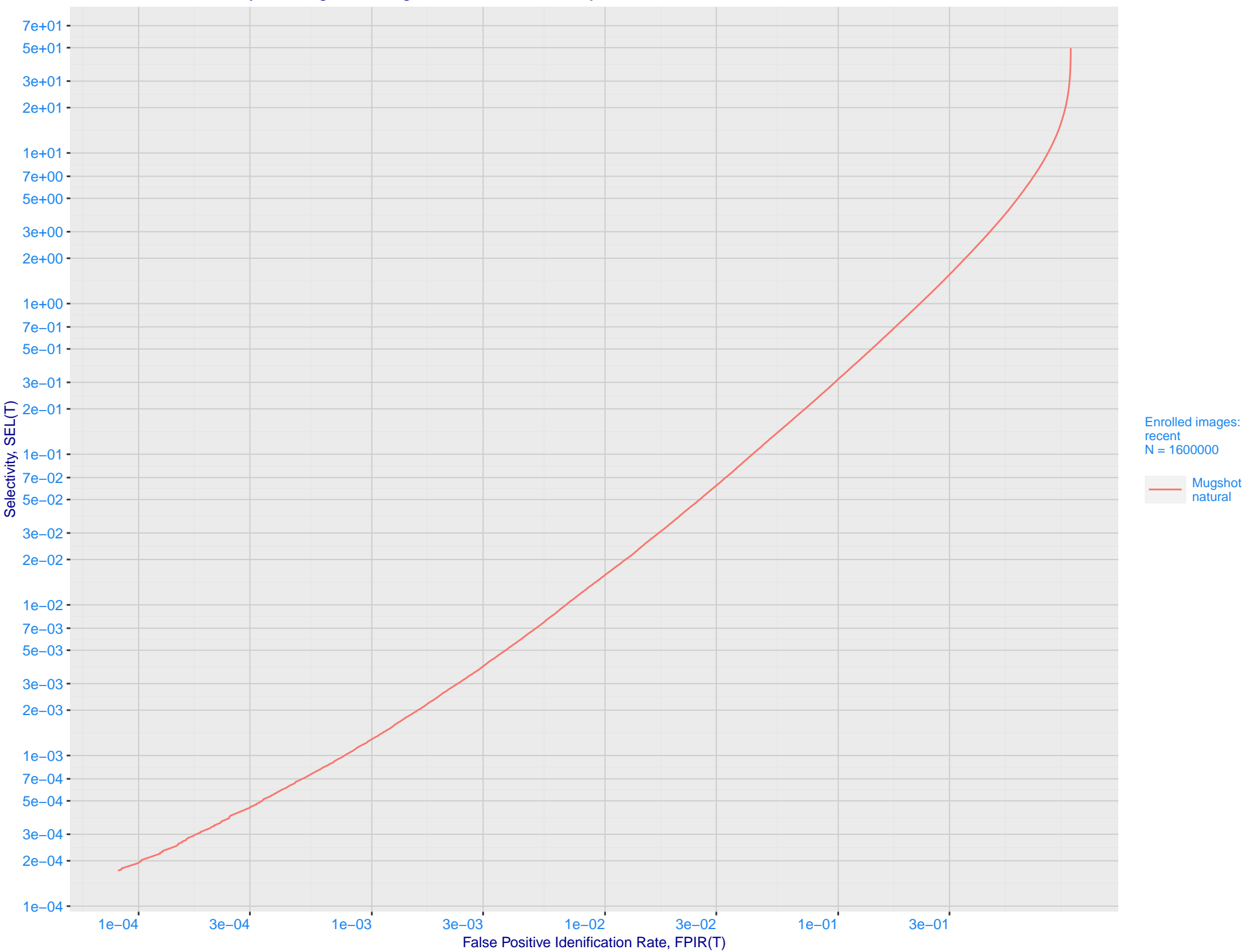Date algorithm submitted to FRVT

D: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals
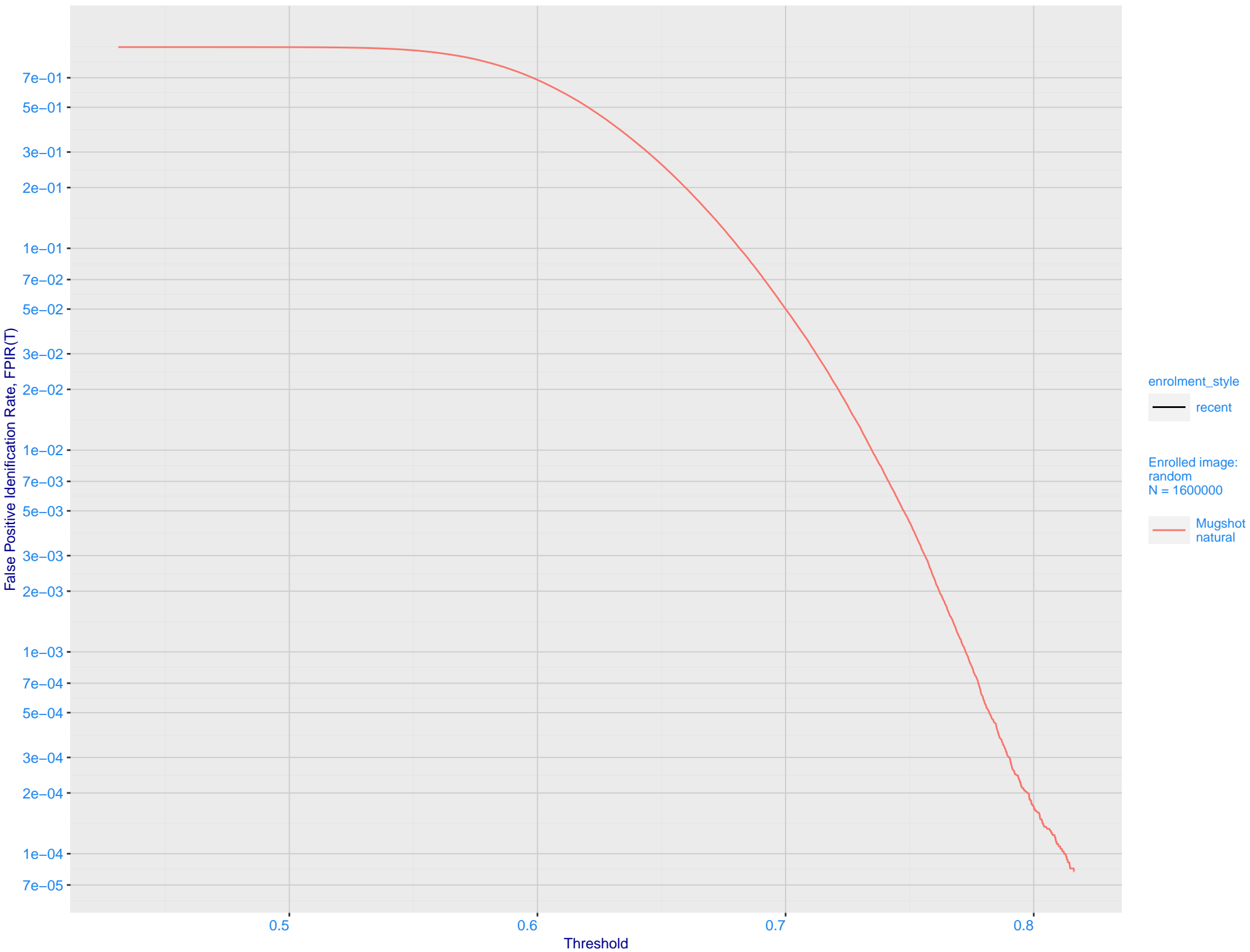
E: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images
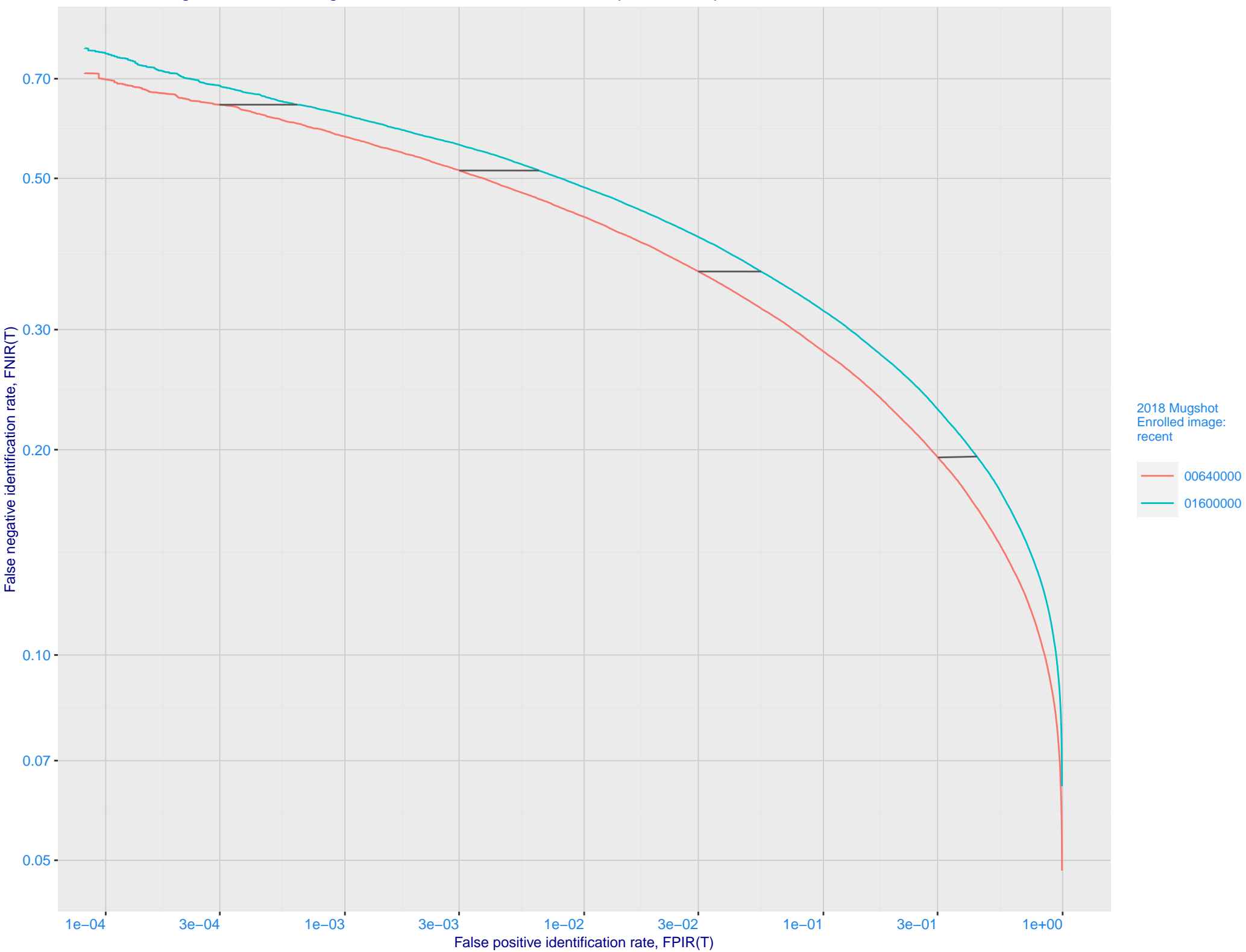
F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate

Selectivity, SEL(T)

False Positive Idenification Rate, FPIR(T)

Enrolled images:
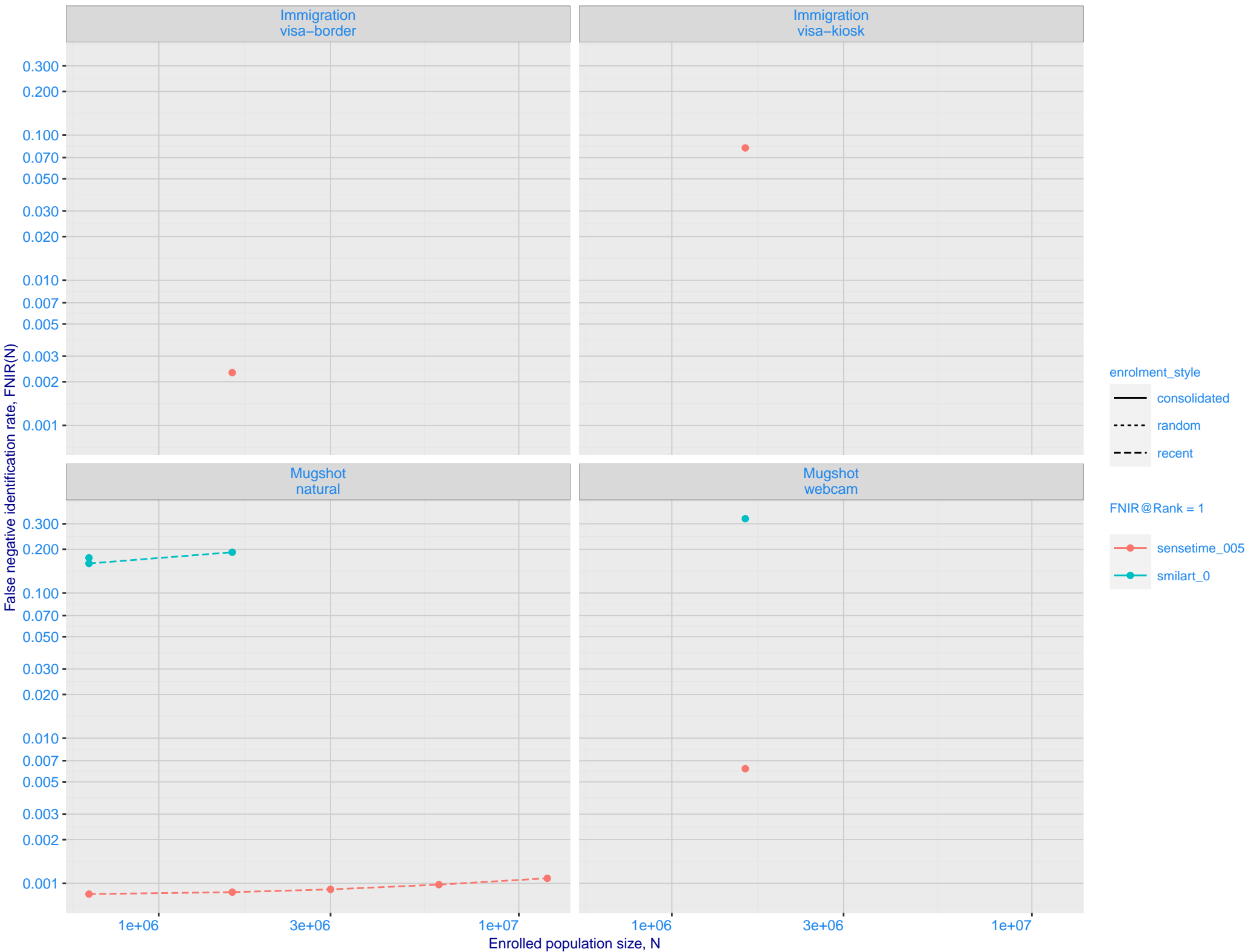recent
N = 1600000

Mugshot
natural

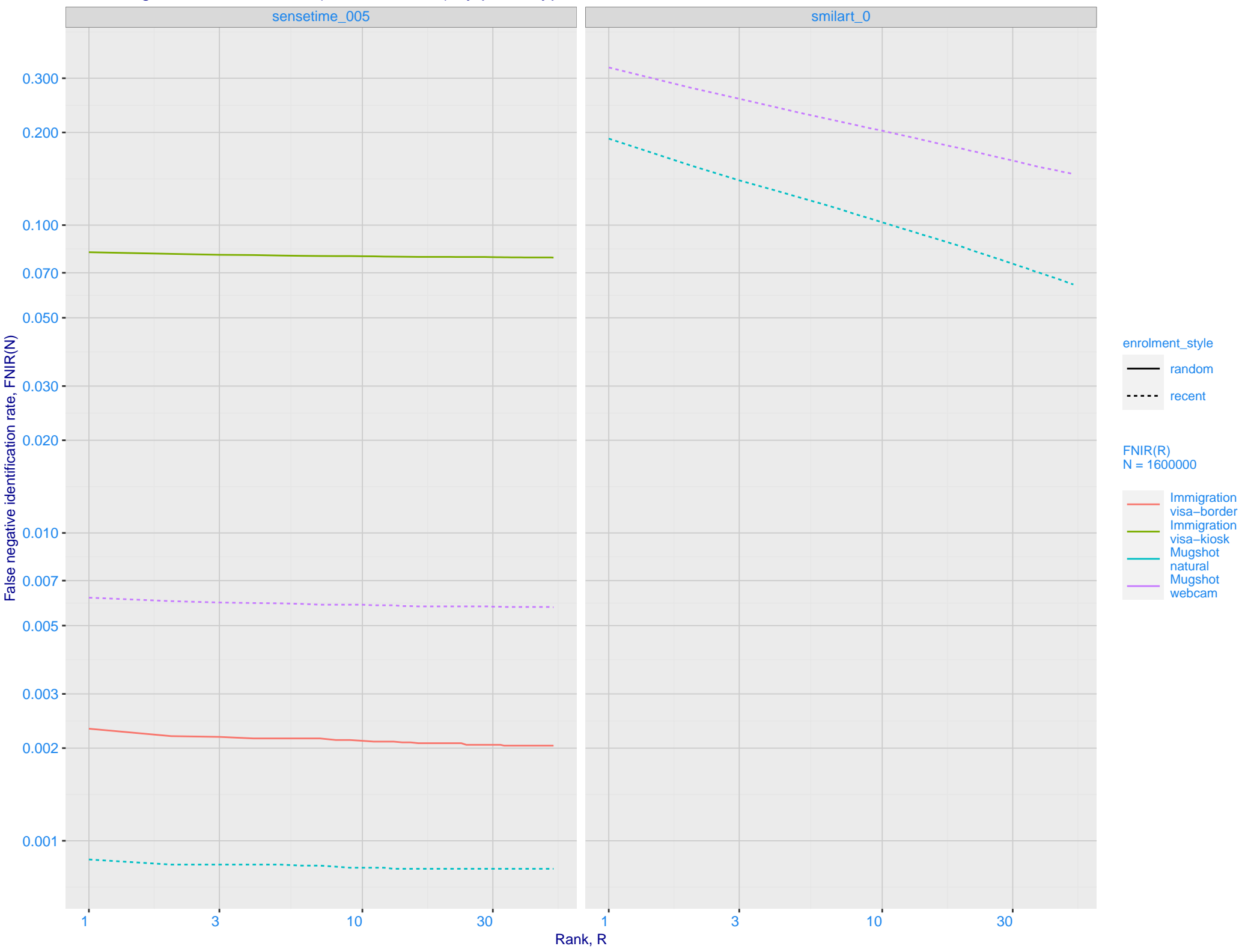G: FPIR dependence on T by probe type for N = 1600000 subjects

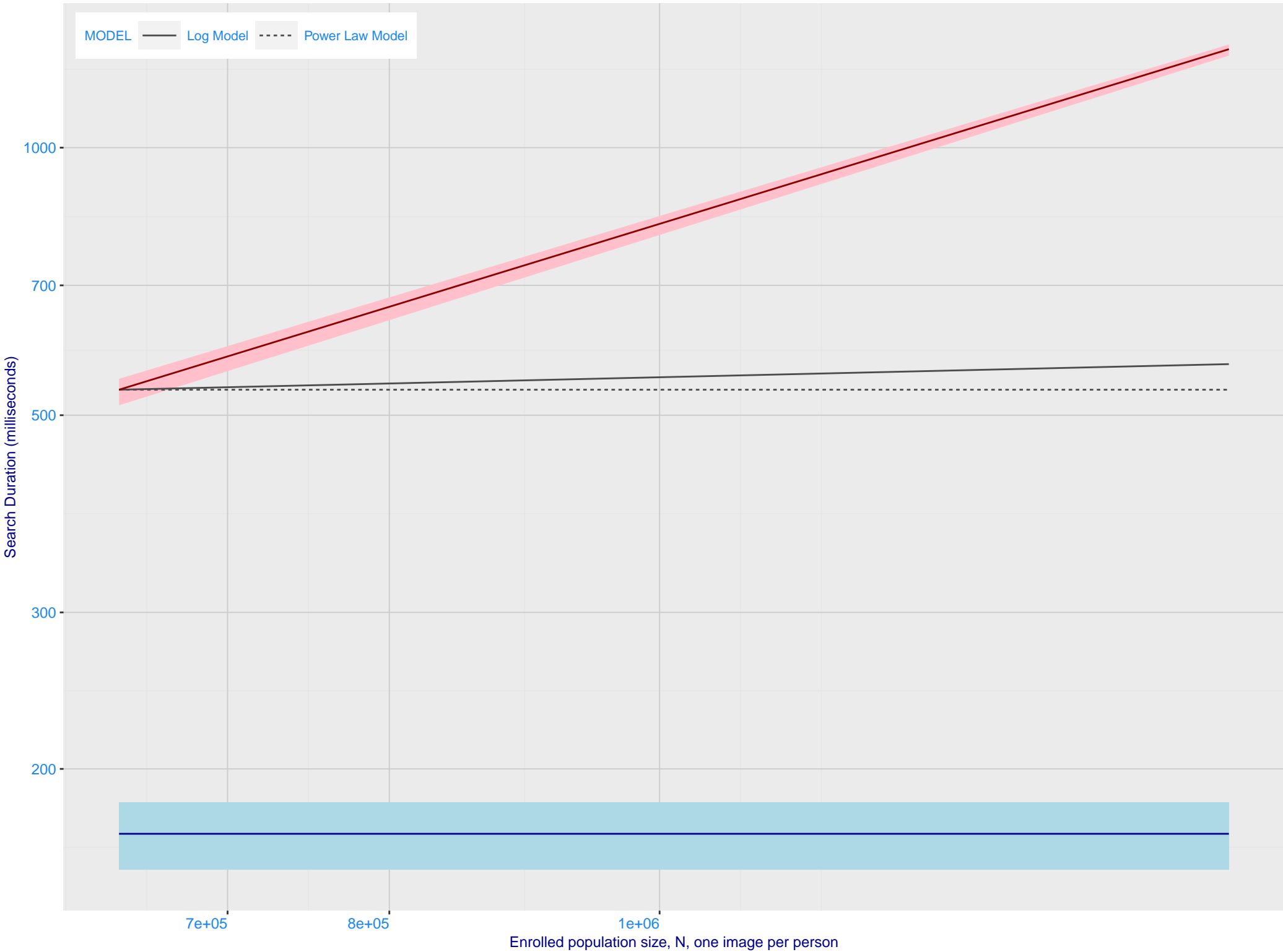H: DET for Mugshot natural images and various N. Links connect points of equal threshold.

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

MODEL — Log Model ····· Power Law Model

Search Duration (milliseconds)

Enrolled population size, N, one image per person

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