A: Datasheet

Algorithm: microfocus_2

Developer: MicroFocus

Submission Date: 2018_02_16

Template size: 256 bytes

Template time (2.5 percentile): 420 msec

Template time (median): 532 msec

Template time (97.5 percentile): 636 msec

Investigation:

Frontal mugshot ranking 256 (out of 259) –– FNIR(1600000, 0, 1) = 0.6262 vs. lowest 0.0009 from sensetime_005

Immigration visa–border ranking 132 (out of 142) –– FNIR(1600000, 0, 1) = 0.7361 vs. lowest 0.0014 from visionlabs_009

Immigration visa–kiosk ranking 134 (out of 139) –– FNIR(1600000, 0, 1) = 0.9189 vs. lowest 0.0694 from cib_000

Identification:

Frontal mugshot ranking 247 (out of 259) –– FNIR(1600000, T, L+1) = 0.9339, FPIR=0.001000 vs. lowest 0.0018 from sensetime_004
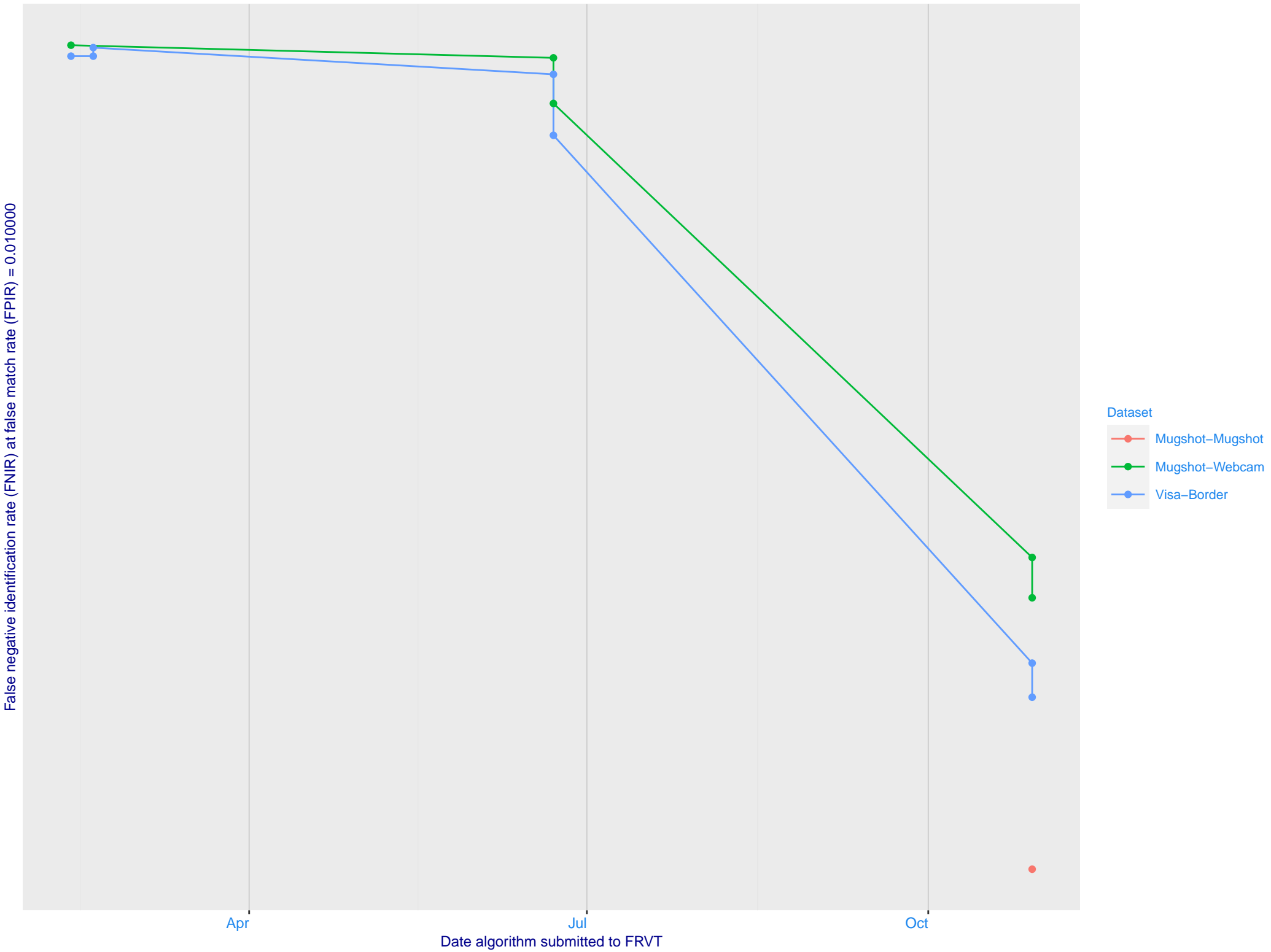
Immigration visa–border ranking 127 (out of 139) –– FNIR(1600000, T, L+1) = 0.9846, FPIR=0.001000 vs. lowest 0.0059 from sensetime_004

Immigration visa–kiosk ranking 113 (out of 134) –– FNIR(1600000, T, L+1) = 0.9834, FPIR=0.001000 vs. lowest 0.1048 from sensetime_005
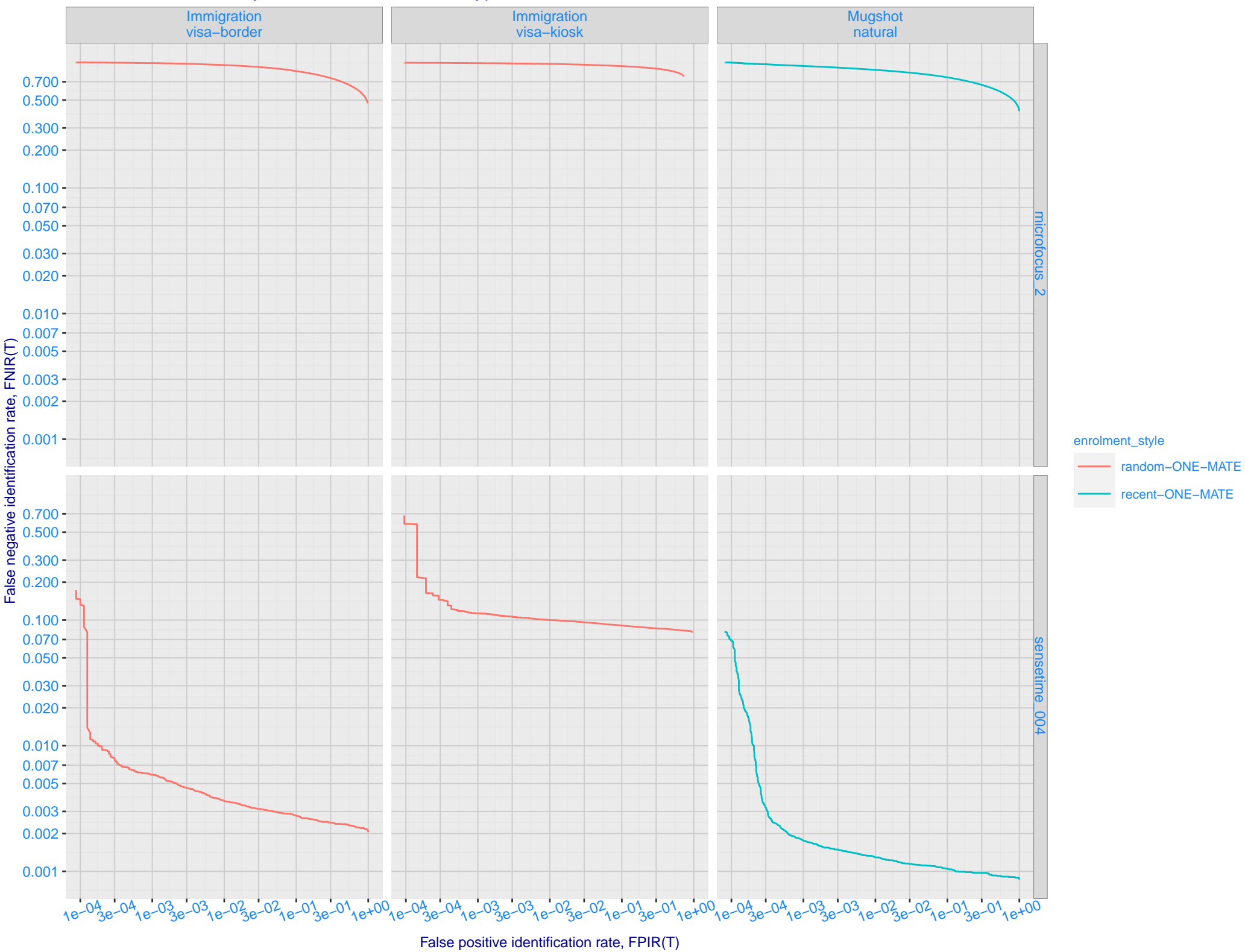
B: Mugshot natural images, identification mode: FNIR(N, L+1, T) vs. most accurate (sensetime_004)
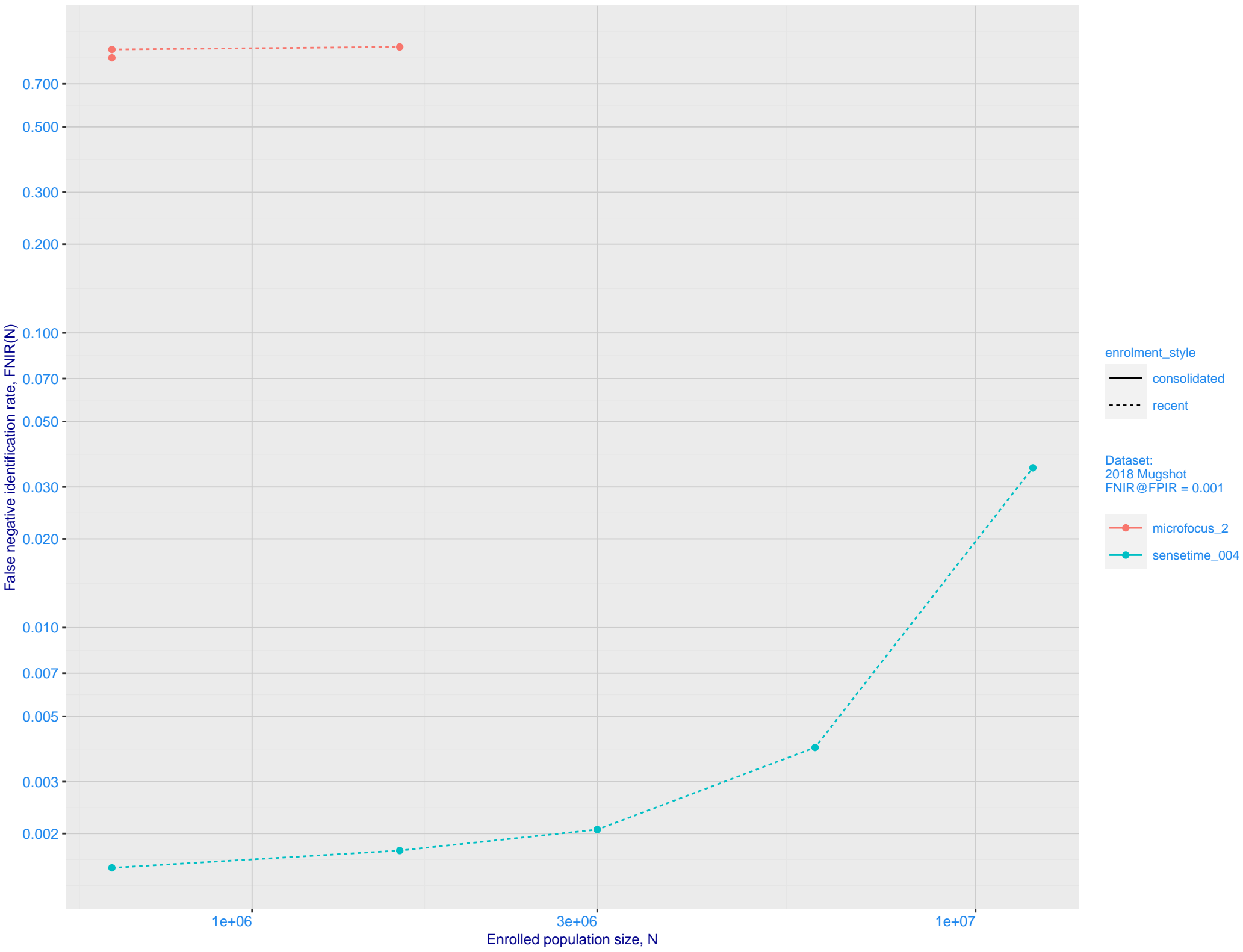
C: Evolution of accuracy for MICROFOCUS algorithms on three datasets 2018 – present

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

Facet columns: Immigration visa–border, Immigration visa–kiosk, Mugshot natural

Facet rows: microfocus_2, sensetime_004

X-axis: False positive identification rate, FPIR(T)

Y-axis: False negative identification rate, FNIR(T)

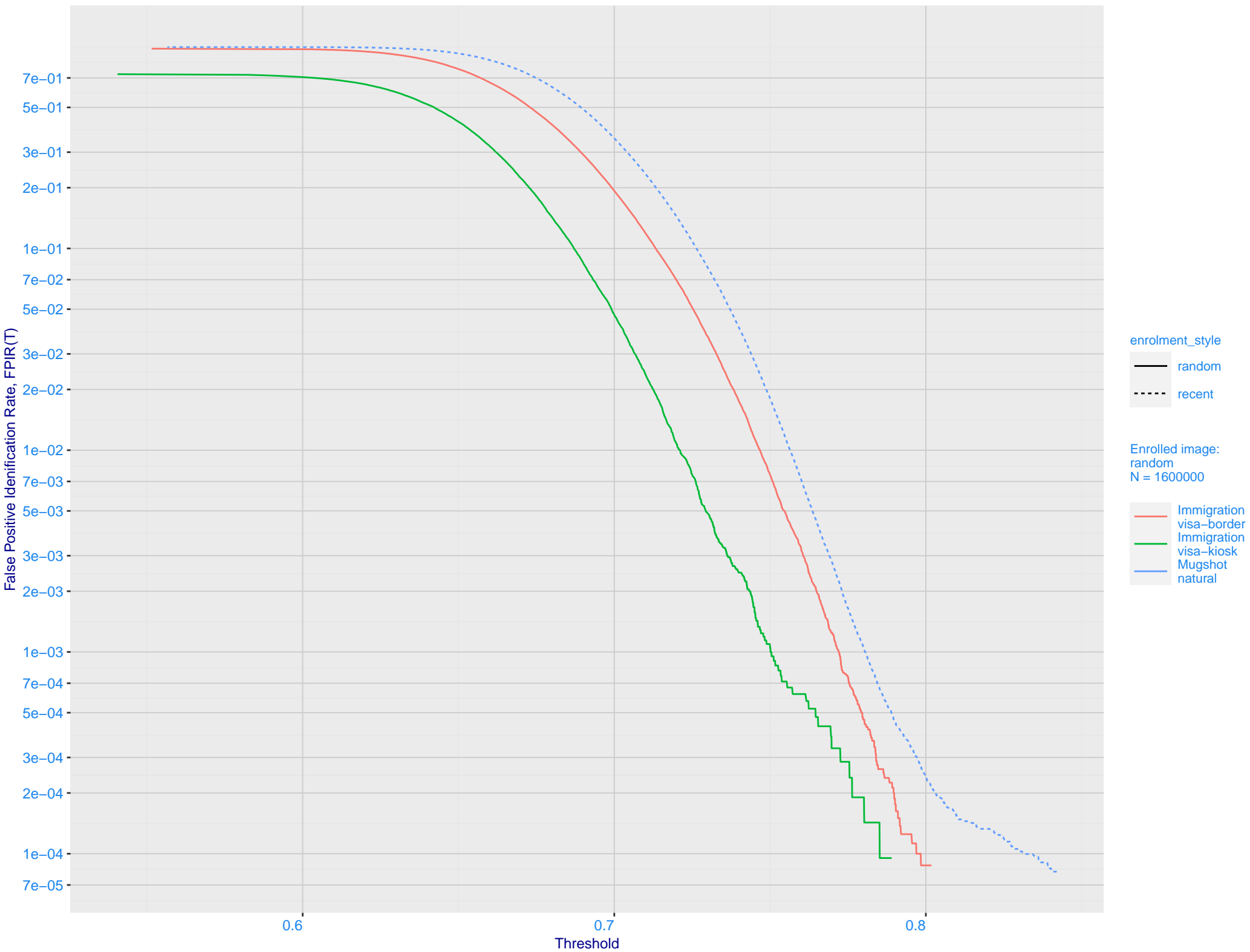Legend — enrolment_style:
- random–ONE–MATE
- recent–ONE–MATE

E: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images
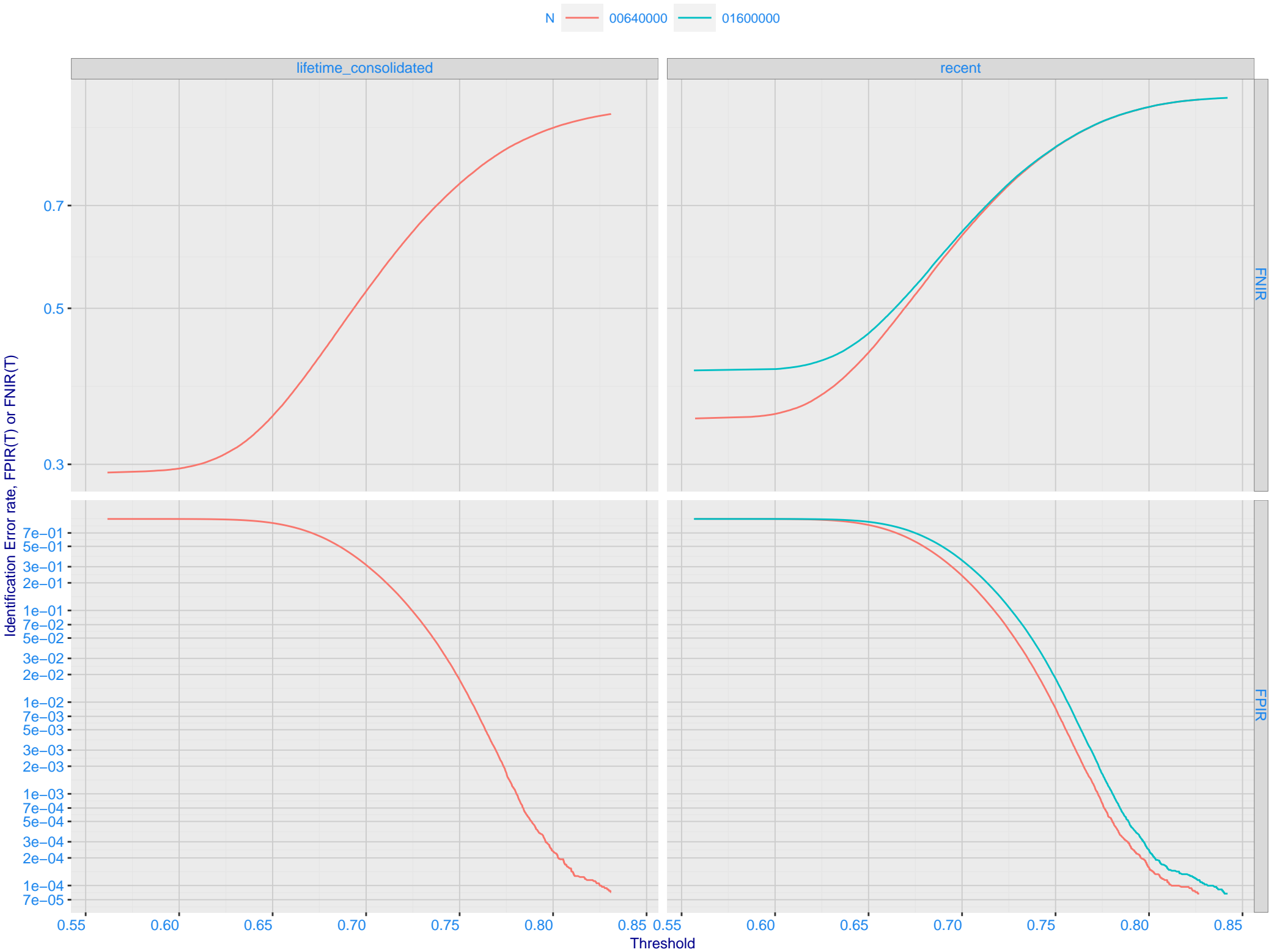
F: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate

Selectivity, SEL(T)

False Positive Idenification Rate, FPIR(T)

Enrolled images:
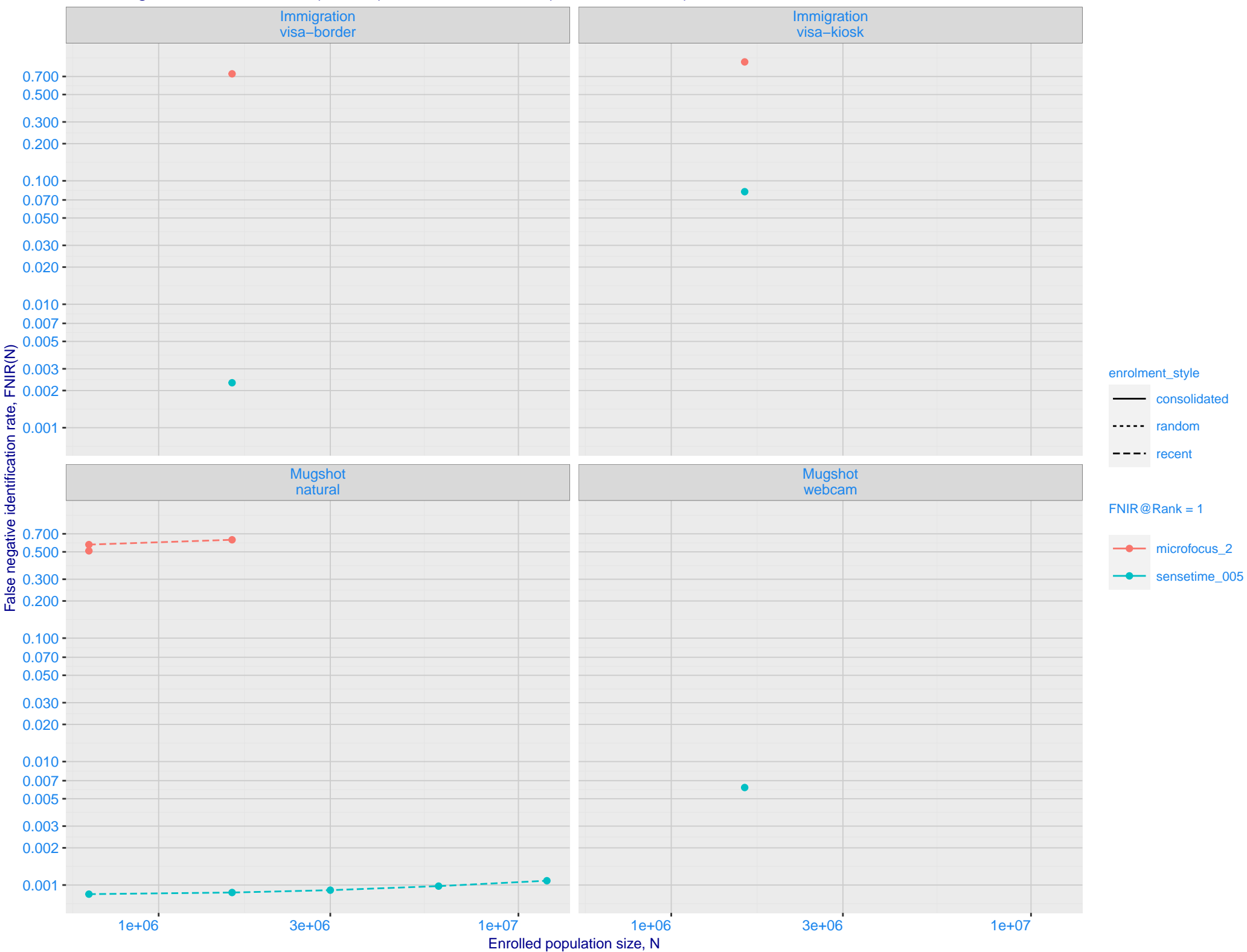recent
N = 1600000
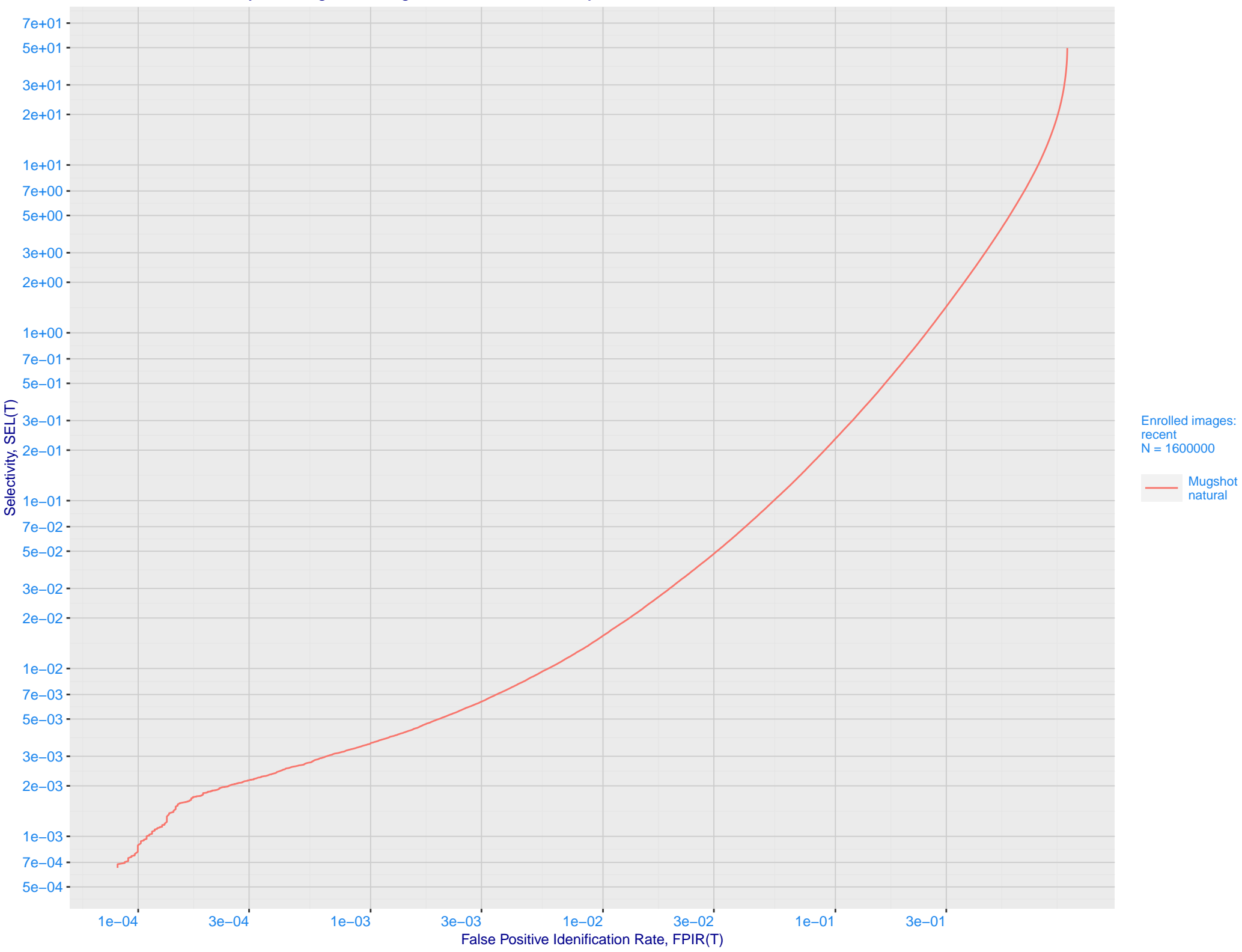
Mugshot
natural

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.

False negative identification rate, FNIR(T)

False positive identification rate, FPIR(T)

2018 Mugshot
Enrolled image:
recent

00640000
01600000
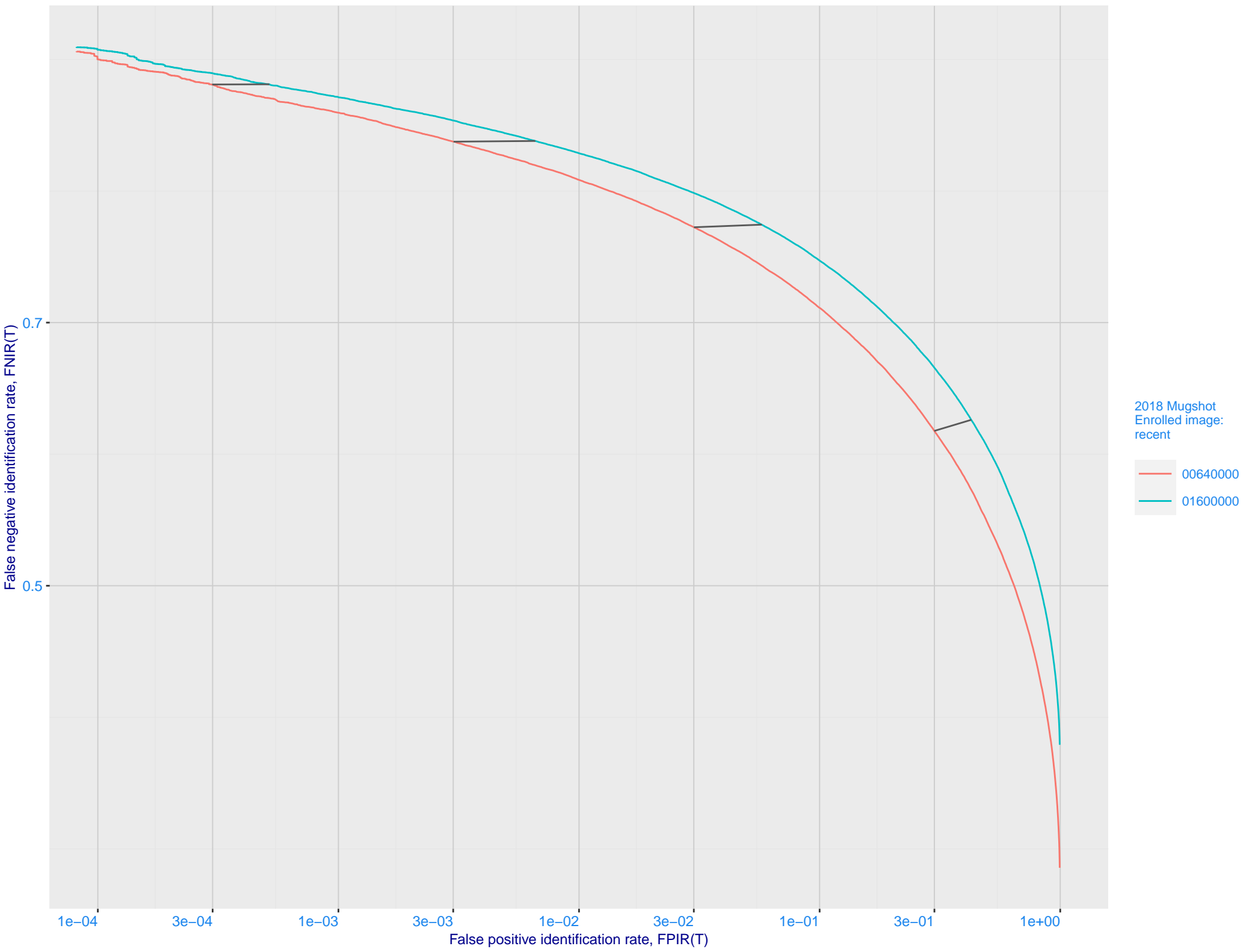
I: Investigational mode: FNIR(N, 1, 0) vs. most accurate (sensetime_005)

J: Investigational mode: FNIR(1600000, R, 0) by probe type
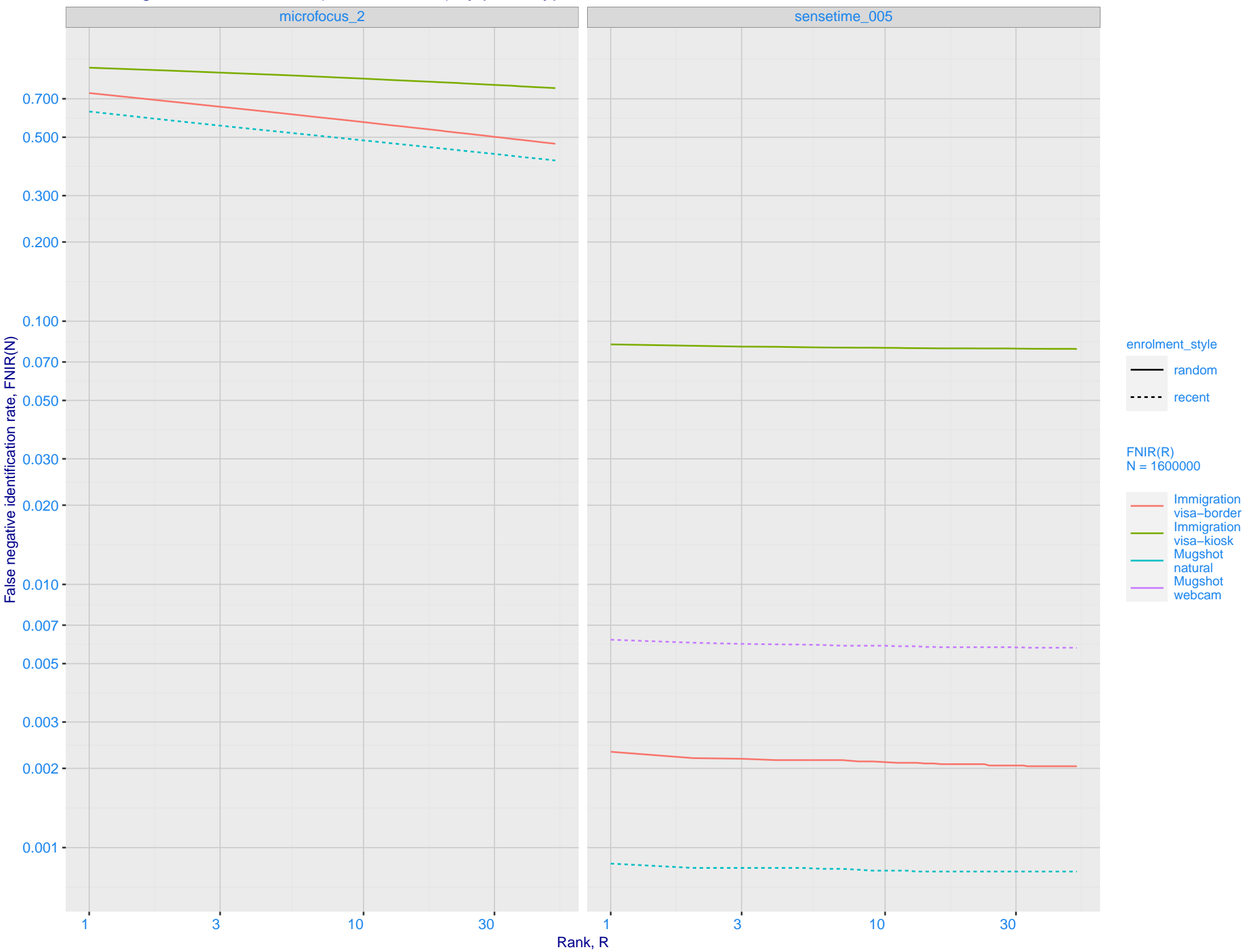
Template duration; search duration vs. N. The blue and pink ribbon covers 95 percent of observed measurements. The template generation time is independent of N. The log and power−law models are fit to the first two (N,T) observations
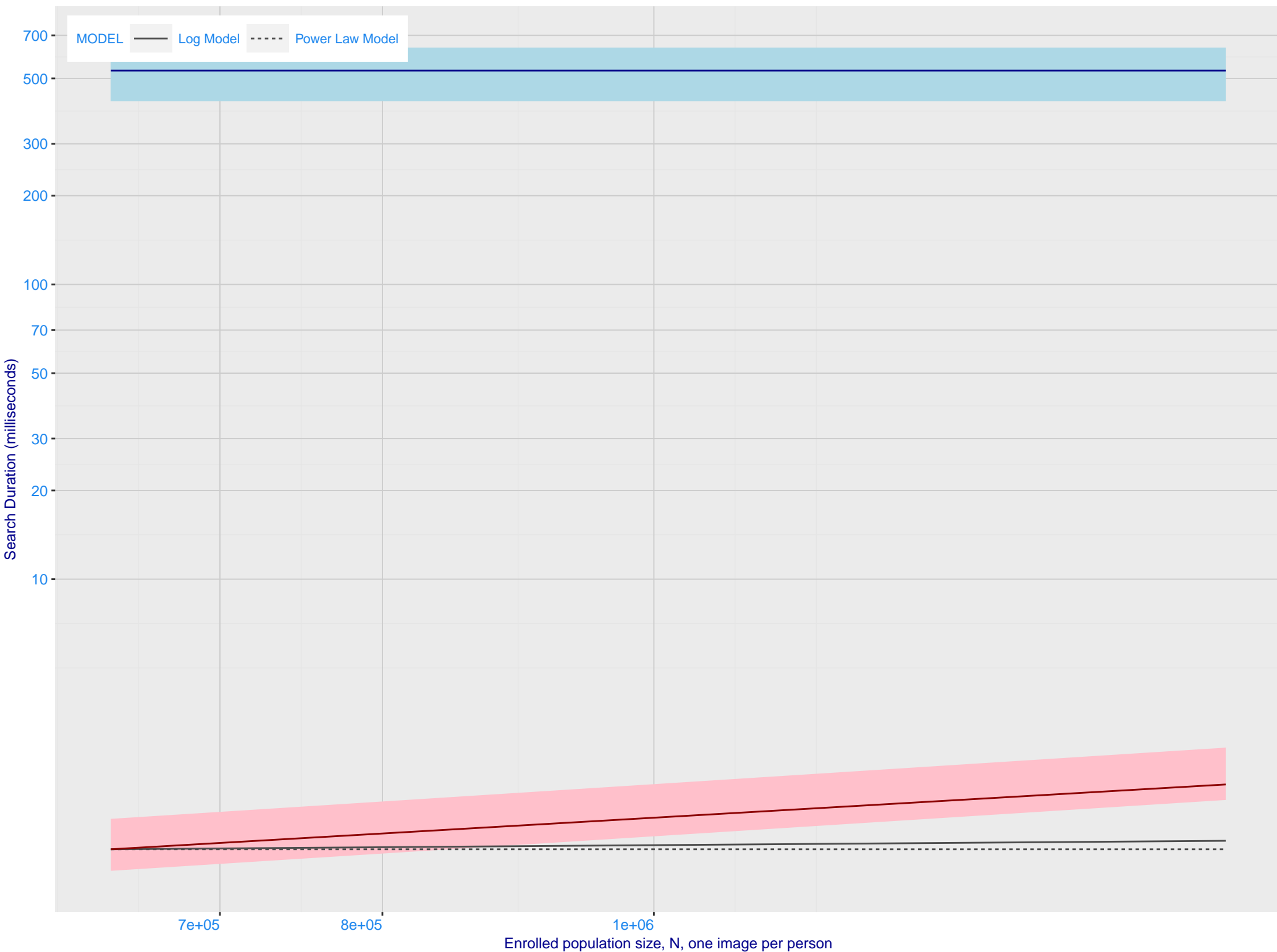
M: Identification FNIR(N, T, L+1) and Investigational FNIR(N, 0, R) under ageing