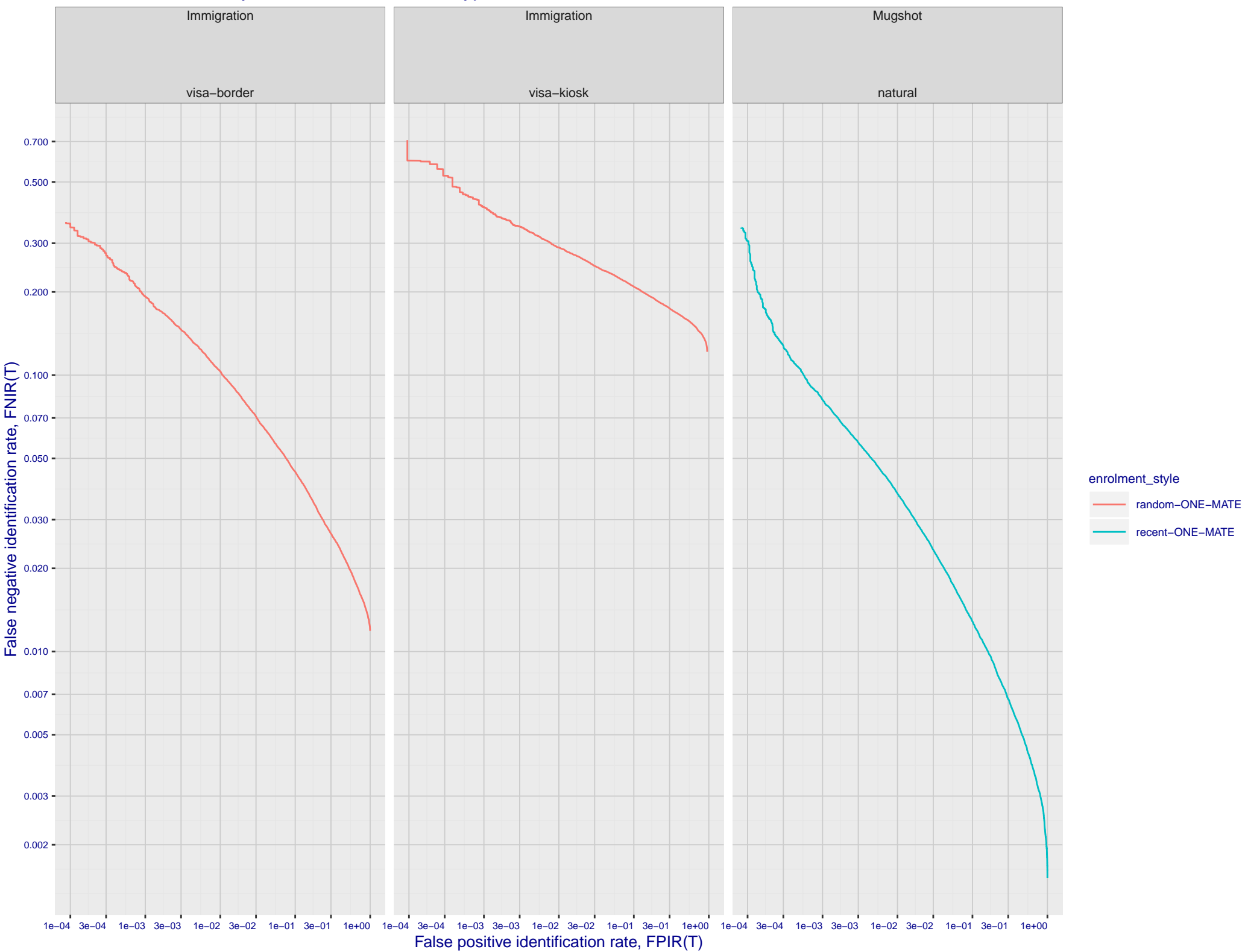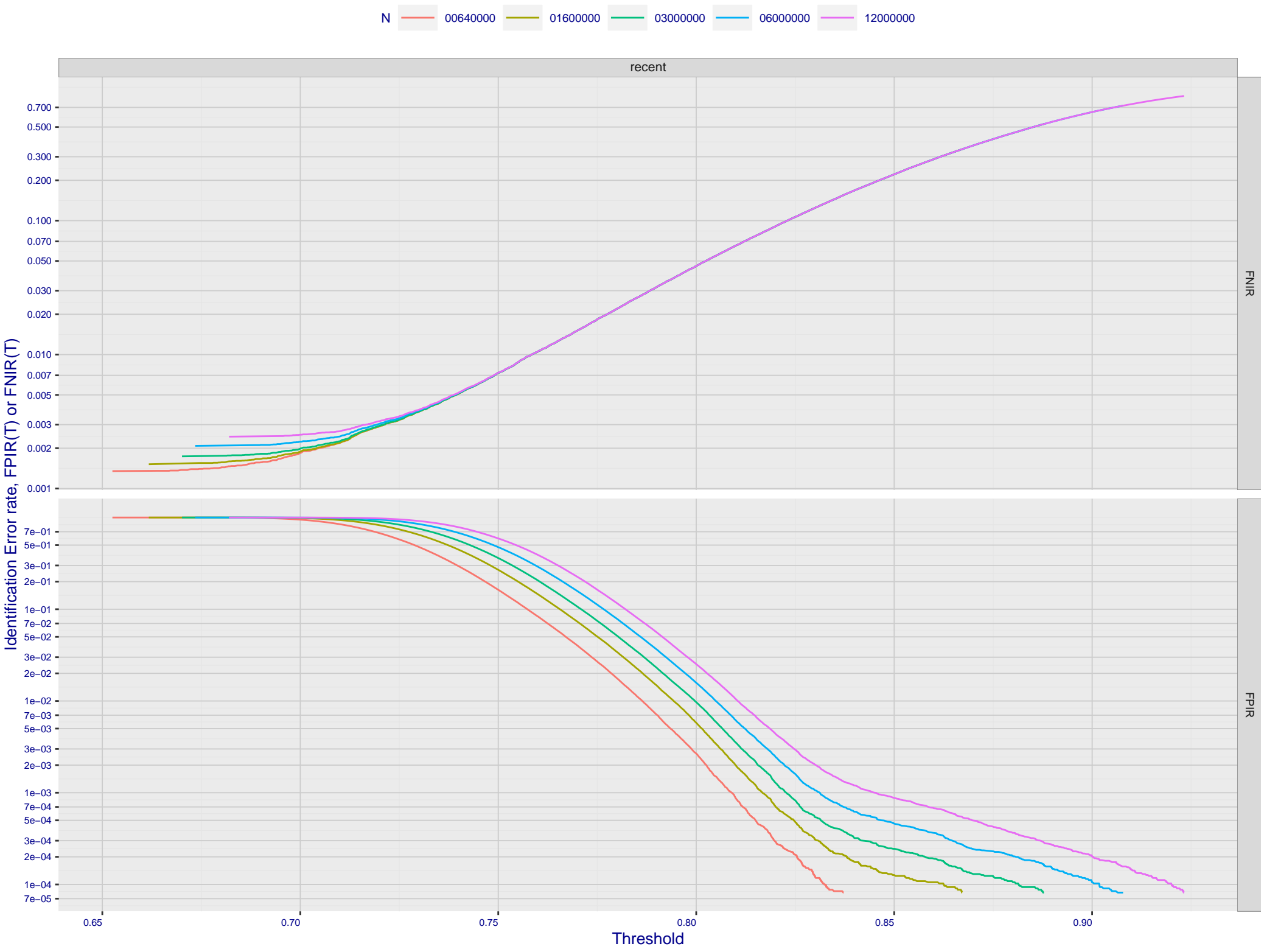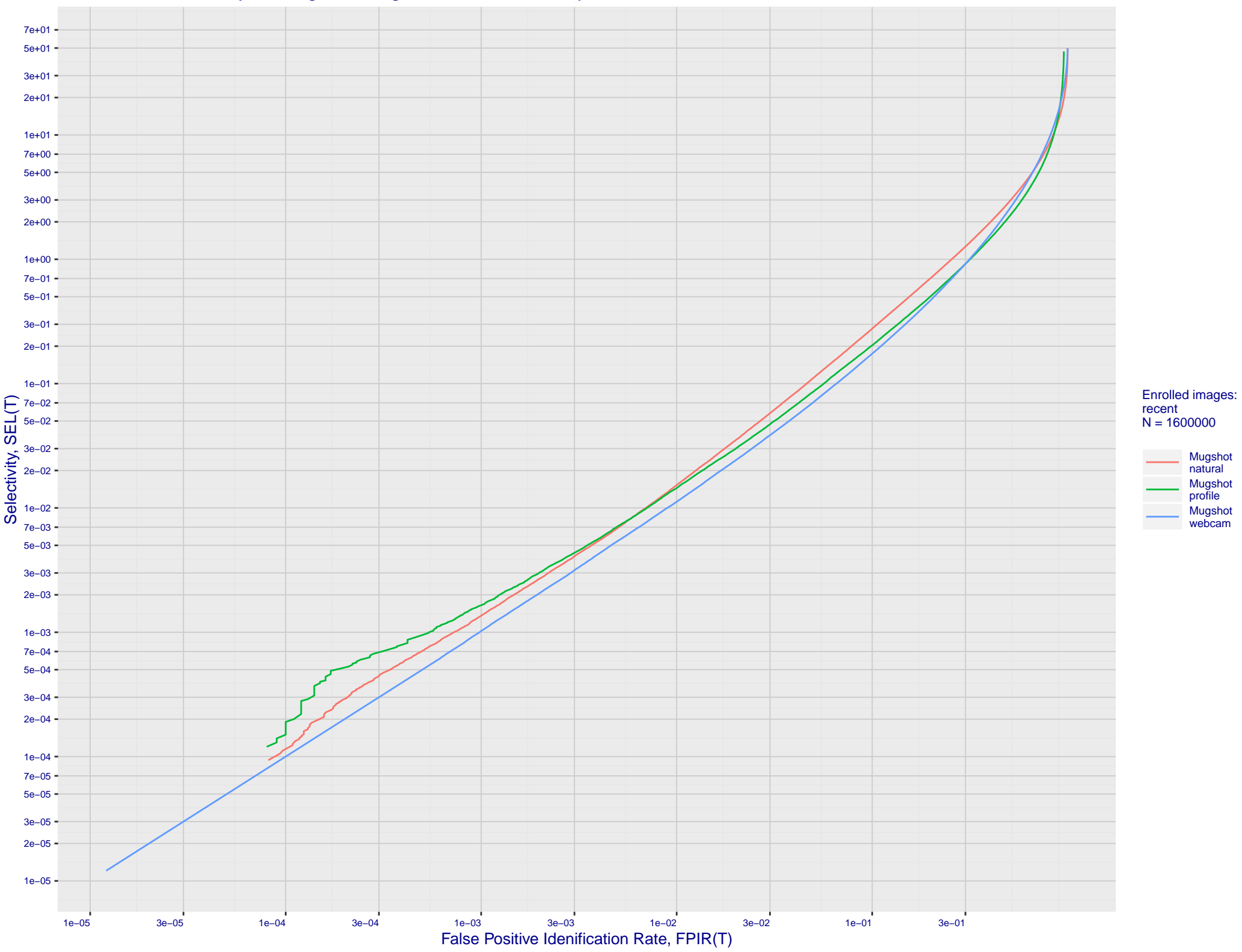A: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals
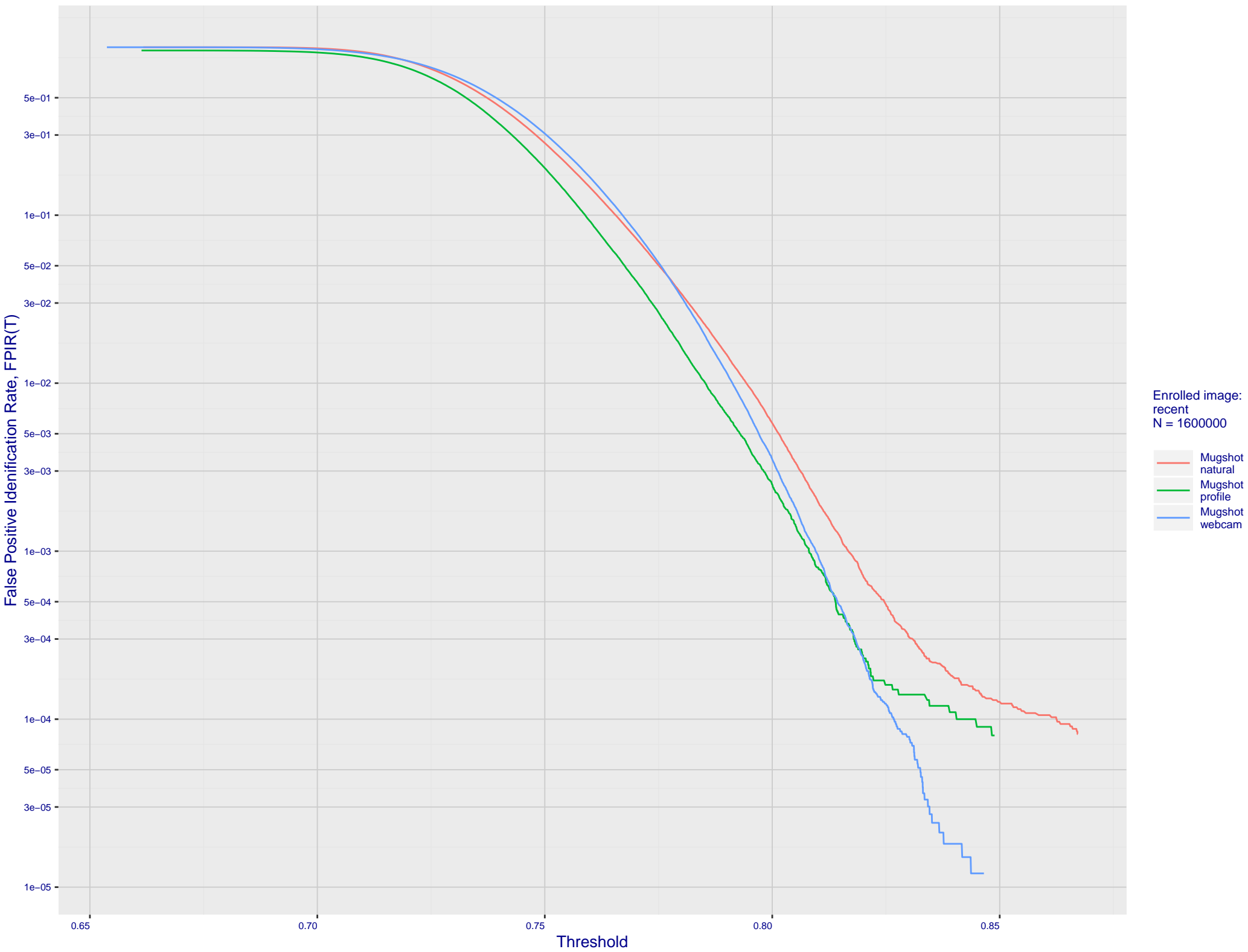
B: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images
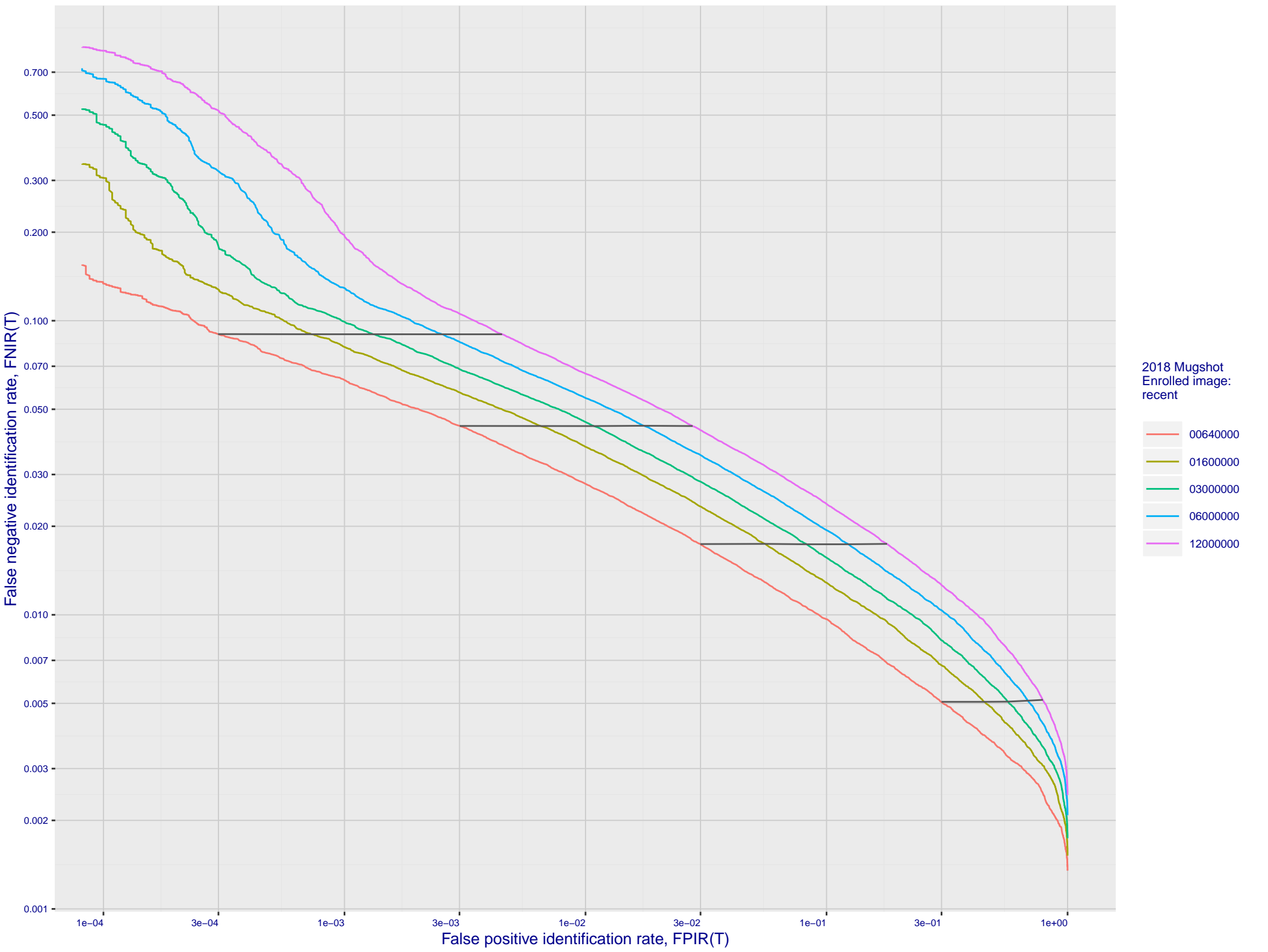
C: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate
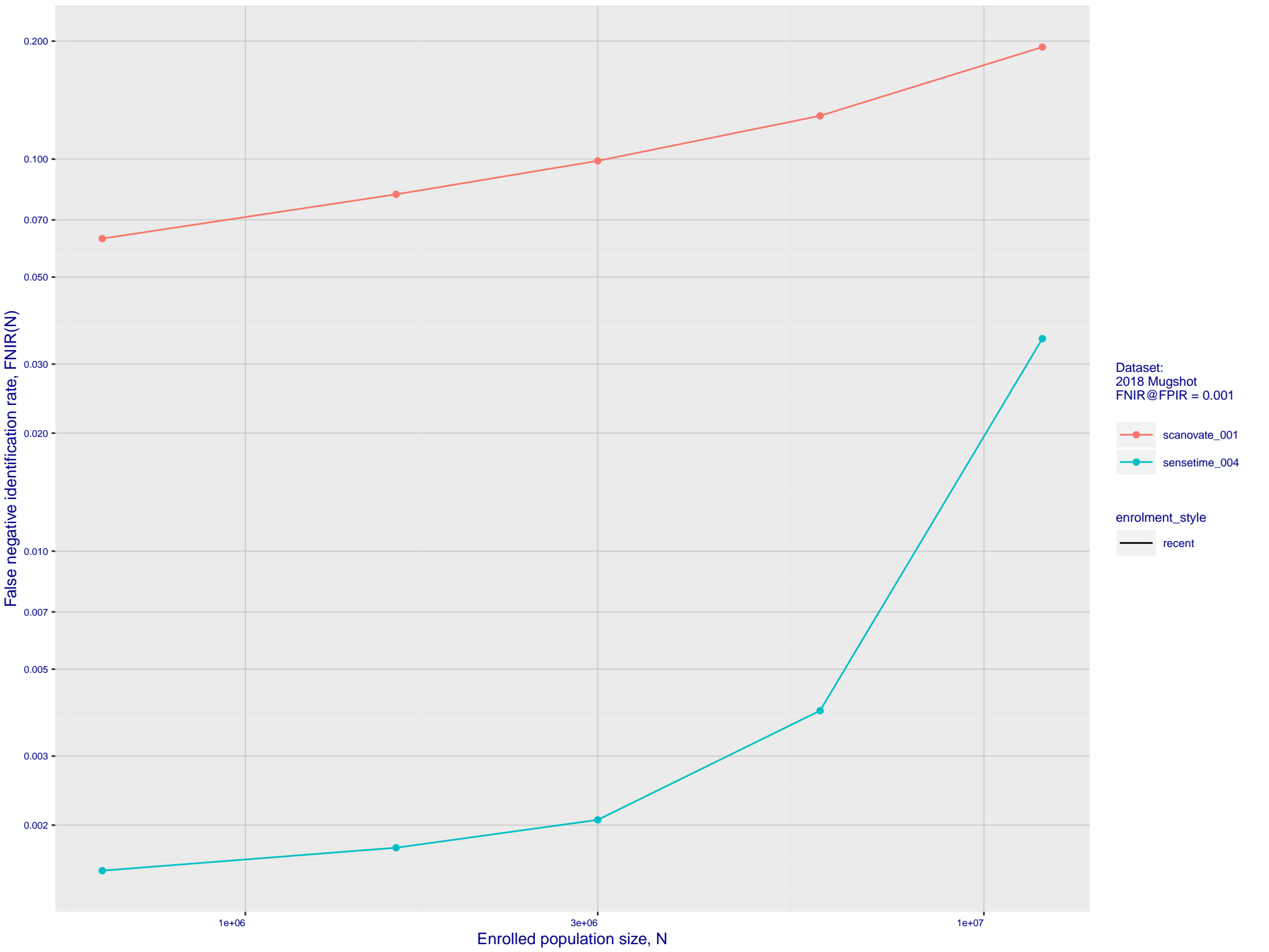
D: FPIR dependence on T by probe type for N = 1600000 subjects

Threshold

False Positive Idenification Rate, FPIR(T)

Enrolled image:
recent
N = 1600000

Mugshot
natural

Mugshot
profile

Mugshot
webcam

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

Plot axes: False positive identification rate, FPIR(T) (x-axis); False negative identification rate, FNIR(T) (y-axis).

Legend — 2018 Mugshot Enrolled image: recent
- 00640000
- 01600000
- 03000000
- 06000000
- 12000000

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

G: Datasheet

Algorithm: scanovate_001

Developer: Scanovate Ltd

Submission Date: 2020_09_10

Template size: 2048 bytes

Template time (2.5 percentile): 646 msec

Template time (median): 675 msec

Template time (97.5 percentile): 703 msec

Frontal mugshot investigation rank 74 –– FNIR(1600000, 0, 1) = 0.0053 vs. lowest 0.0010 from sensetime_004

natural investigation rank 120 –– FNIR(1600000, 0, 1) = 0.0401 vs. lowest 0.0067 from sensetime_003

natural investigation rank 82 –– FNIR(1600000, 0, 1) = 0.4112 vs. lowest 0.0492 from paravision_005

natural investigation rank 82 –– FNIR(1600000, 0, 1) = 0.4112 vs. lowest 0.0492 from paravision_005

natural investigation rank 65 –– FNIR(1600000, 0, 1) = 0.0310 vs. lowest 0.0014 from visionlabs_009

natural investigation rank 55 –– FNIR(1600000, 0, 1) = 0.1782 vs. lowest 0.0694 from cib_000

Frontal mugshot identification rank 105 –– FNIR(1600000, T, L+1) = 0.0813 vs. lowest 0.0018 from sensetime_004

natural identification rank 122 –– FNIR(1600000, T, L+1) = 0.2268 vs. lowest 0.0122 from sensetime_003

natural identification rank 27 –– FNIR(1600000, T, L+1) = 0.8042 vs. lowest 0.1020 from sensetime_004

natural identification rank 65 –– FNIR(1600000, T, L+1) = 0.1924 vs. lowest 0.0059 from sensetime_004

natural identification rank 42 –– FNIR(1600000, T, L+1) = 0.4055 vs. lowest 0.1129 from visionlabs_009
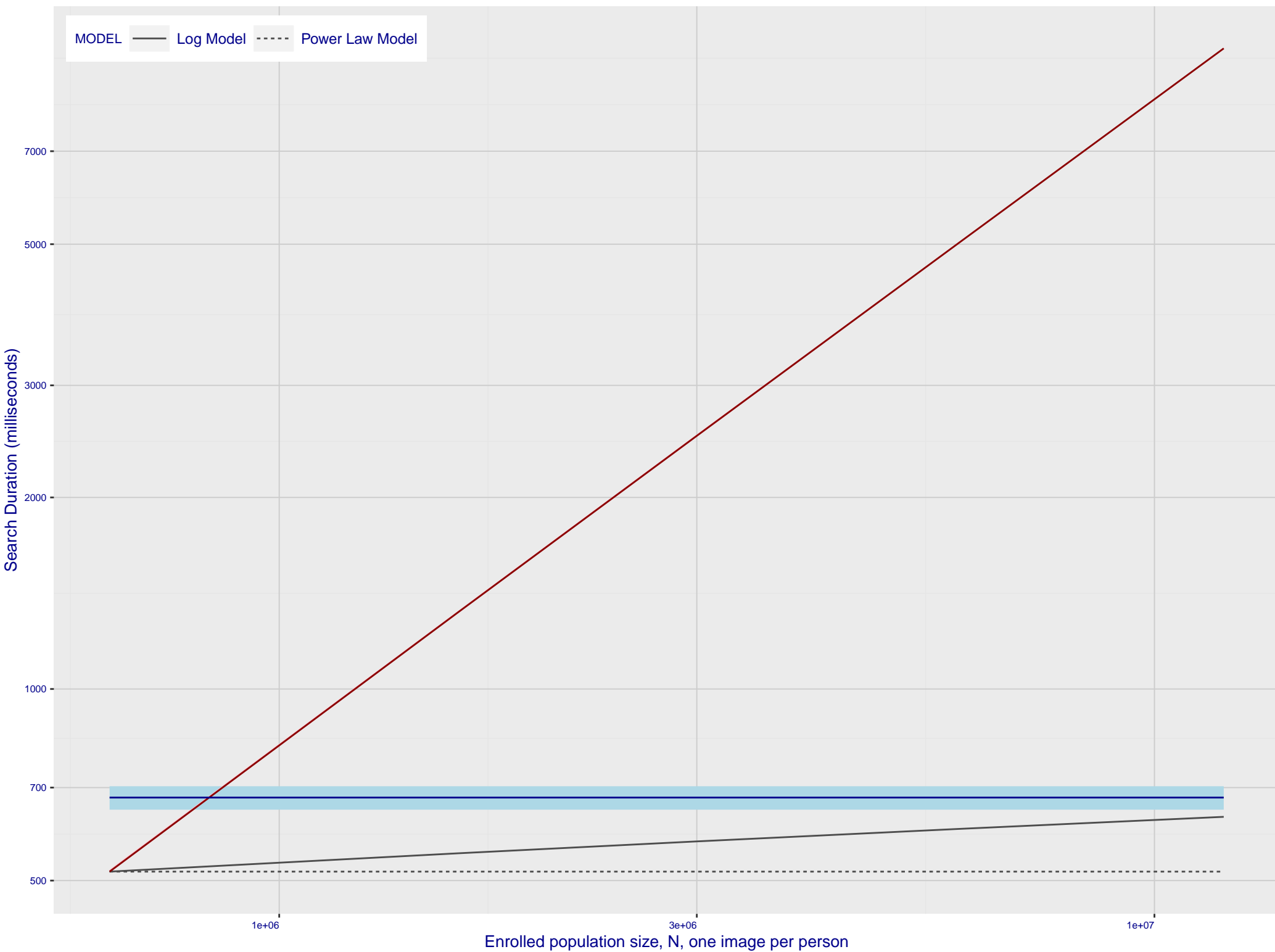
H: Investigational mode: FNIR(N, 1, 0) vs. most accurate (yitu_4)
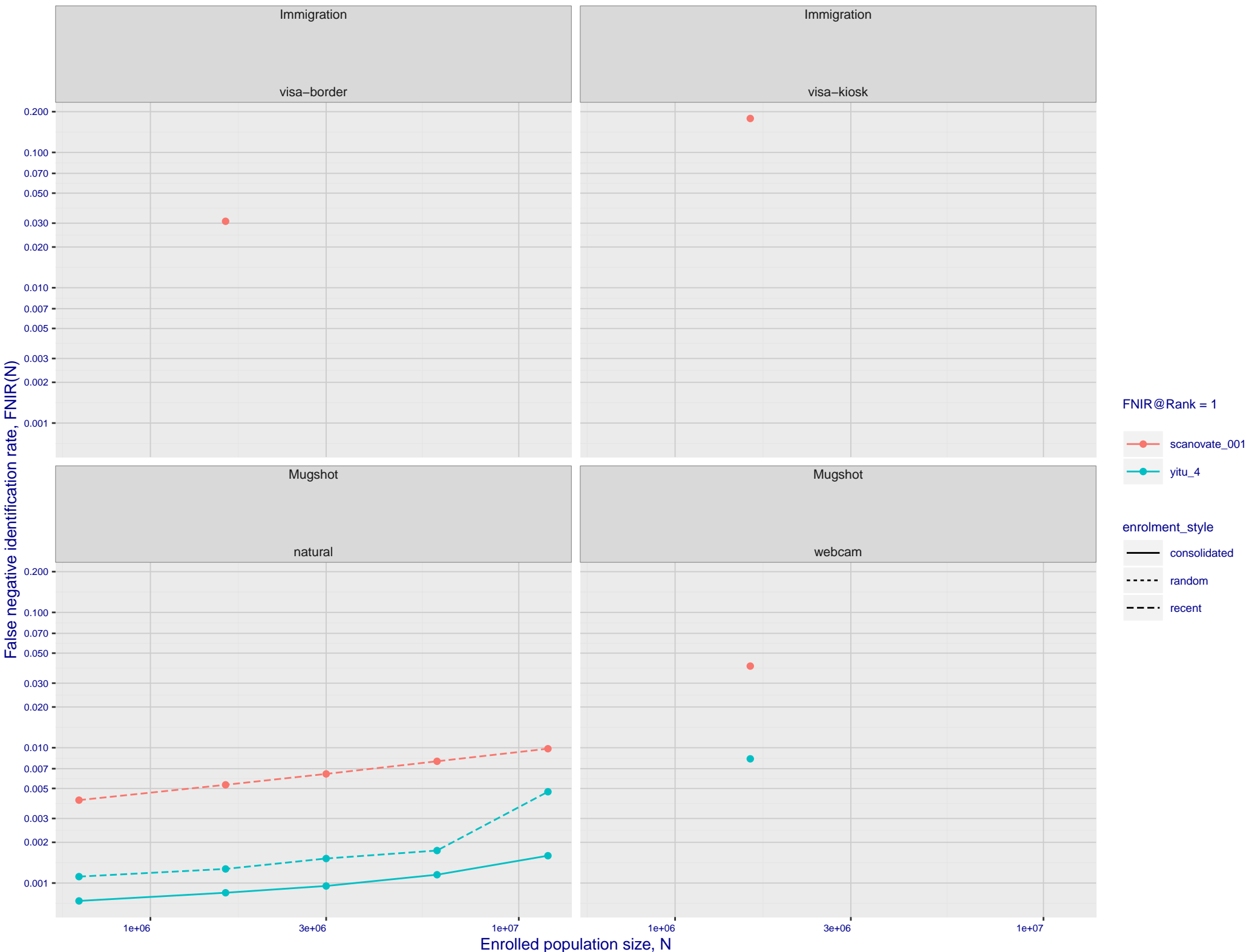
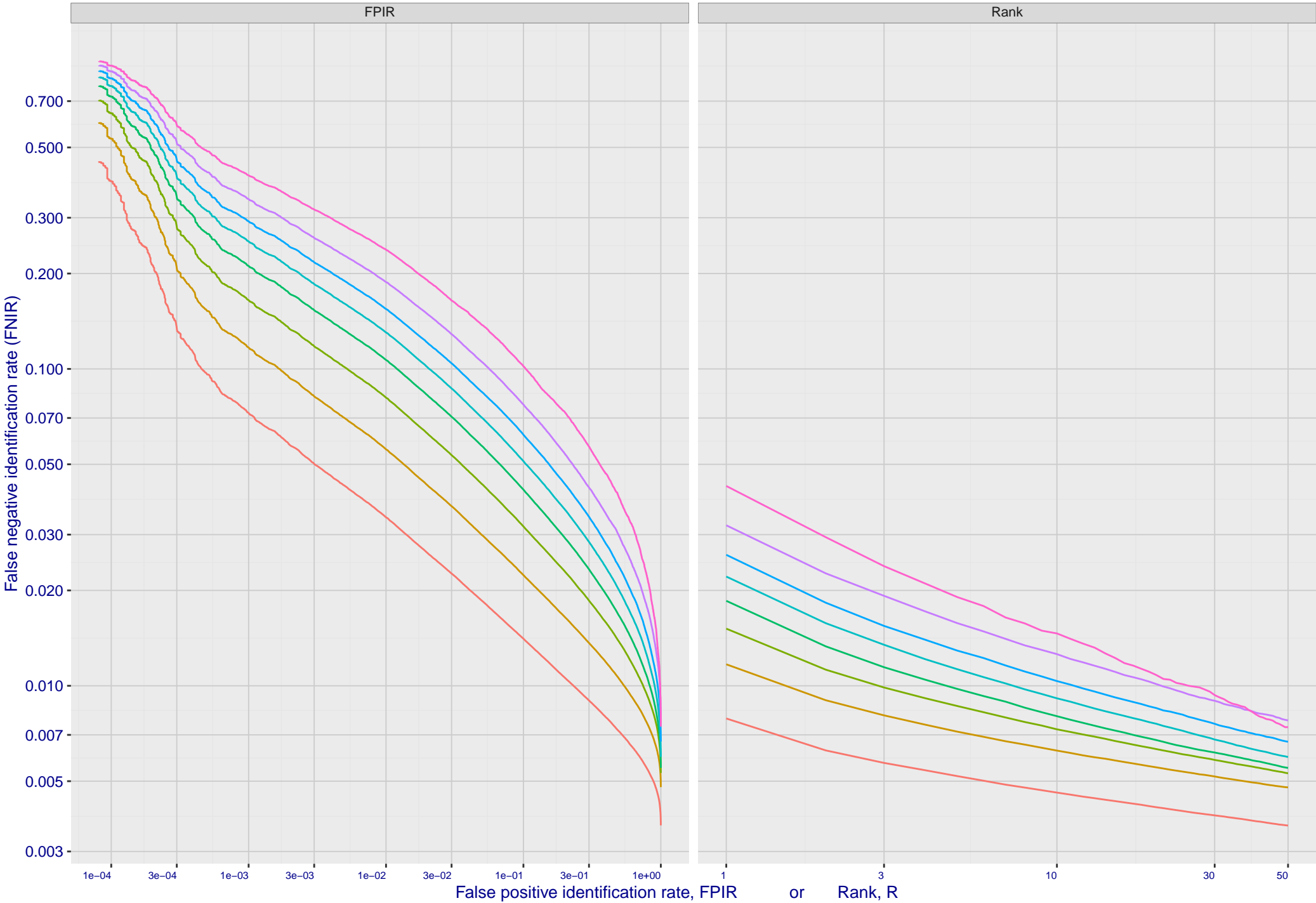I: Investigational mode: FNIR(1600000, R, 0) by probe type
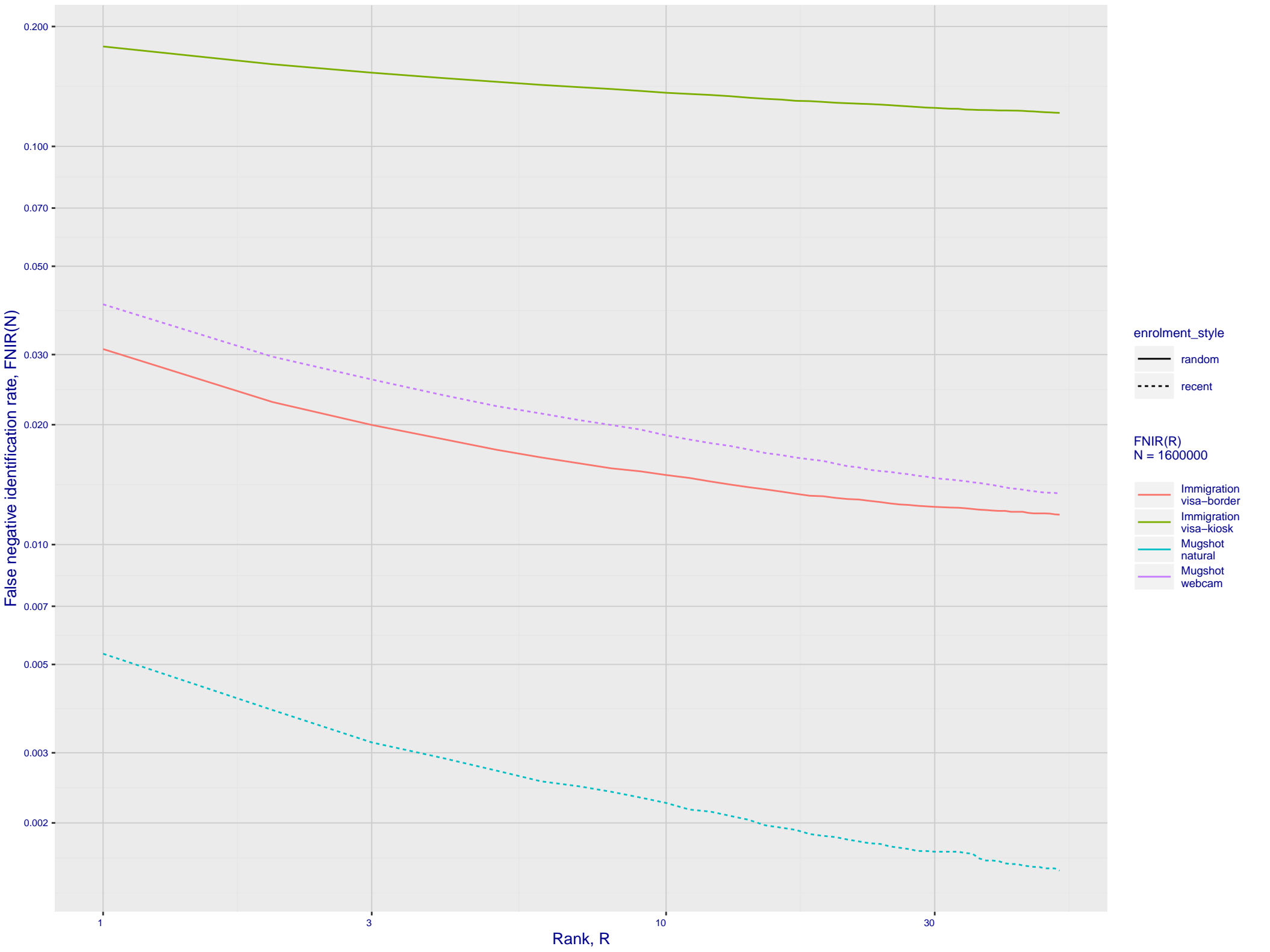
Template duration; search duration vs. N. The blue and pink ribbon covers 95 percent of observed measurements. The template generation time is independent of N. The log and power−law models are fit to the first two (N,T) observations

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

N: Decline of genuine scores with ageing