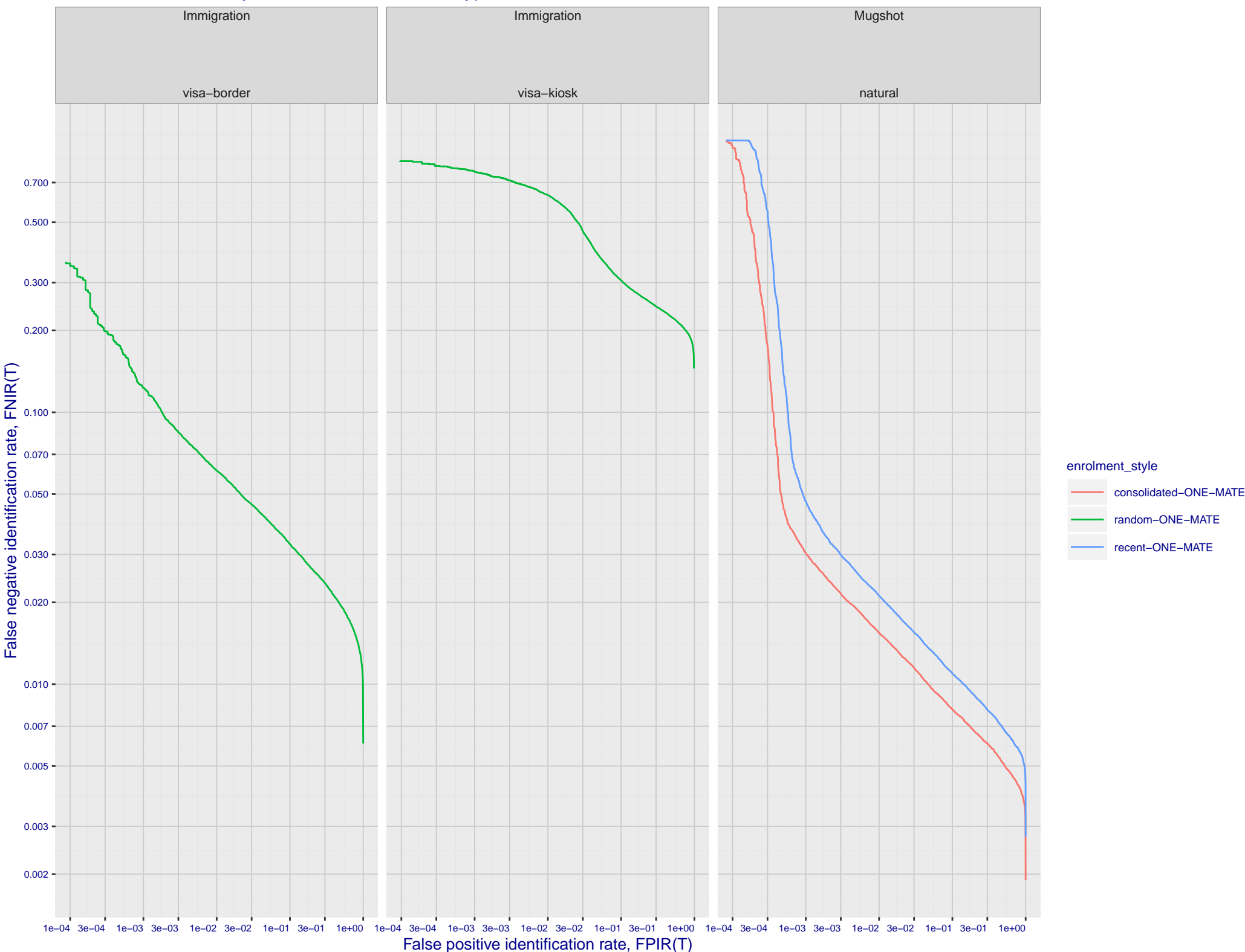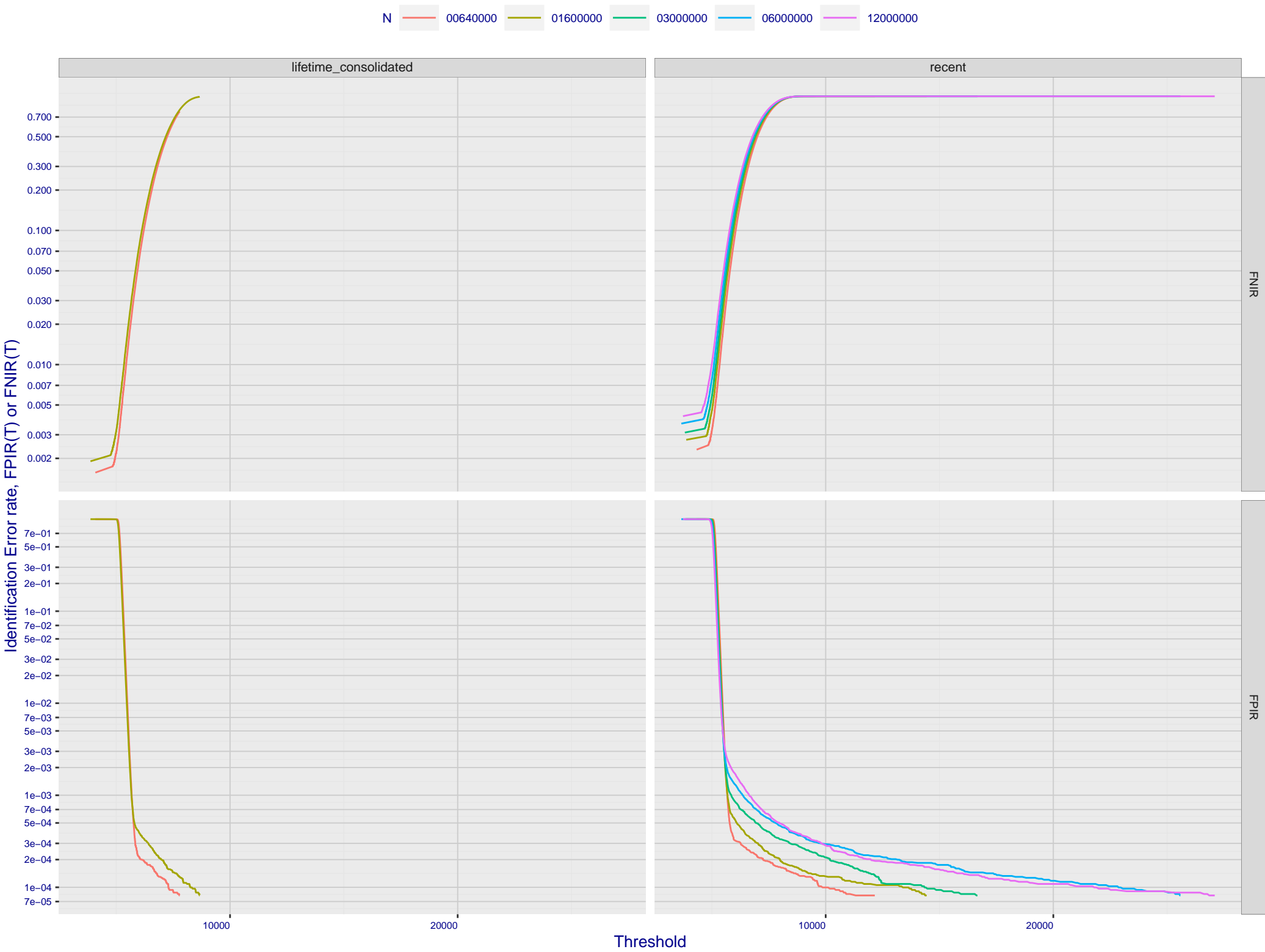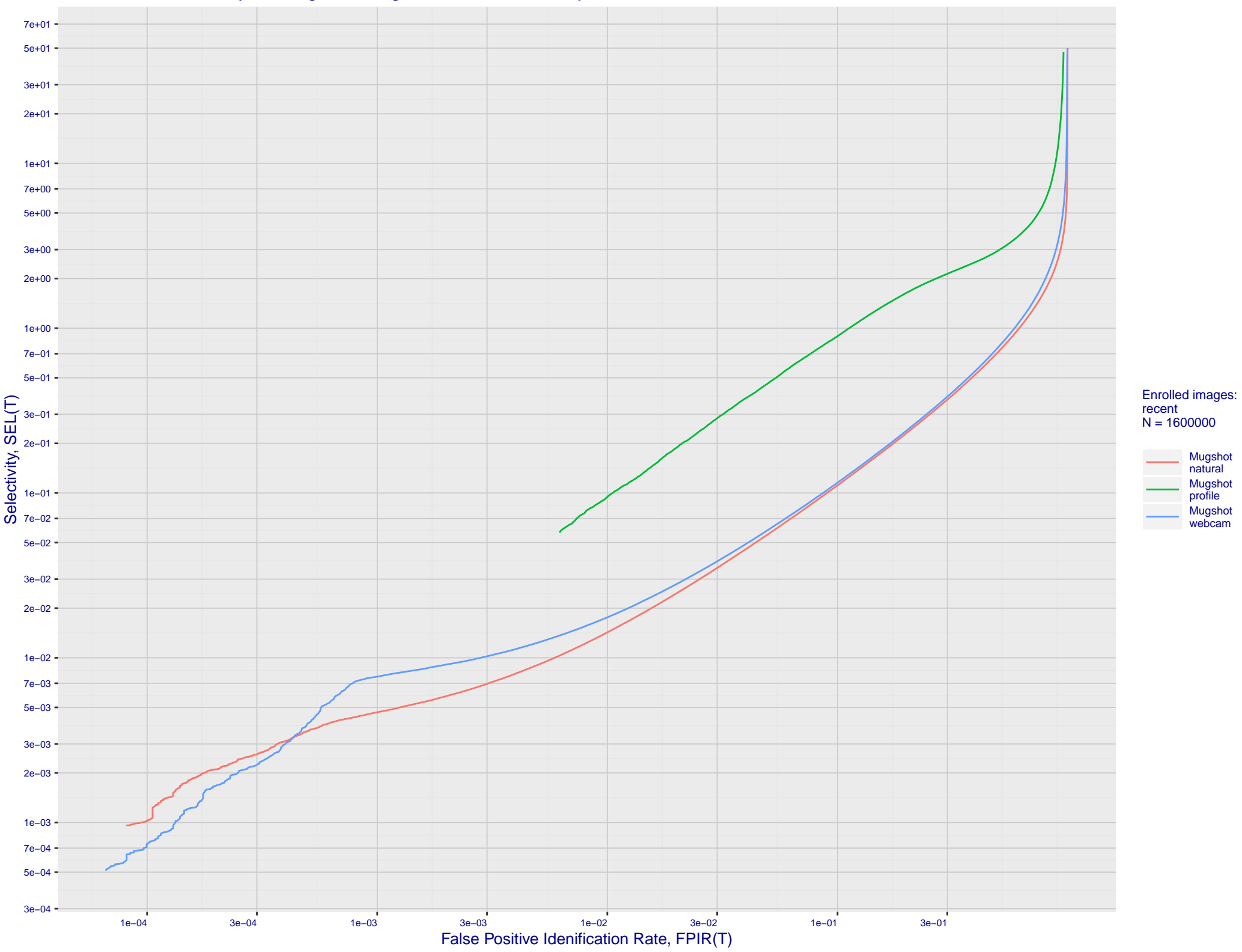A: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals

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

False Positive Idenification Rate, FPIR(T)

Threshold

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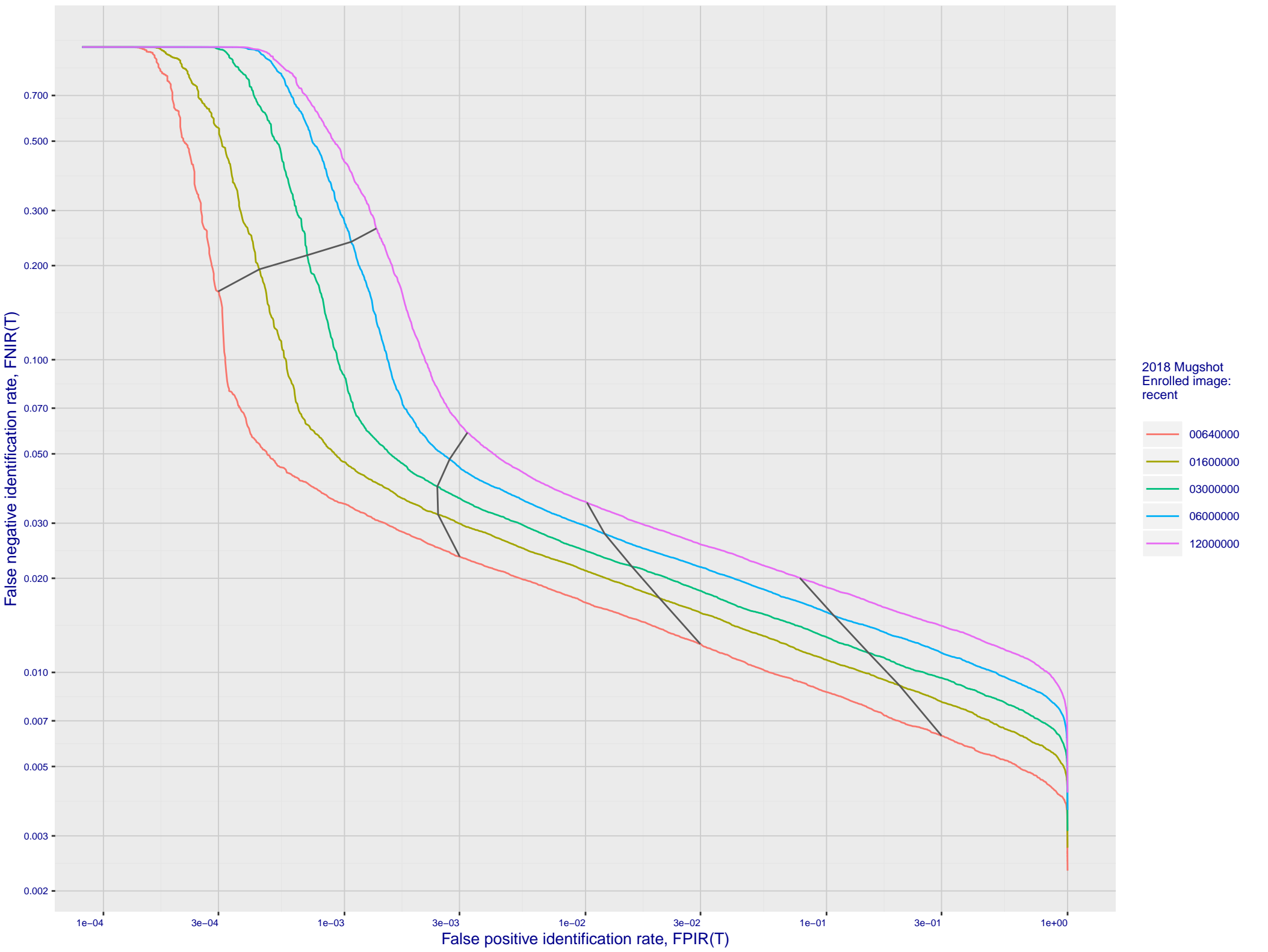
F: Mugshot natural images, identification mode: FNIR(N, L+1, T) vs. most accurate (sensetime_004)
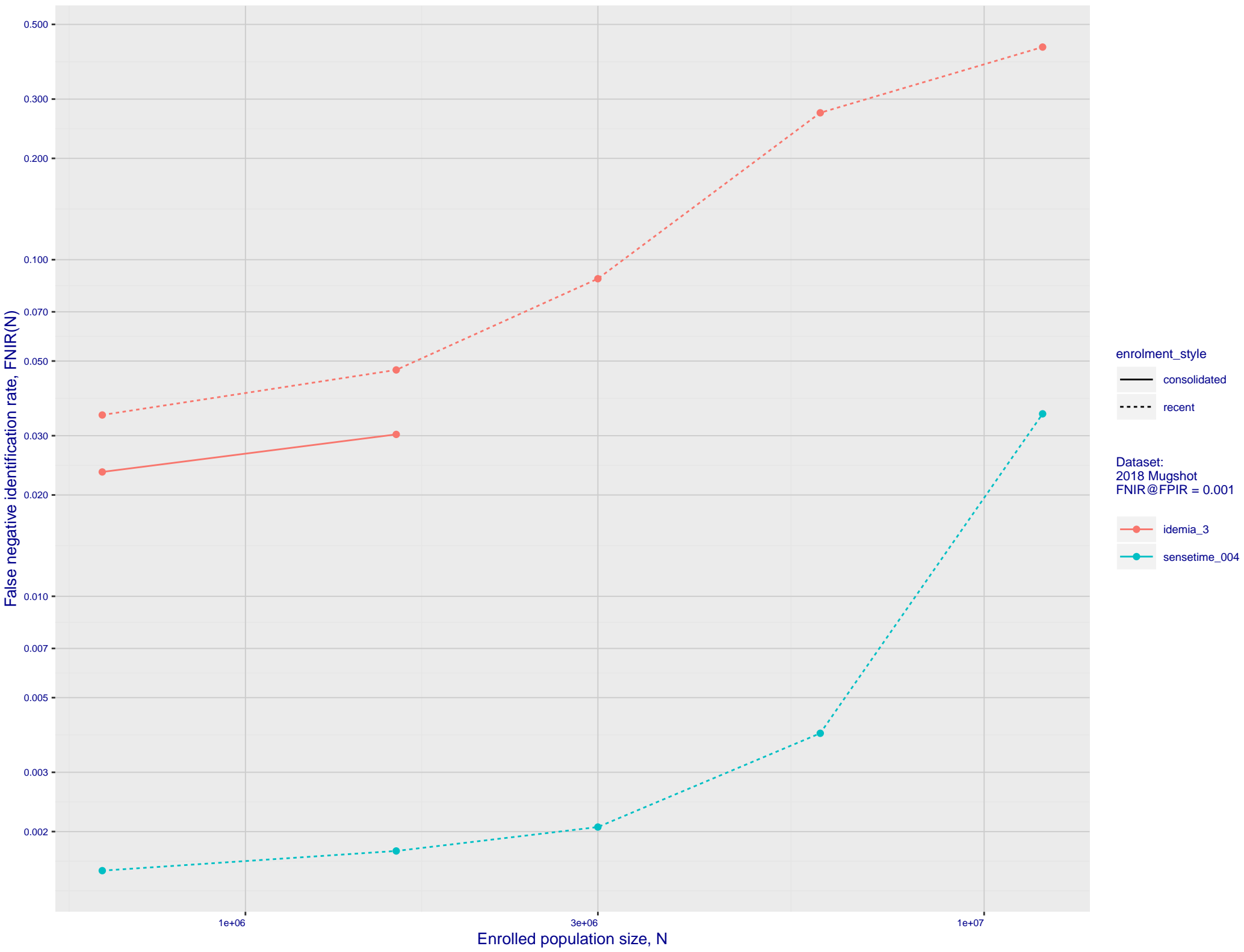
## G: Datasheet

Algorithm: idemia_3

Developer: Idemia

Submission Date: 2018_06_21

Template size: 528 bytes

Template time (2.5 percentile): 644 msec

Template time (median): 663 msec

Template time (97.5 percentile): 941 msec

Frontal mugshot investigation rank 90 –– FNIR(1600000, 0, 1) = 0.0069  vs. lowest 0.0010 from sensetime_004

natural investigation rank 102 –– FNIR(1600000, 0, 1) = 0.0341  vs. lowest 0.0067 from sensetime_003

natural investigation rank 278 –– FNIR(1600000, 0, 1) = 0.9522  vs. lowest 0.0492 from paravision_005

natural investigation rank 278 –– FNIR(1600000, 0, 1) = 0.9522  vs. lowest 0.0492 from paravision_005

natural investigation rank 56 –– FNIR(1600000, 0, 1) = 0.0175  vs. lowest 0.0014 from visionlabs_009

natural investigation rank 64 –– FNIR(1600000, 0, 1) = 0.2101  vs. lowest 0.0694 from cib_000

Frontal mugshot identification rank 65 –– FNIR(1600000, T, L+1) = 0.0470  vs. lowest 0.0018 from sensetime_004

natural identification rank 103 –– FNIR(1600000, T, L+1) = 0.1643  vs. lowest 0.0122 from sensetime_003

natural identification rank 178 –– FNIR(1600000, T, L+1) = 1.0000  vs. lowest 0.1020 from sensetime_004

natural identification rank 54 –– FNIR(1600000, T, L+1) = 0.1230  vs. lowest 0.0059 from sensetime_004

natural identification rank 66 –– FNIR(1600000, T, L+1) = 0.7692  vs. lowest 0.1129 from visionlabs_009
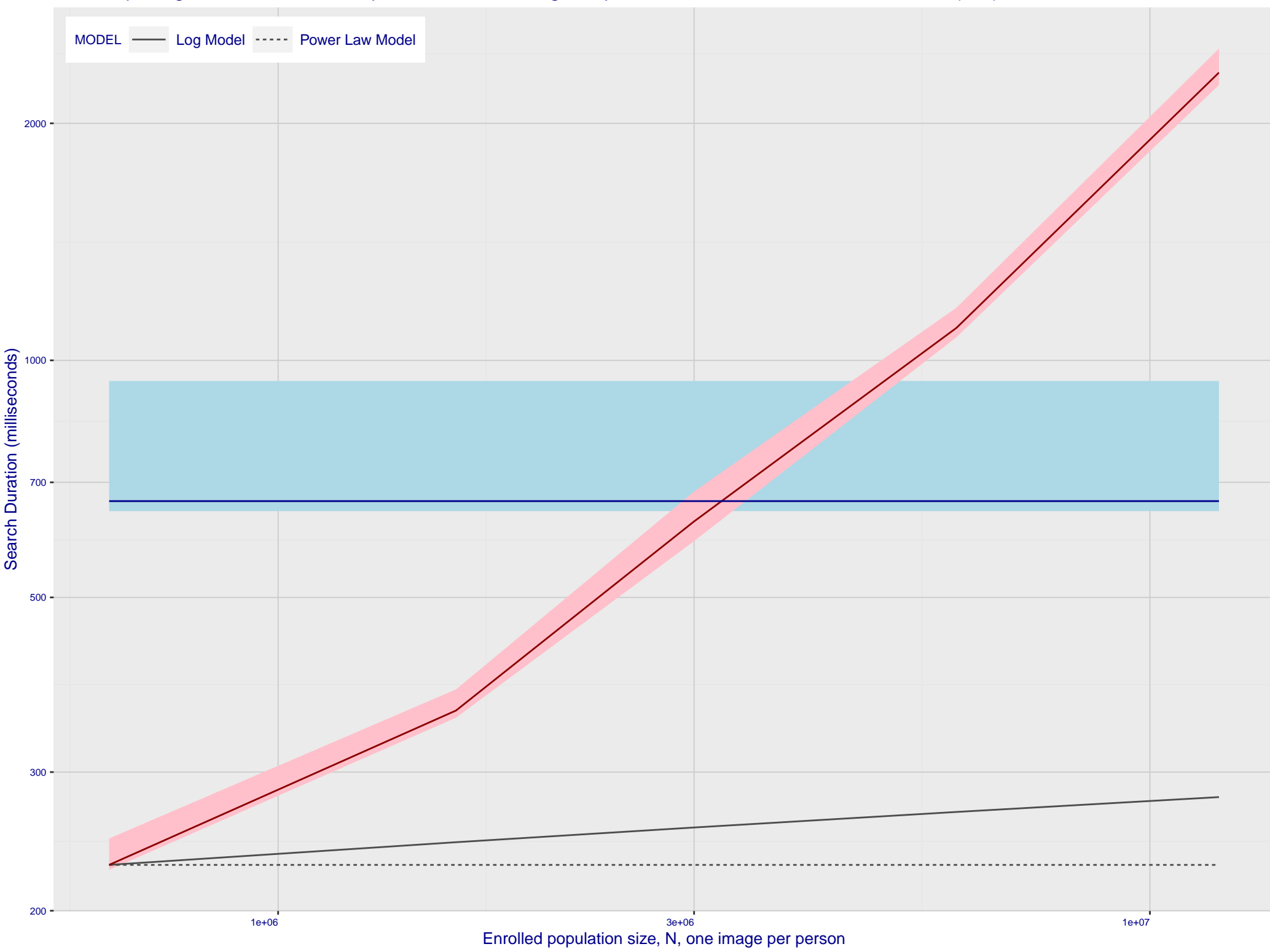
H: Investigational mode: FNIR(N, 1, 0) vs. most accurate (yitu_4)
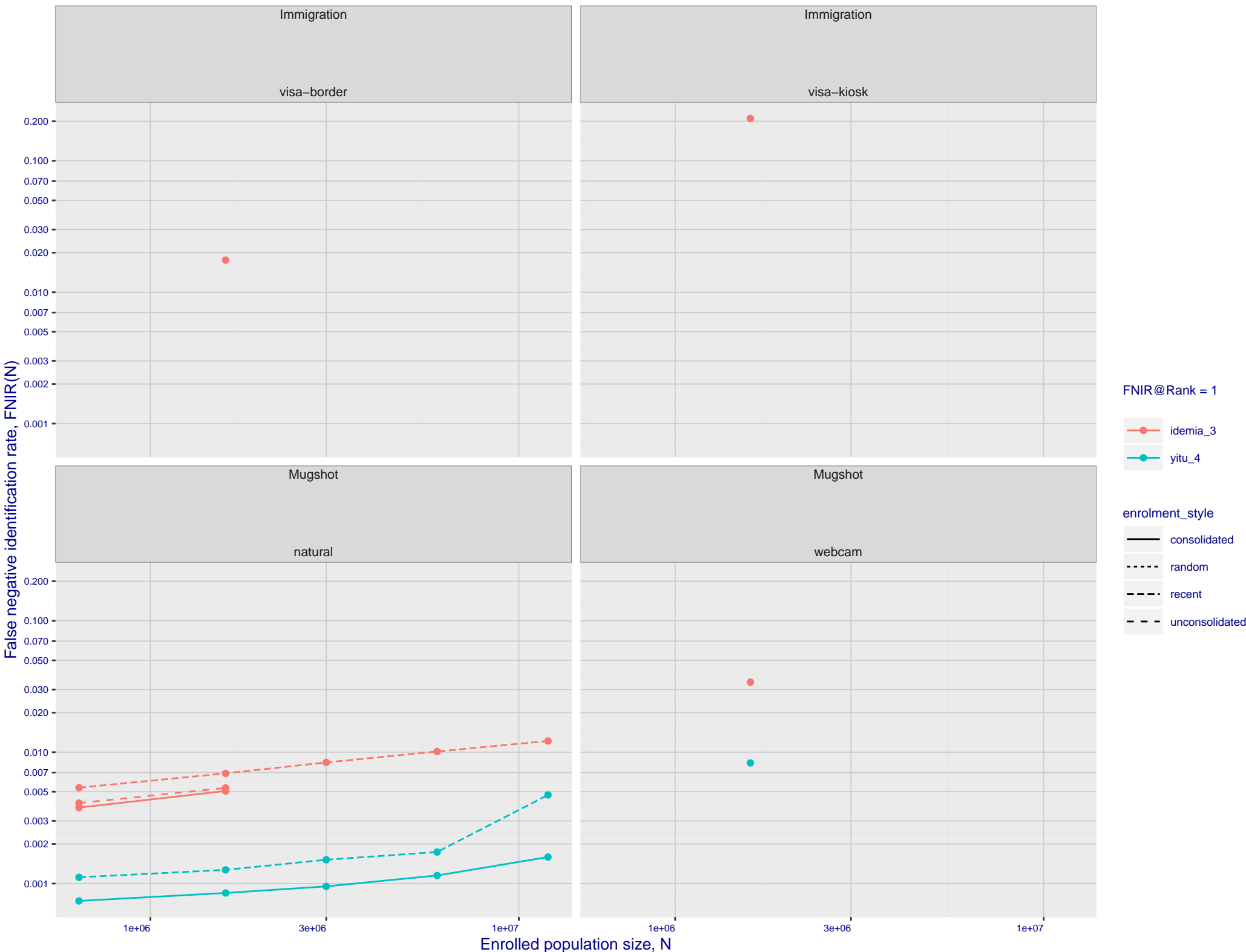
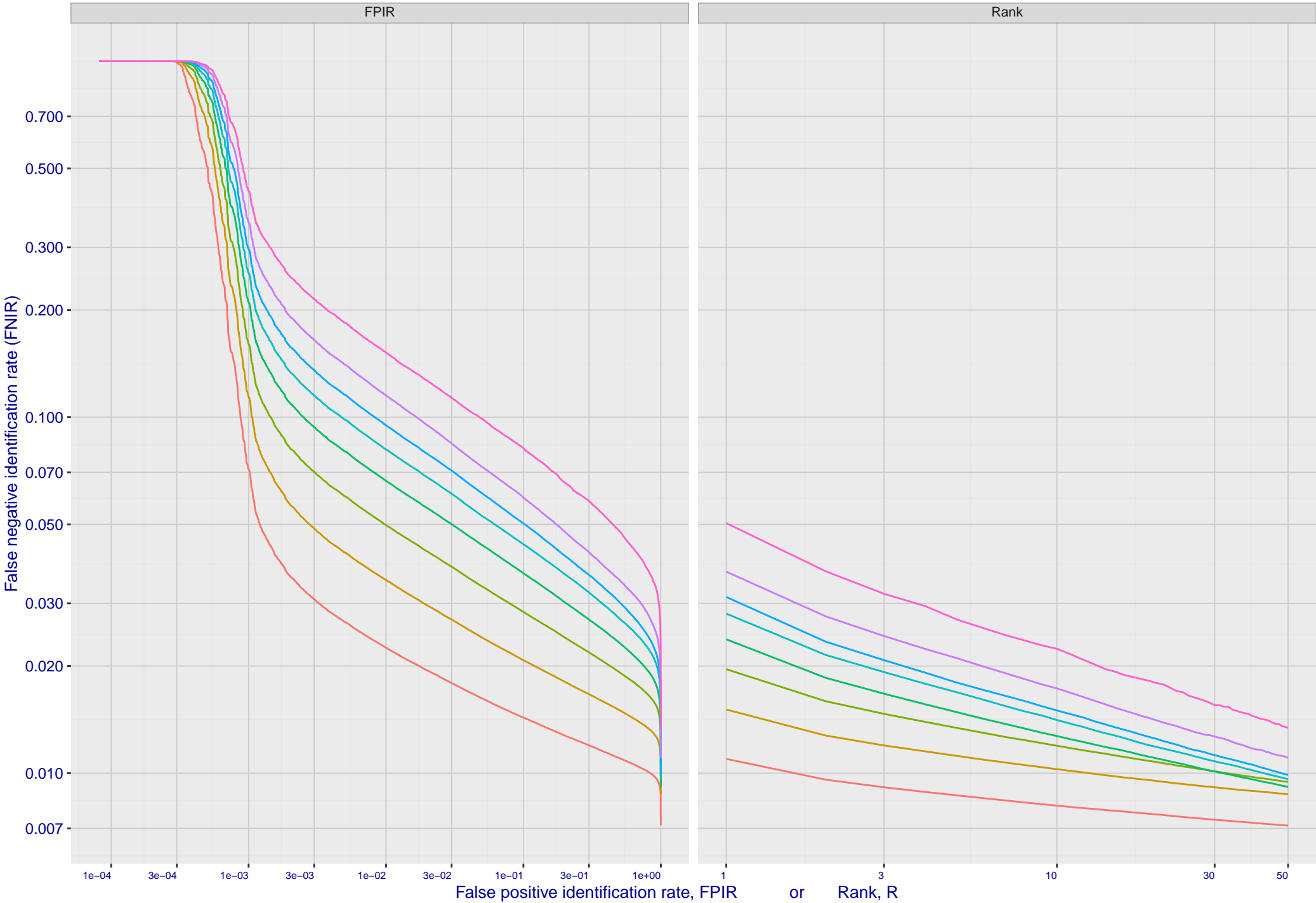I: Investigational mode: FNIR(1600000, R, 0) by probe type
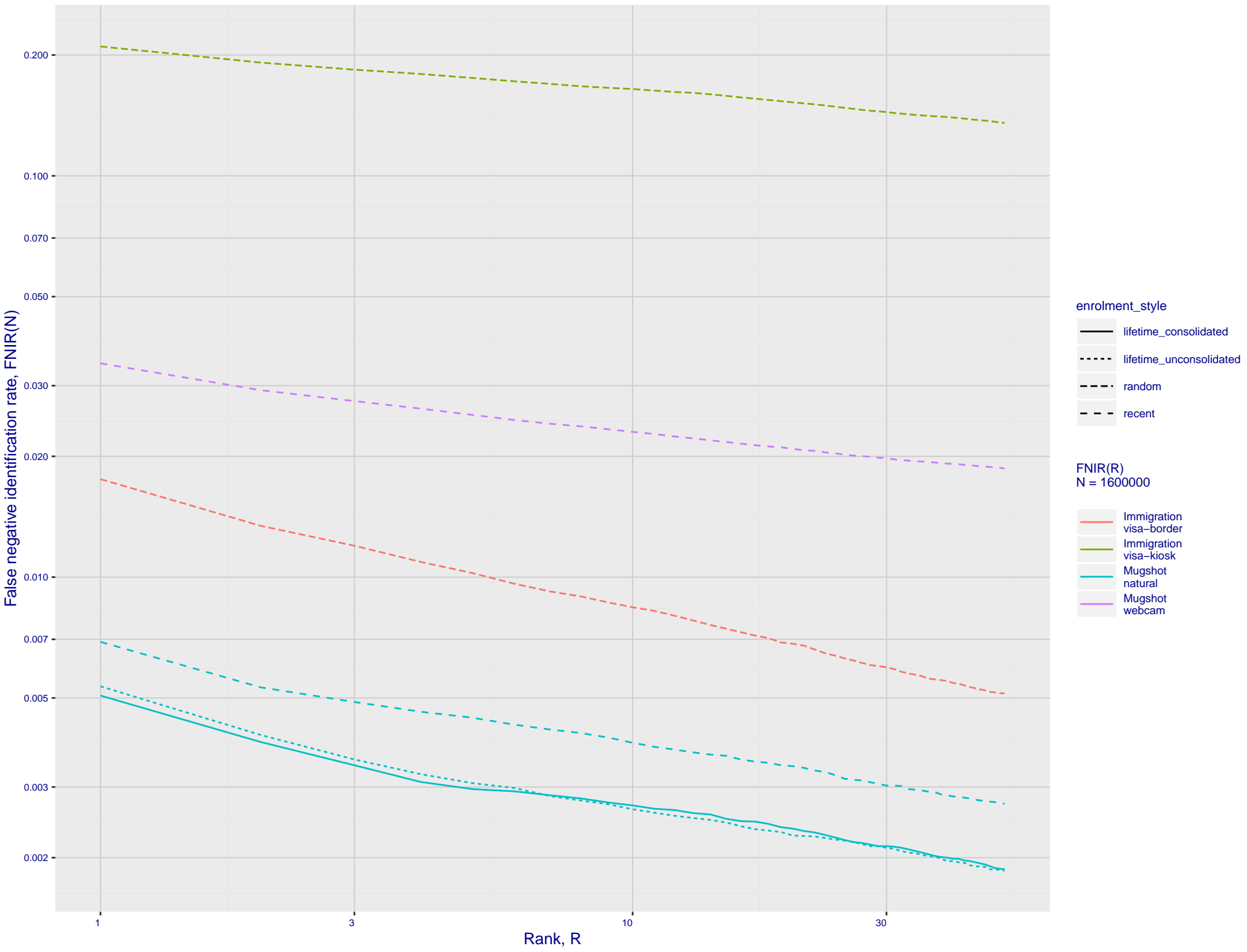
Template duration; search duration vs. N. The blue and pink ribbon covers 95 percent of observed measurements. The template generation time is independent of N. The log and power−law models are fit to the first two (N,T) observations

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

N: Decline of genuine scores with ageing