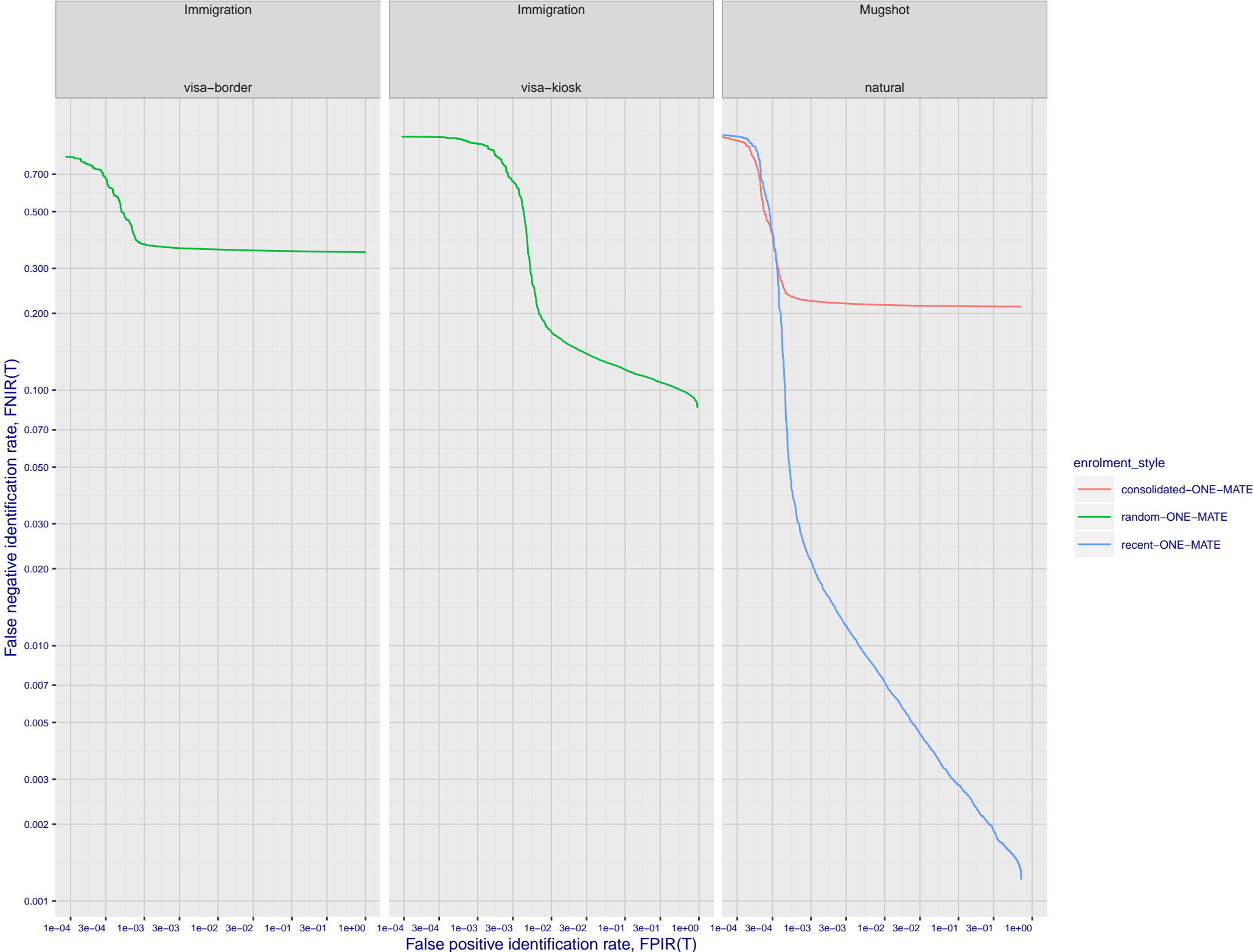
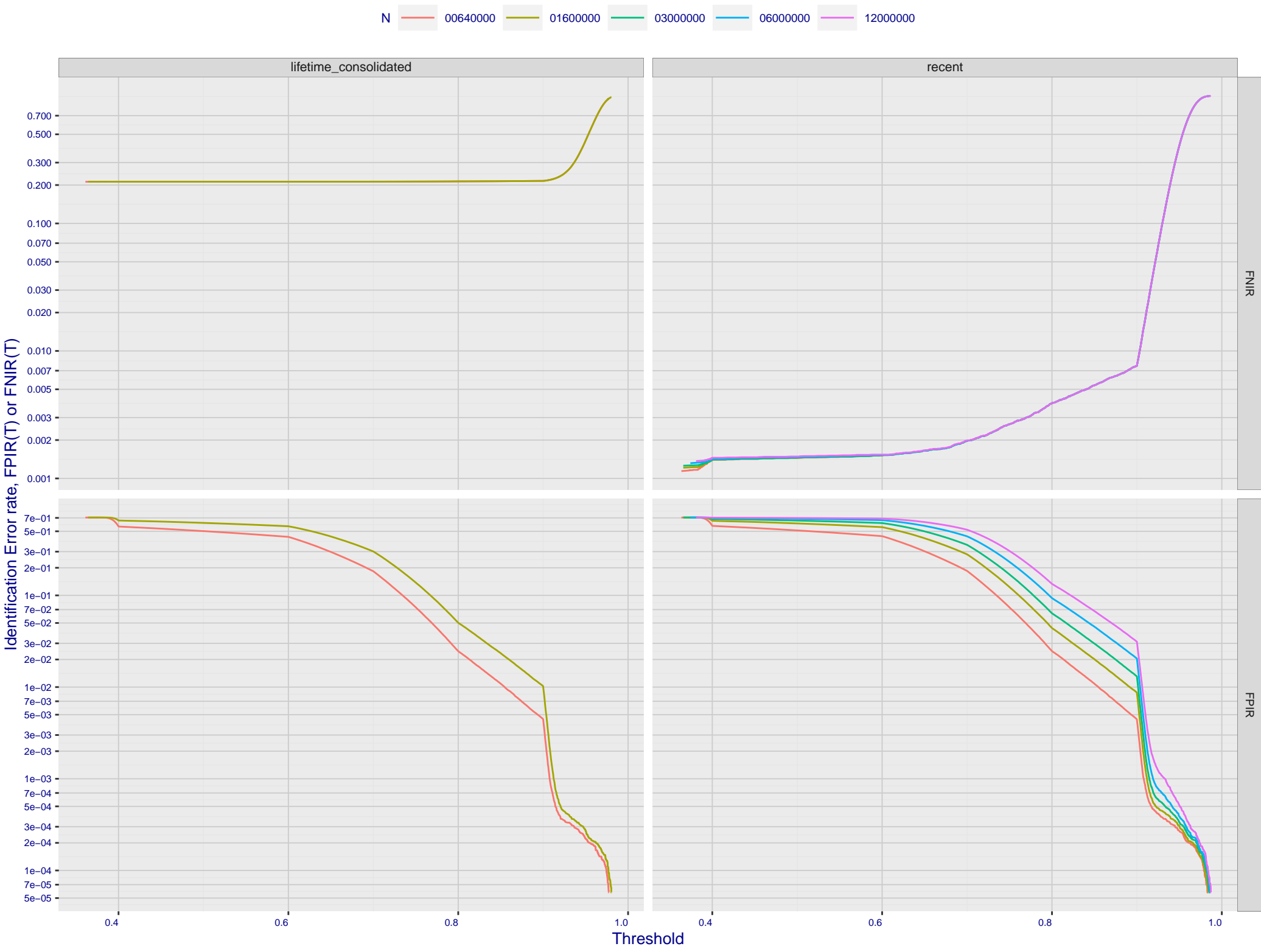


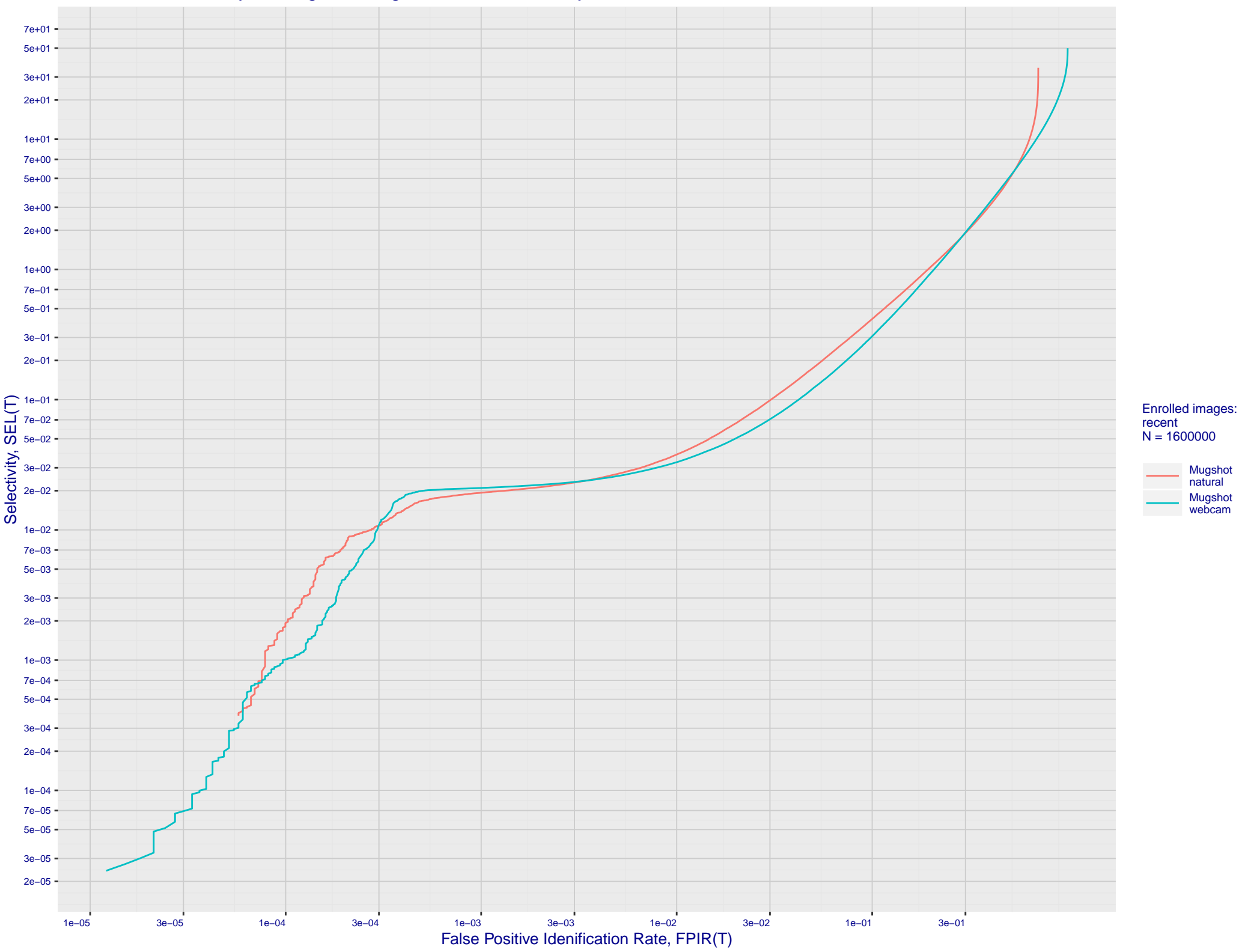
A: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals



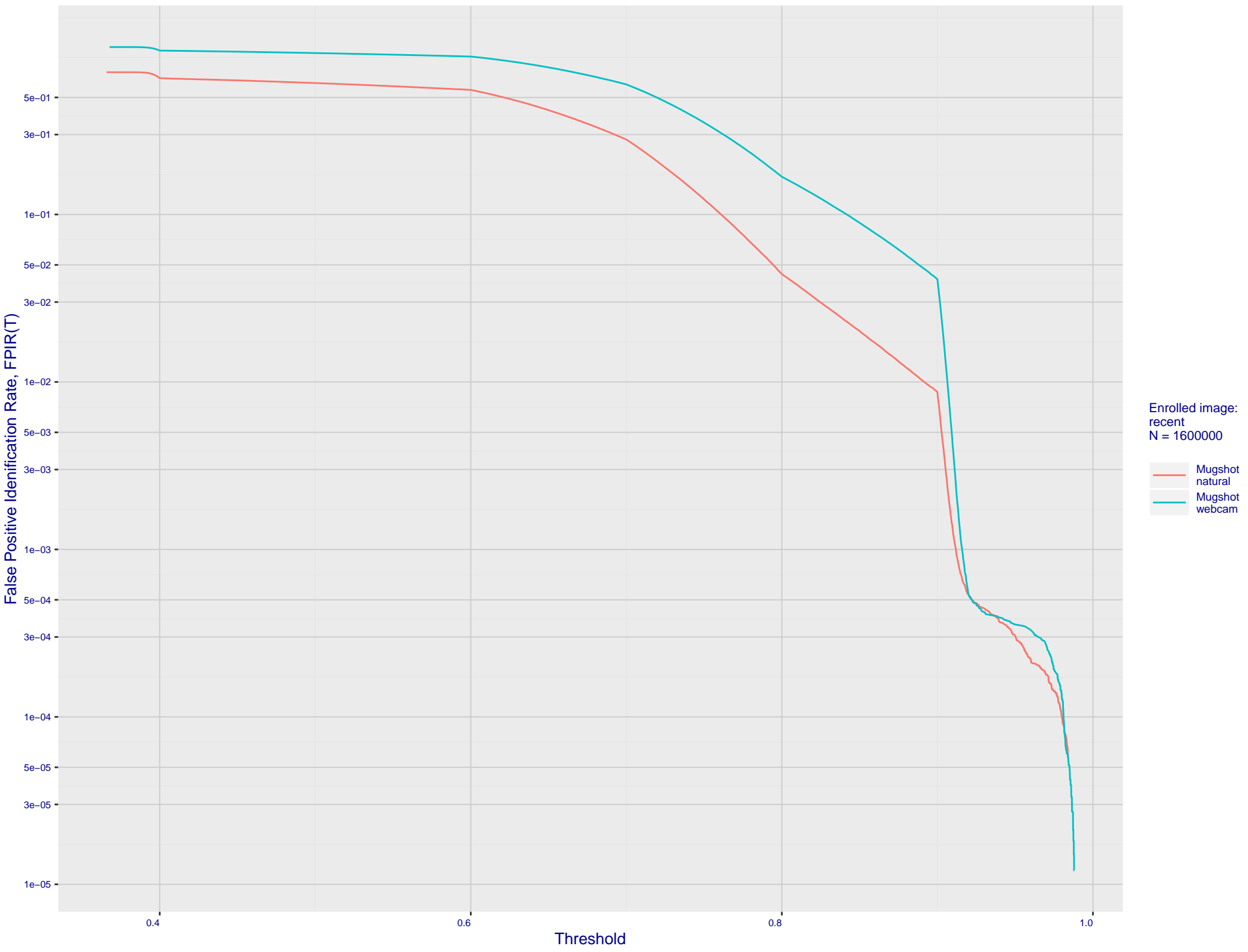
B: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images



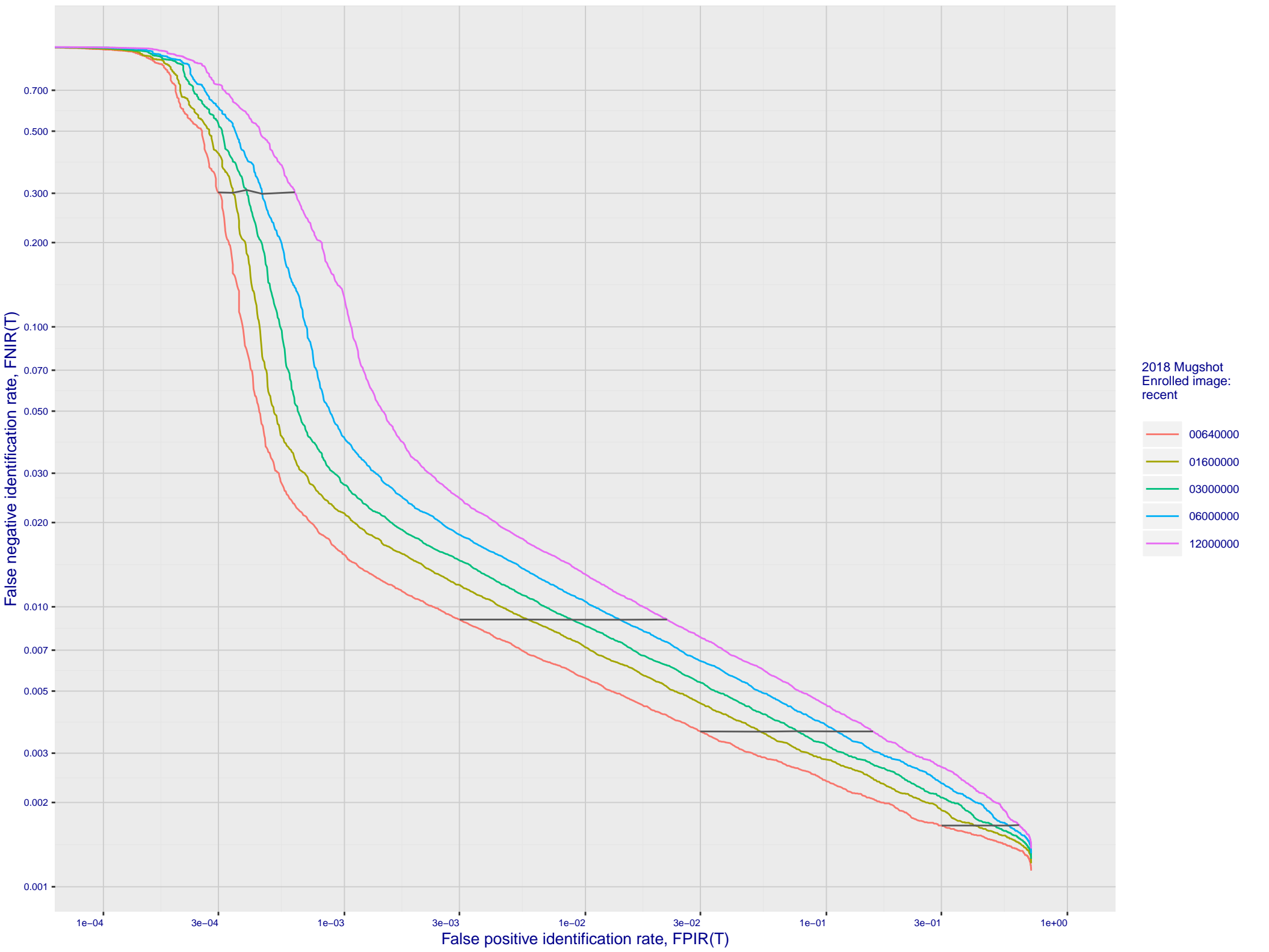
C: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate



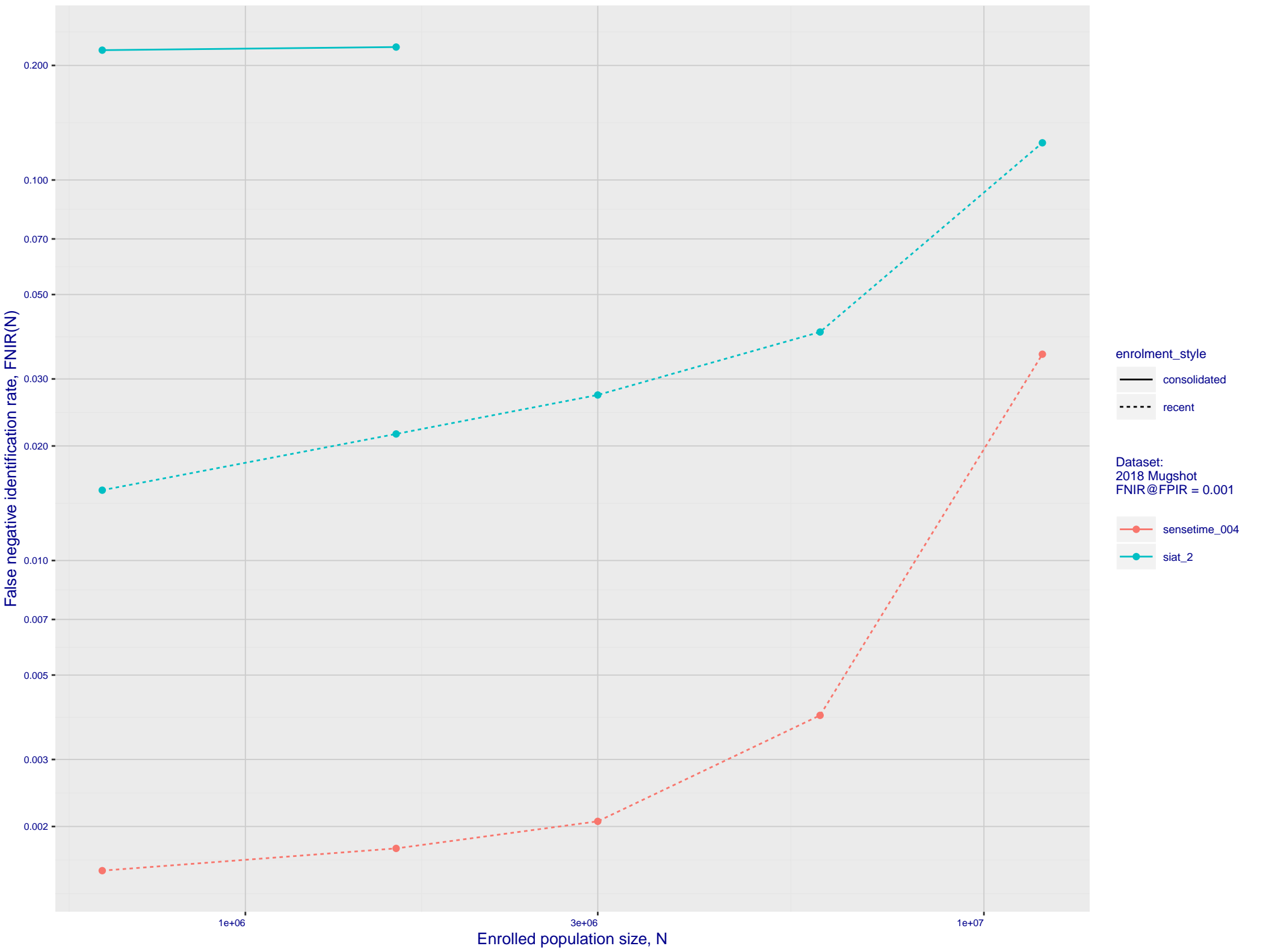
D: FPIR dependence on T by probe type for N = 1600000 subjects



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: siat\_2

Developer: Shenzhen Inst Adv Integrated Tech CAS

Submission Date: 2018\_02\_30

Template size: 2052 bytes

Template time (2.5 percentile): 842 msec

Template time (median): 900 msec

Template time (97.5 percentile): 981 msec

Frontal mugshot investigation rank 17 --- FNIR(1600000, 0, 1) = 0.0018 vs. lowest 0.0010 from sensetime\_004

natural investigation rank 198 --- FNIR(1600000, 0, 1) = 0.4457 vs. lowest 0.0067 from sensetime\_003

natural investigation rank 89 --- FNIR(1600000, 0, 1) = 0.3481 vs. lowest 0.0014 from visionlabs\_009

natural investigation rank 19 --- FNIR(1600000, 0, 1) = 0.1019 vs. lowest 0.0694 from cib\_000

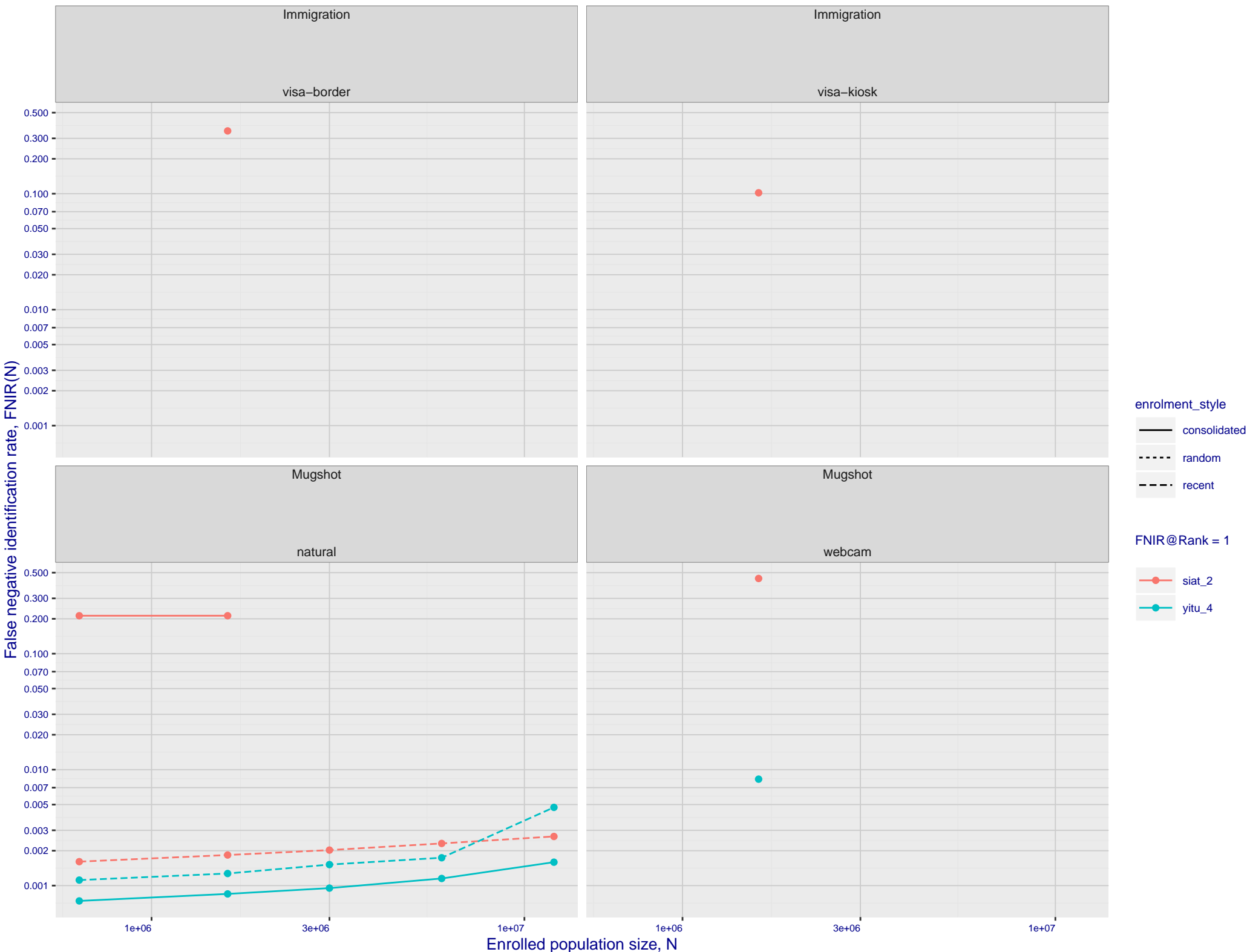
Frontal mugshot identification rank 28 --- FNIR(1600000, T, L+1) = 0.0215 vs. lowest 0.0018 from sensetime\_004

natural identification rank 168 --- FNIR(1600000, T, L+1) = 0.4777 vs. lowest 0.0122 from sensetime\_003

natural identification rank 73 --- FNIR(1600000, T, L+1) = 0.3725 vs. lowest 0.0059 from sensetime\_004

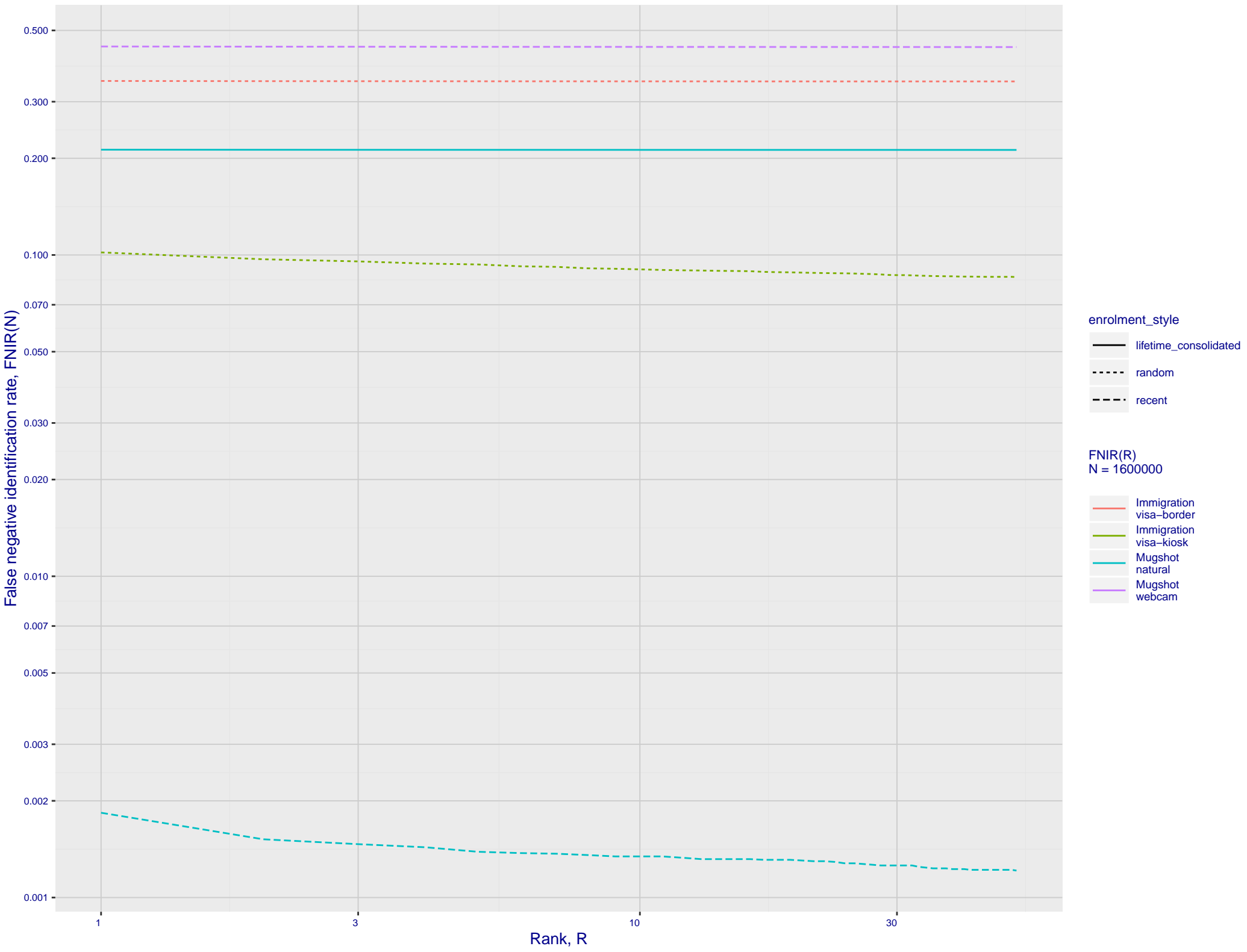
natural identification rank 77 --- FNIR(1600000, T, L+1) = 0.9237 vs. lowest 0.1129 from visionlabs\_009

H: Investigational mode: FNIR(N, 1, 0) vs. most accurate (yitu\_4)

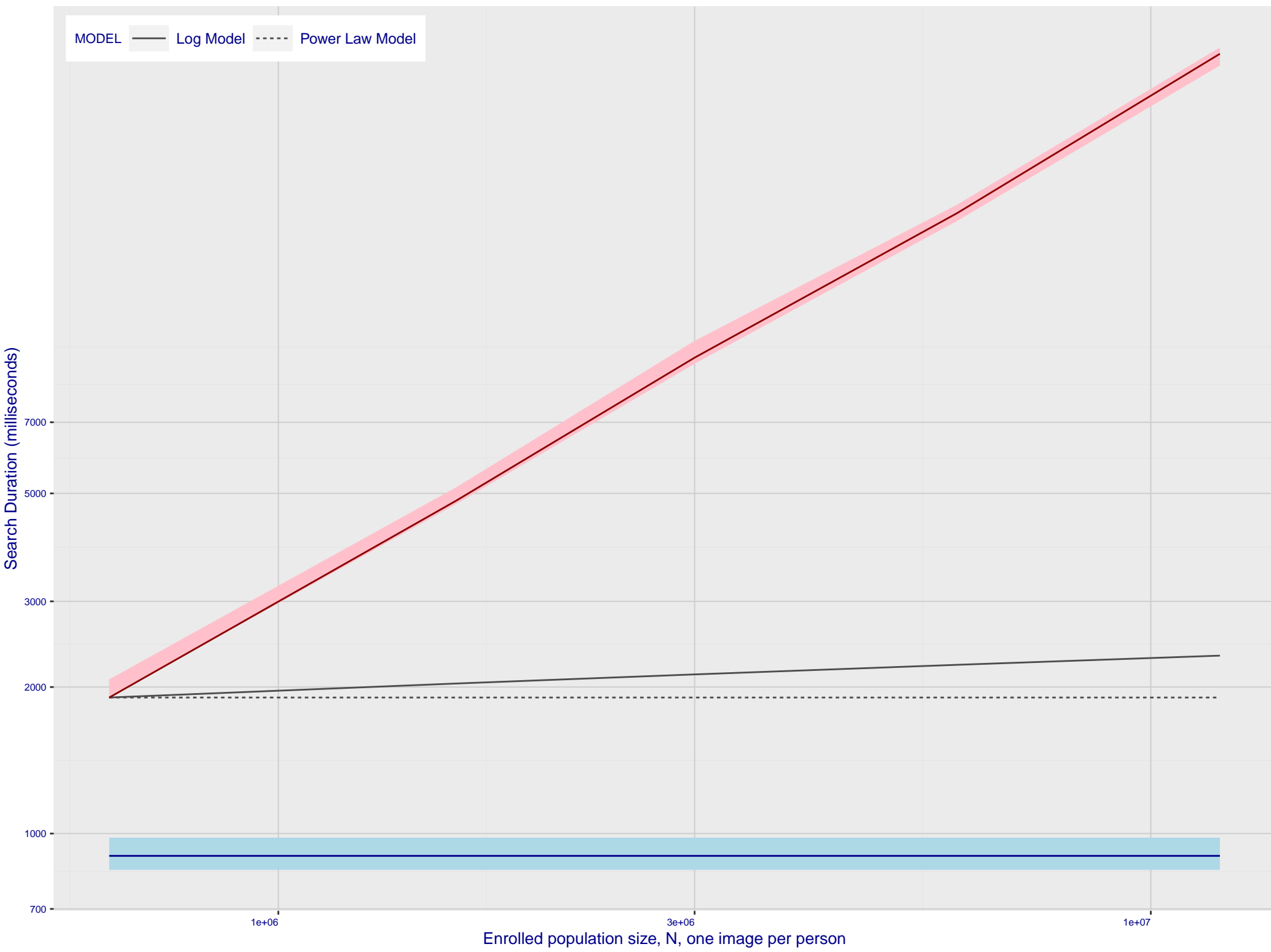




I: Investigational mode: FNIR(1600000, R, 0) by probe type

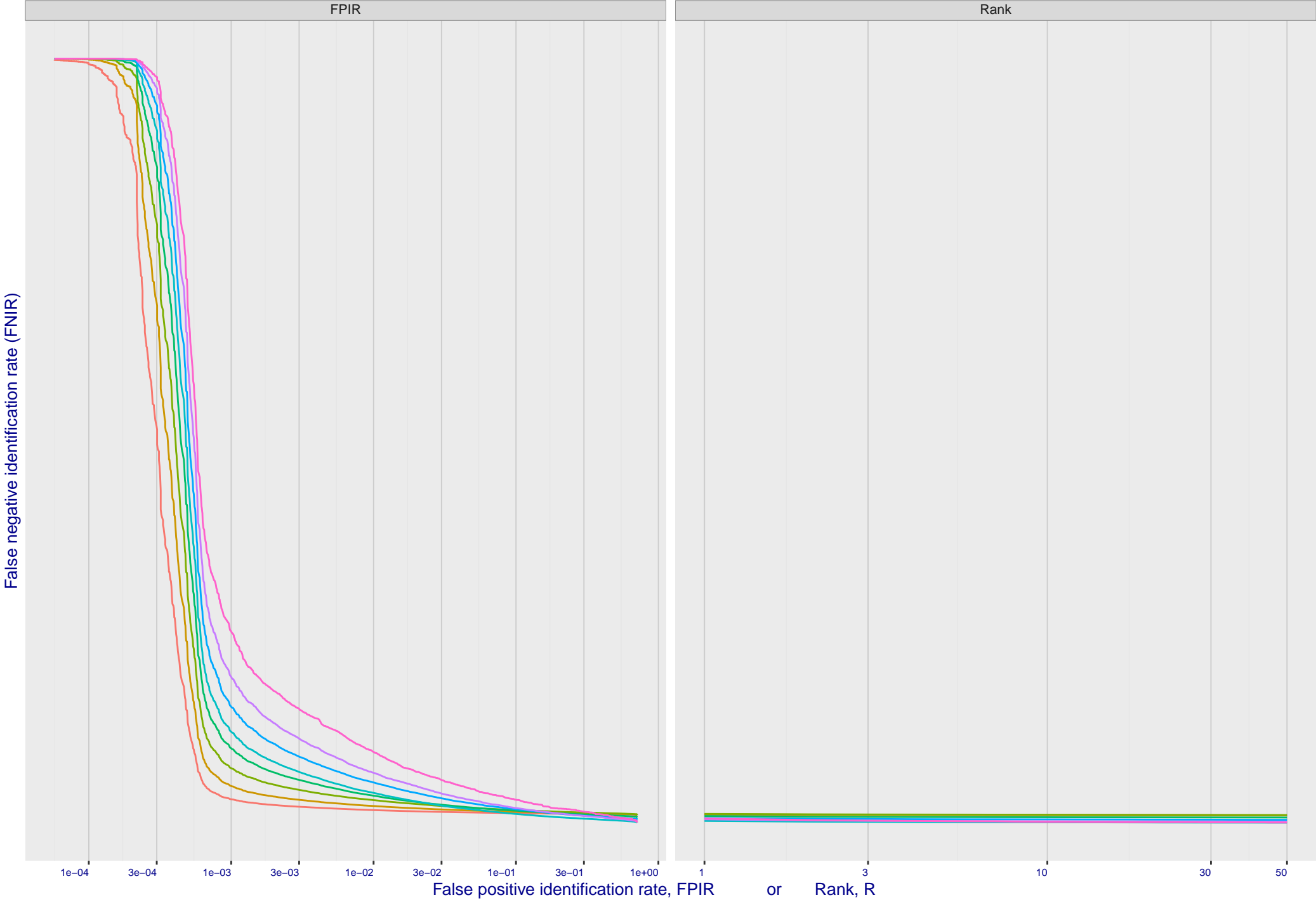


Template duration; search duration vs. N. The blue and pink ribbon covers 95 percent of observed measurements.  
The template generation time is independent of N. The log and power-law models are fit to the first two (N,T) observations



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

Dataset: 2018 Mugshot    N = 3068801



# N: Decline of genuine scores with ageing

