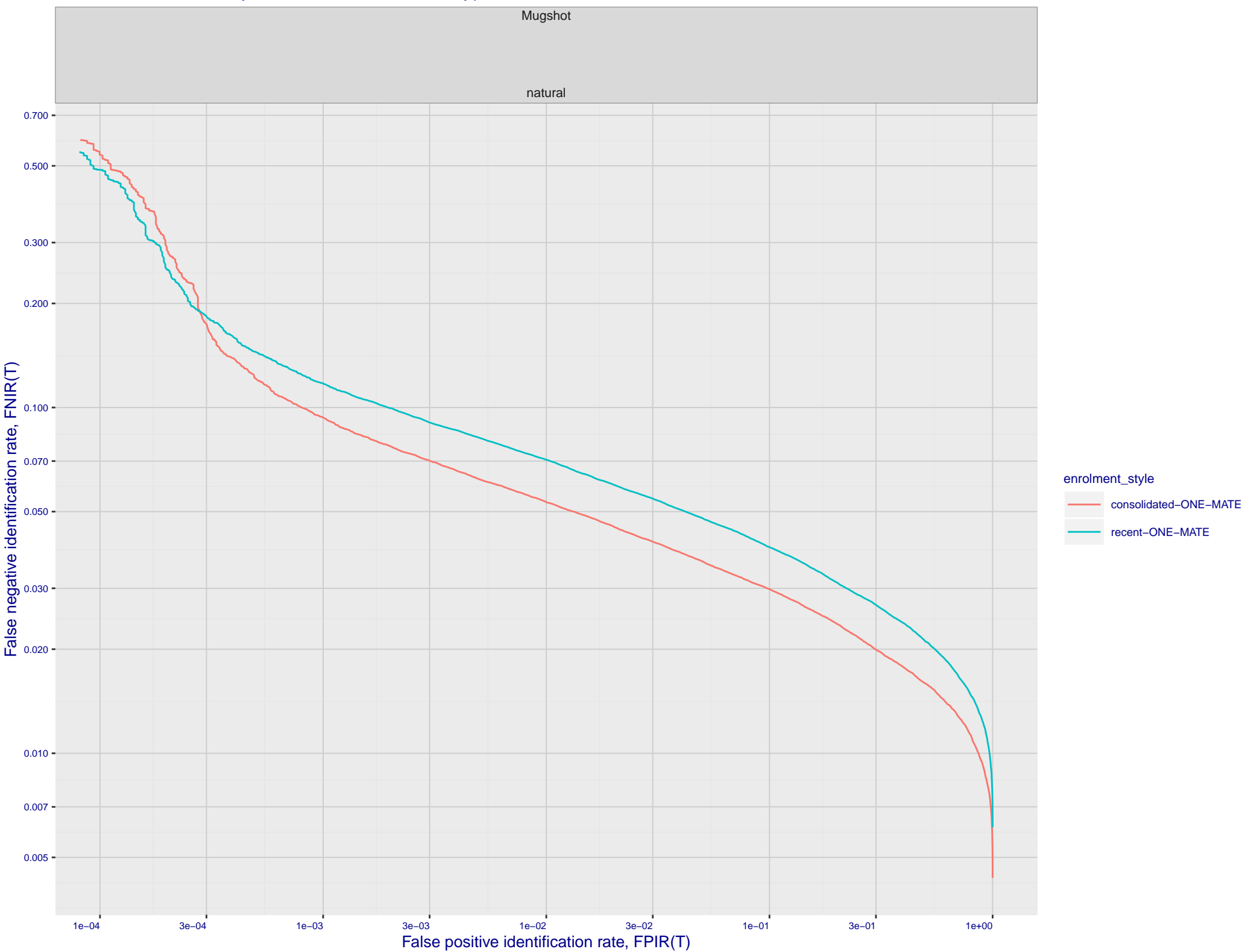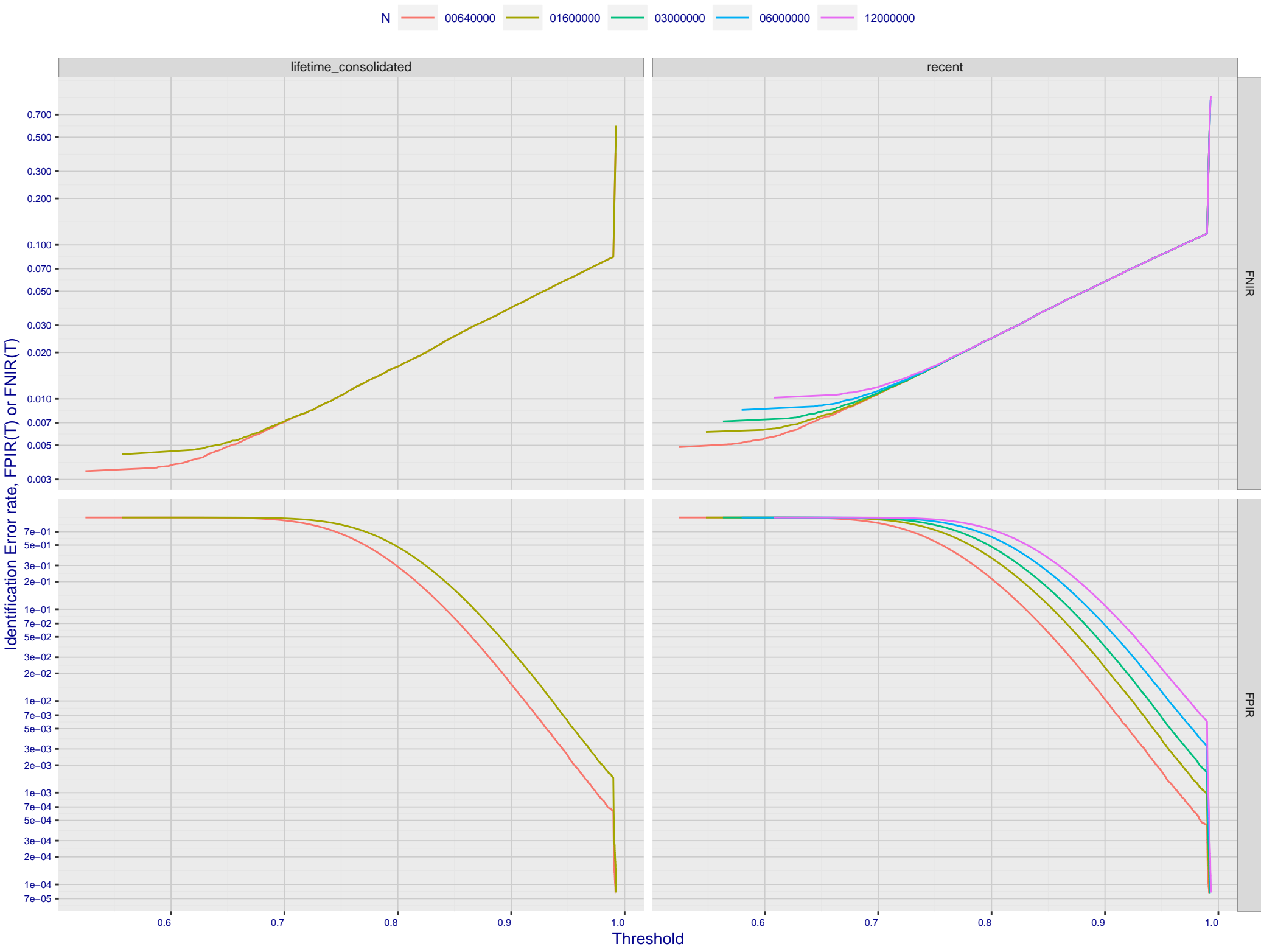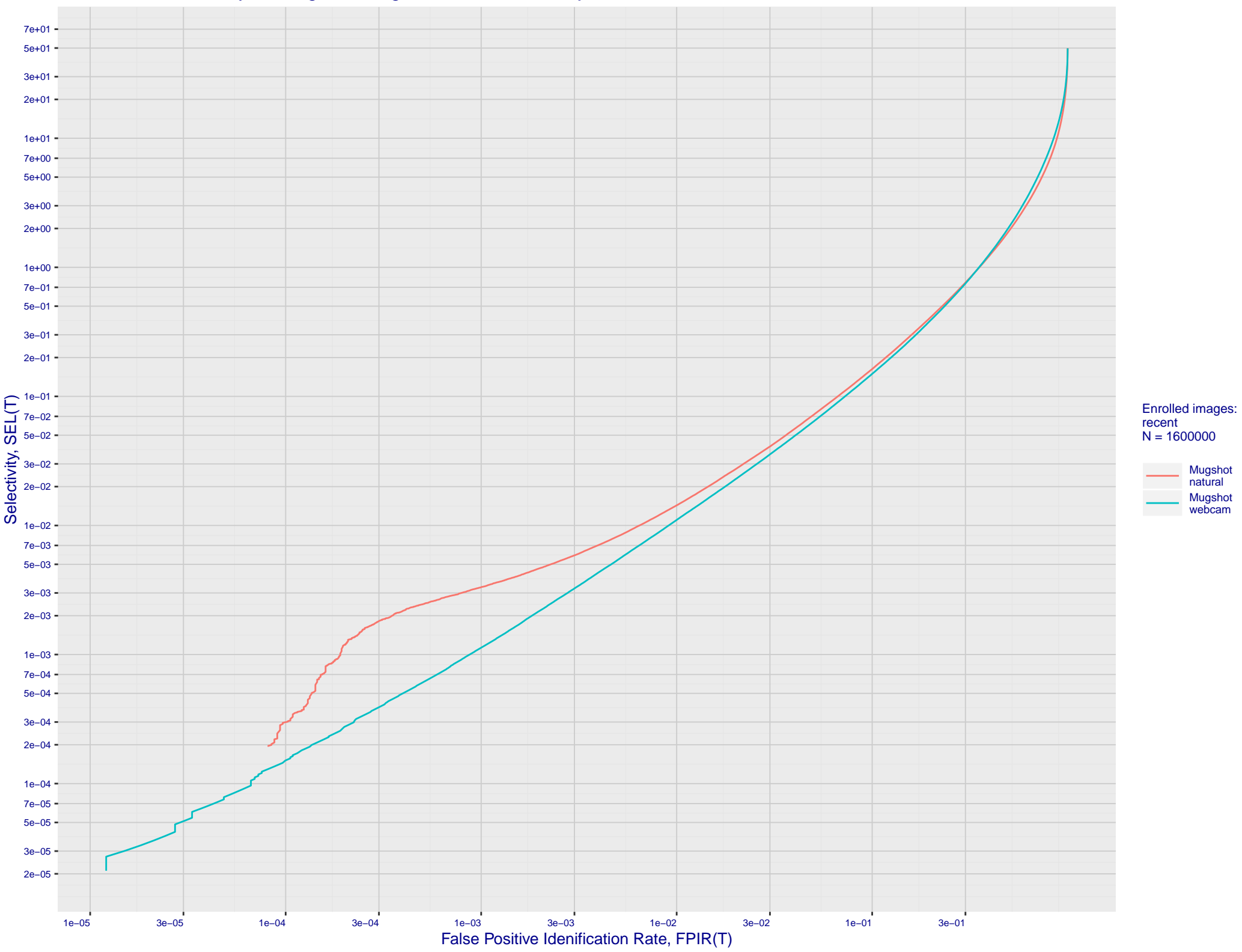A: 1:N error tradeoff by dataset and enrollment type. N = 1600000 individuals
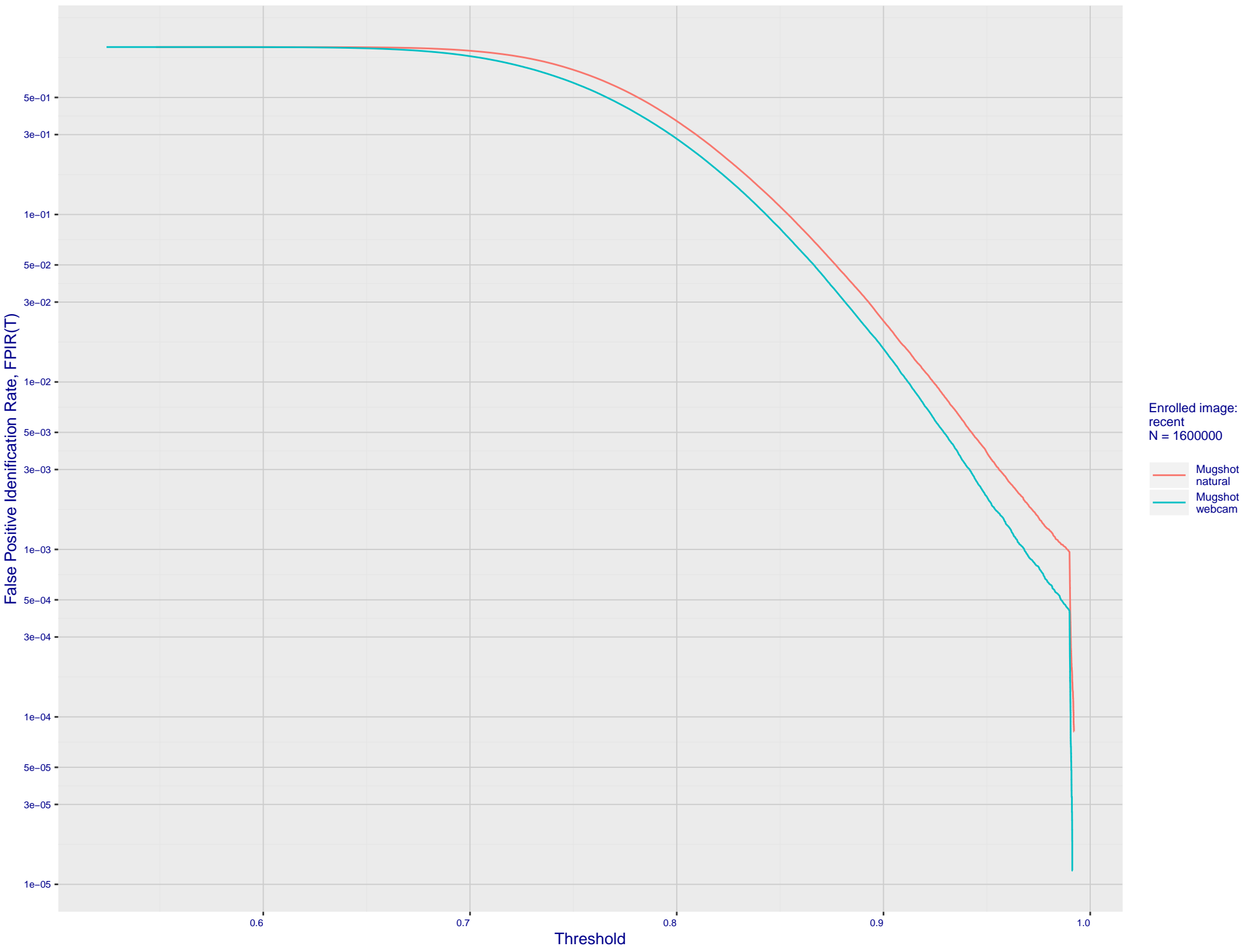
B: Dependence of error rates on T by number enrolled identities, N, for Mugshot natural images

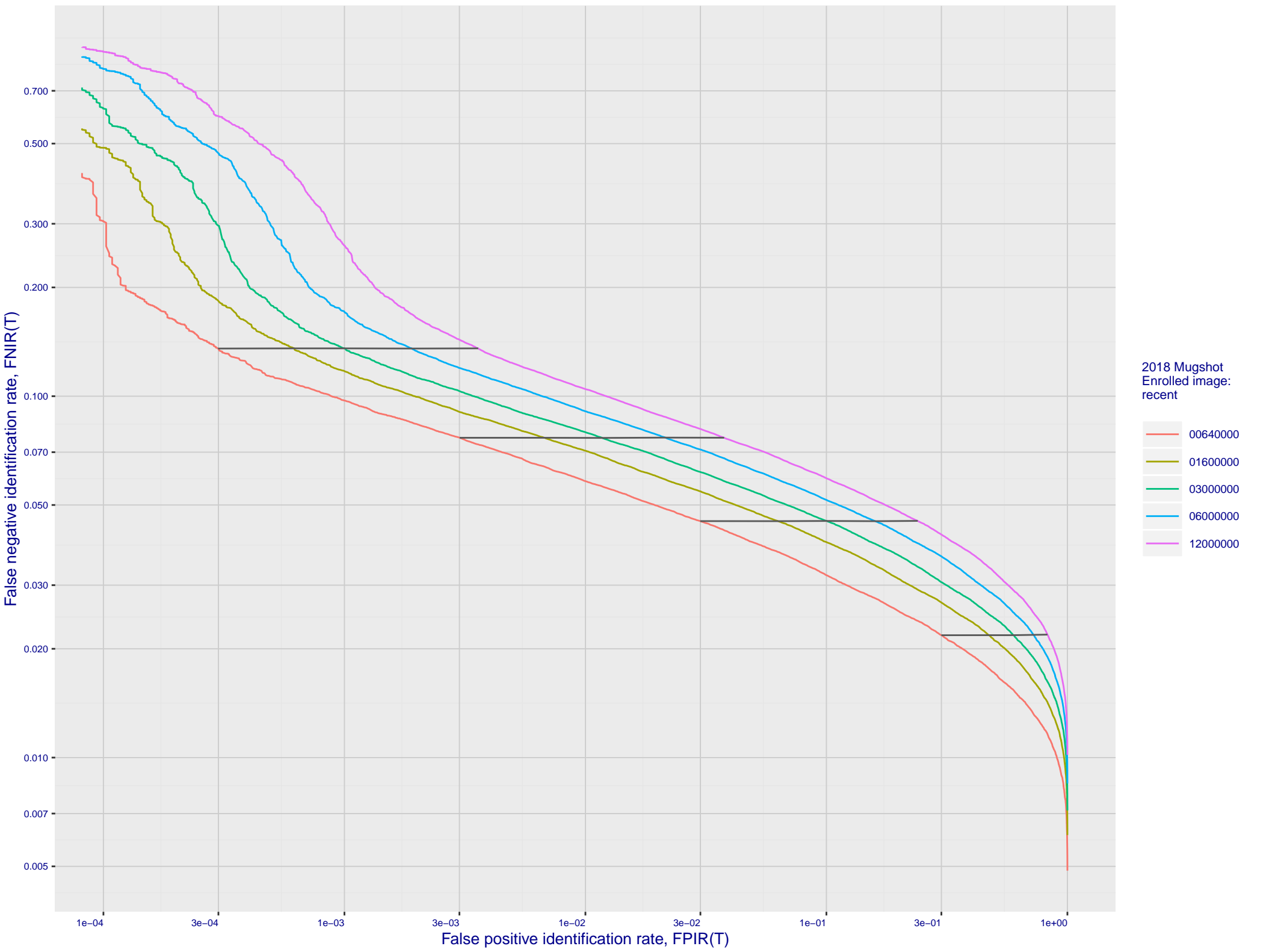N 00640000 01600000 03000000 06000000 12000000

C: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate
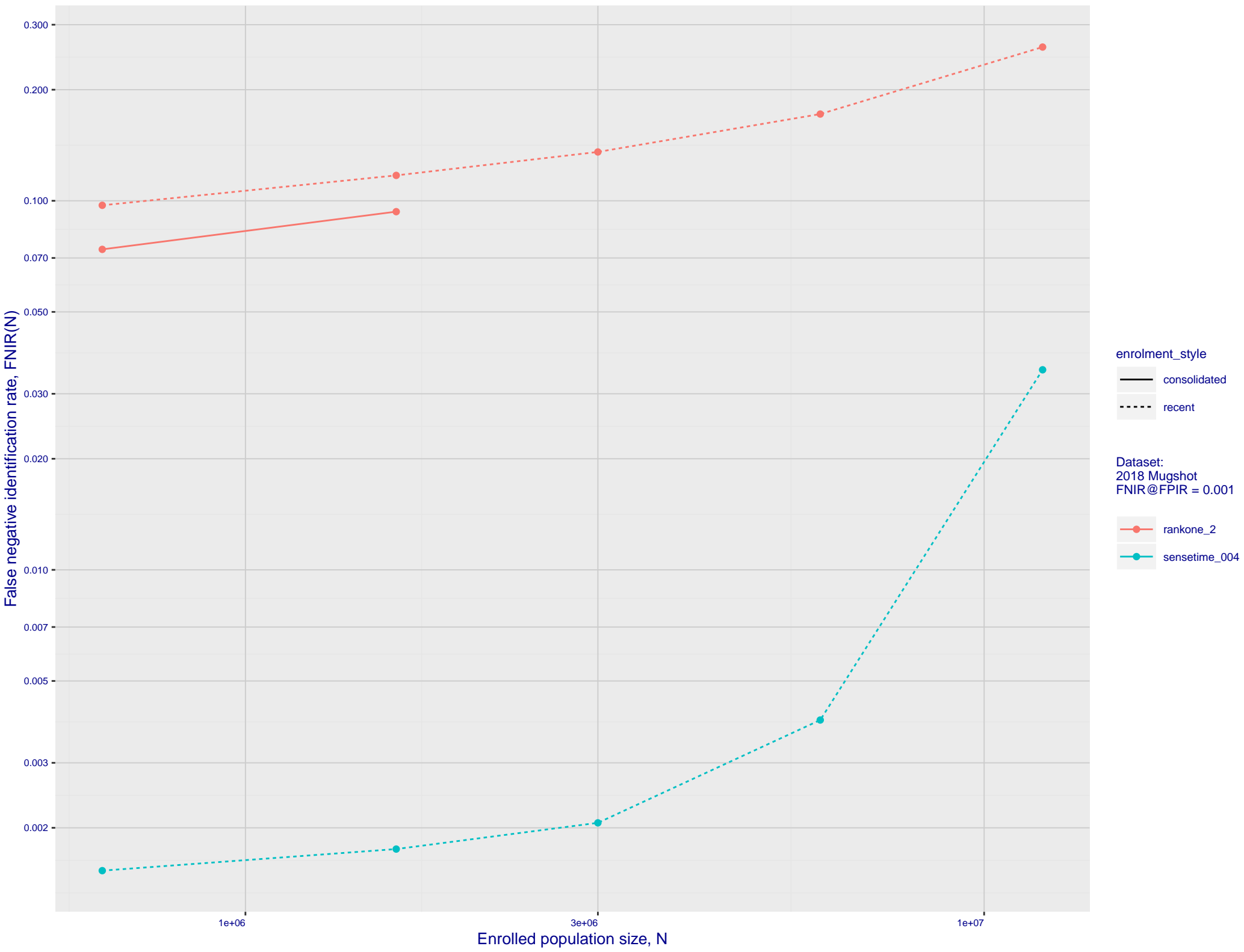
D: FPIR dependence on T by probe type for N = 1600000 subjects

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: rankone_2

Developer: Rank One Computing

Submission Date: 2018_06_19

Template size: 133 bytes

Template time (2.5 percentile): 107 msec

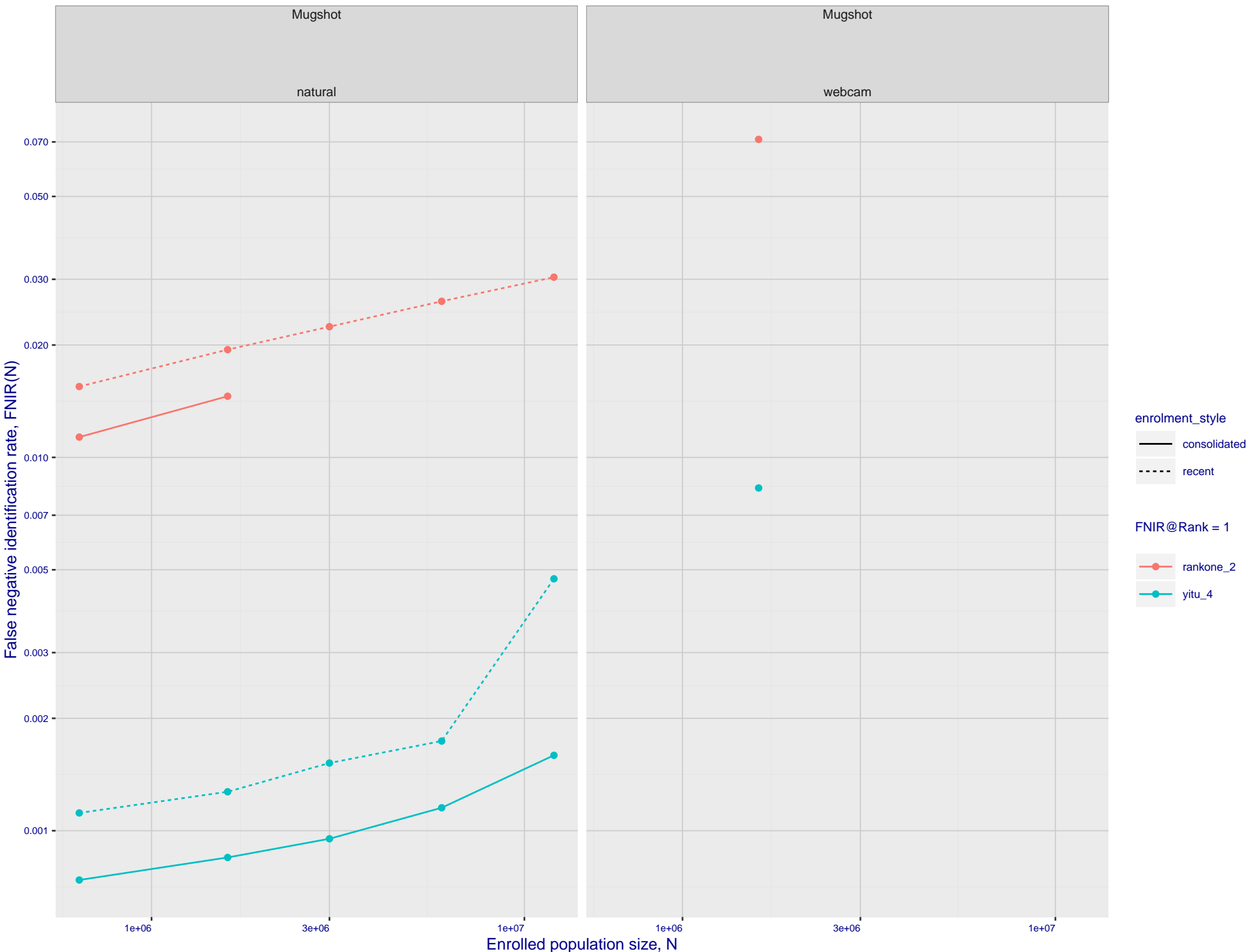Template time (median): 111 msec

Template time (97.5 percentile): 127 msec

Frontal mugshot investigation rank 150 –– FNIR(1600000, 0, 1) = 0.0194 vs. lowest 0.0010 from sensetime_004

natural investigation rank 151 –– FNIR(1600000, 0, 1) = 0.0711 vs. lowest 0.0067 from sensetime_003

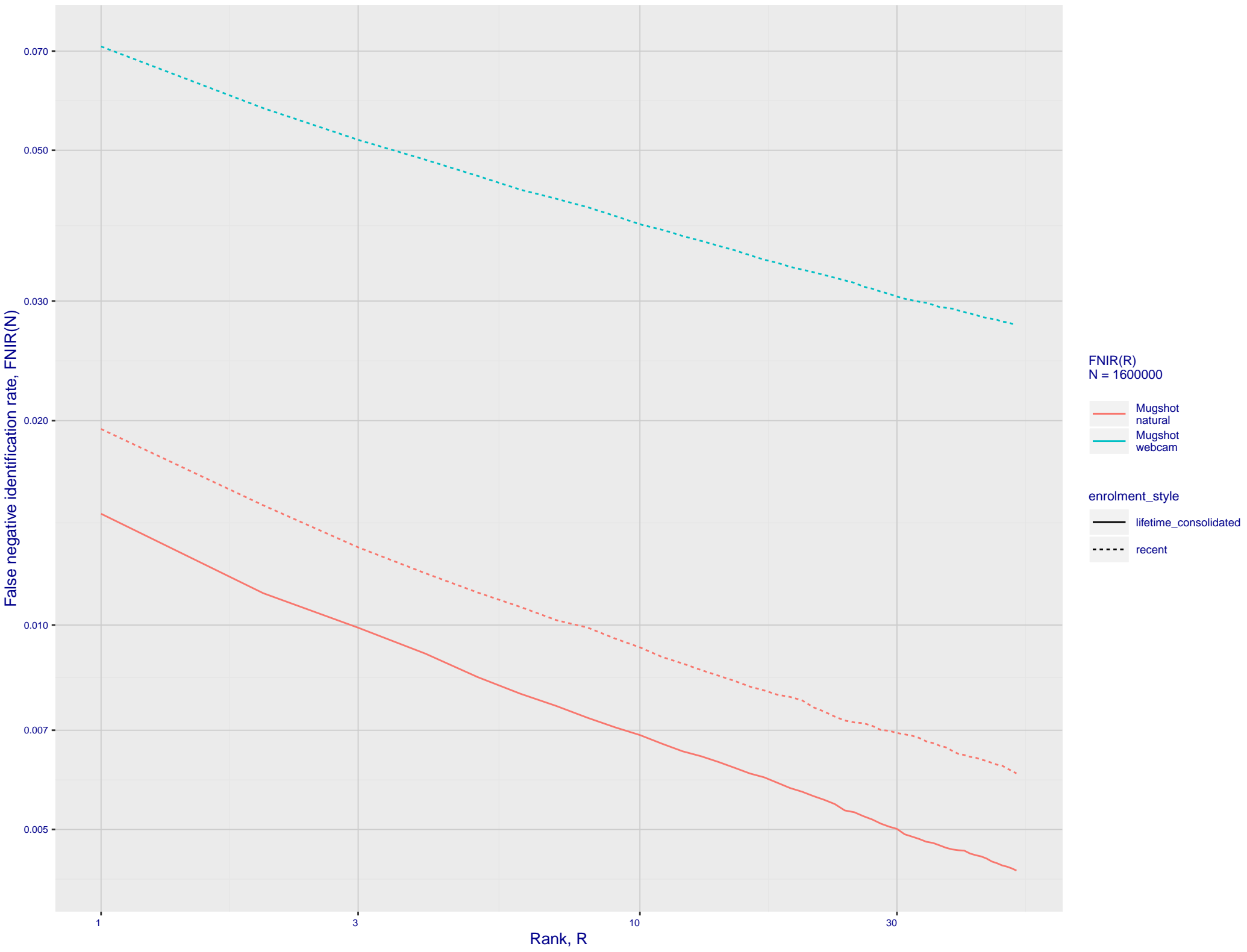Frontal mugshot identification rank 132 –– FNIR(1600000, T, L+1) = 0.1172 vs. lowest 0.0018 from sensetime_004

natural identification rank 132 –– FNIR(1600000, T, L+1) = 0.2609 vs. lowest 0.0122 from sensetime_003

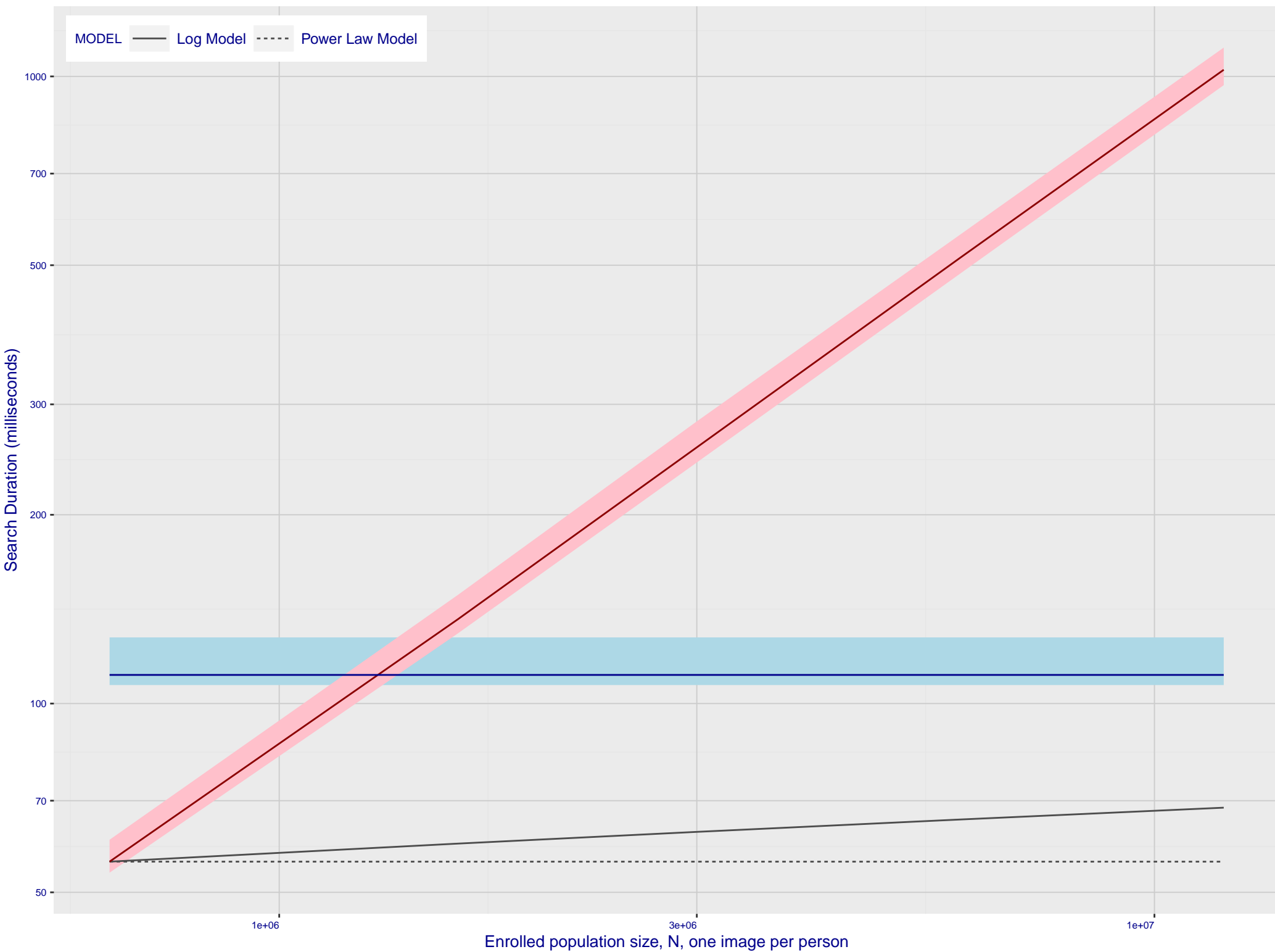H: Investigational mode: FNIR(N, 1, 0) vs. most accurate (yitu_4)

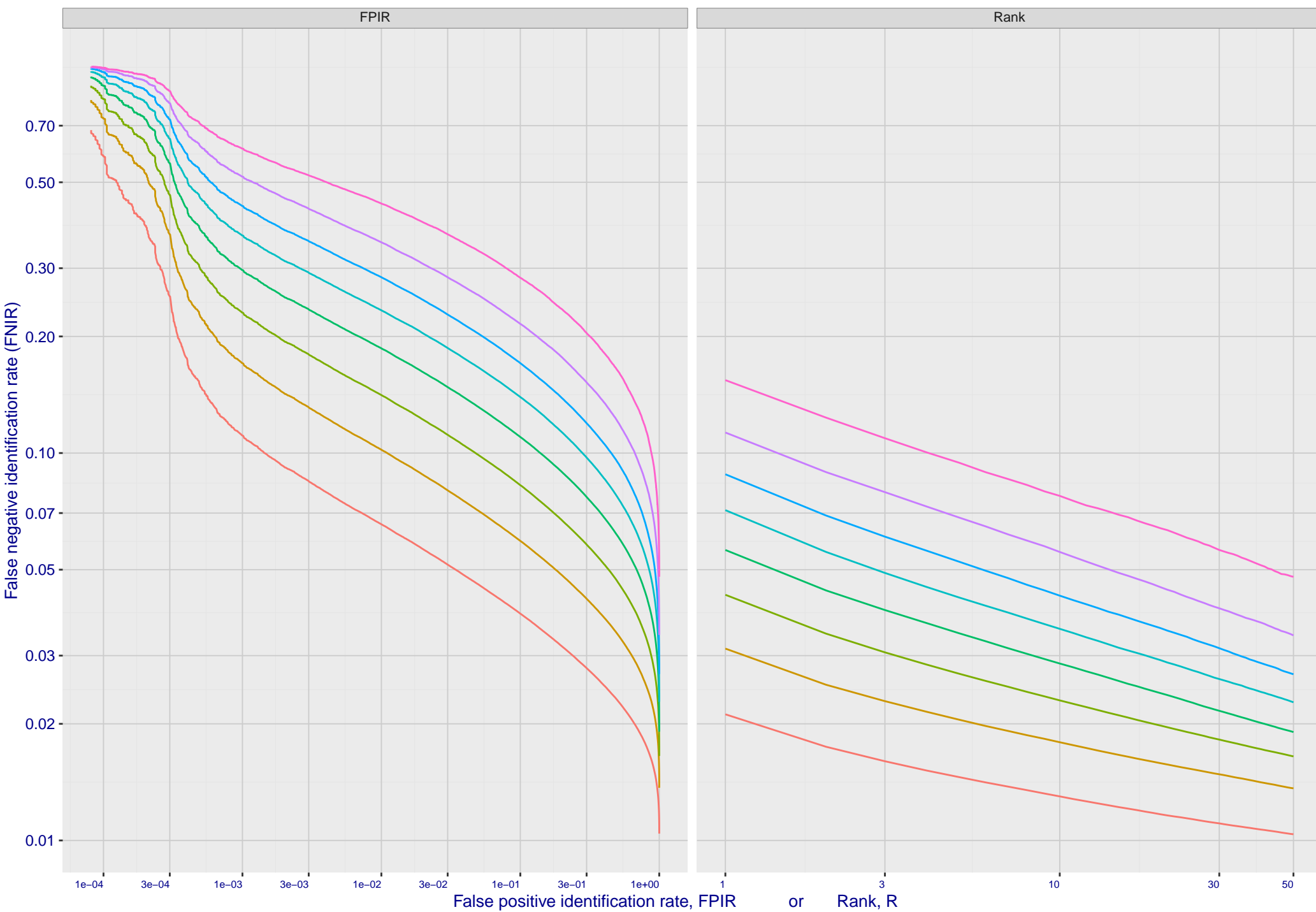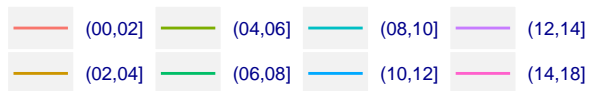I: Investigational mode: FNIR(1600000, R, 0) by probe type

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

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

N: Decline of genuine scores with ageing