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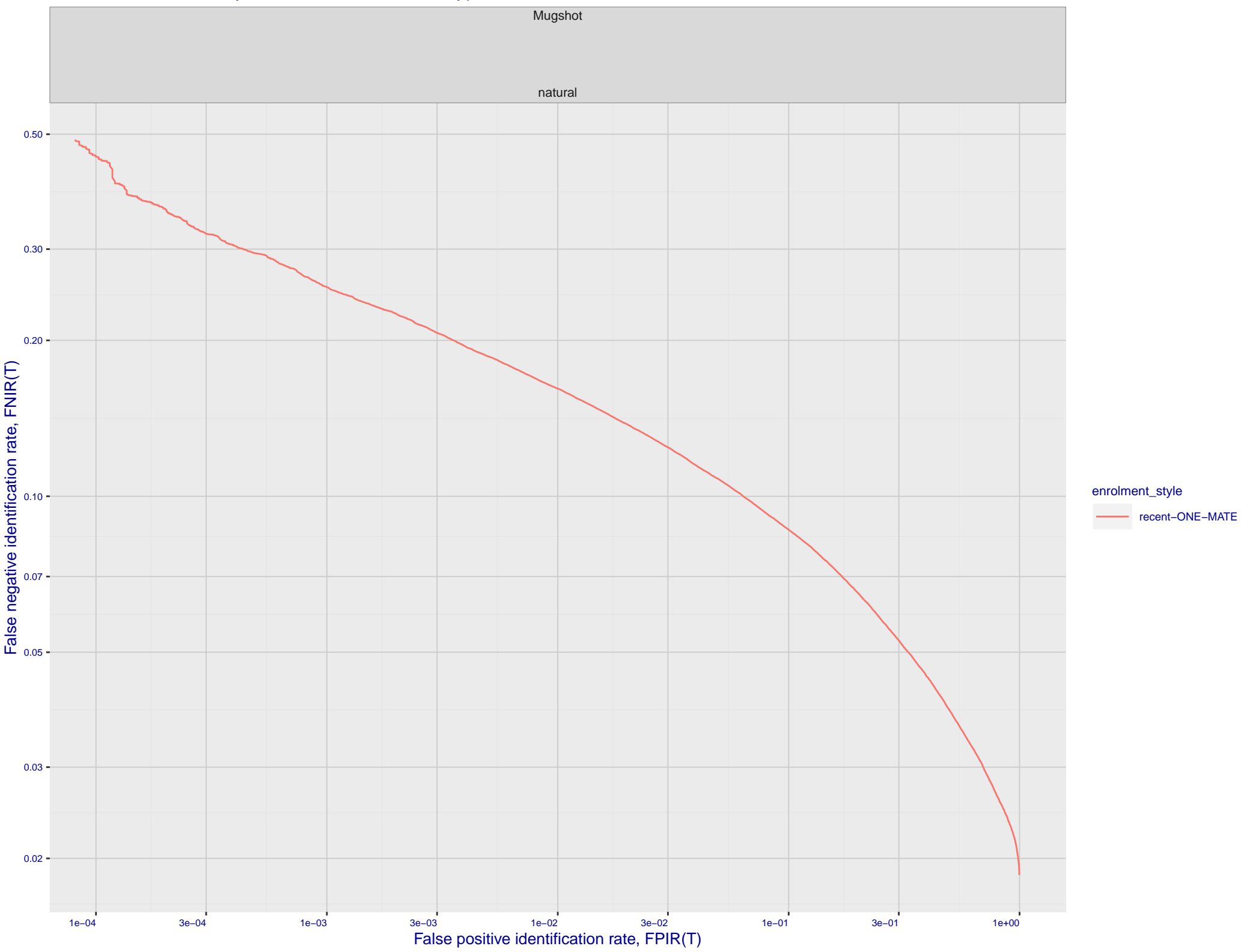
Mugshot

natural

False negative identification rate, FNIR(T)

0.50

0.30

0.20

0.10

0.07

0.05

0.03

0.02

1e−04   3e−04   1e−03   3e−03   1e−02   3e−02   1e−01   3e−01   1e+00

False positive identification rate, FPIR(T)
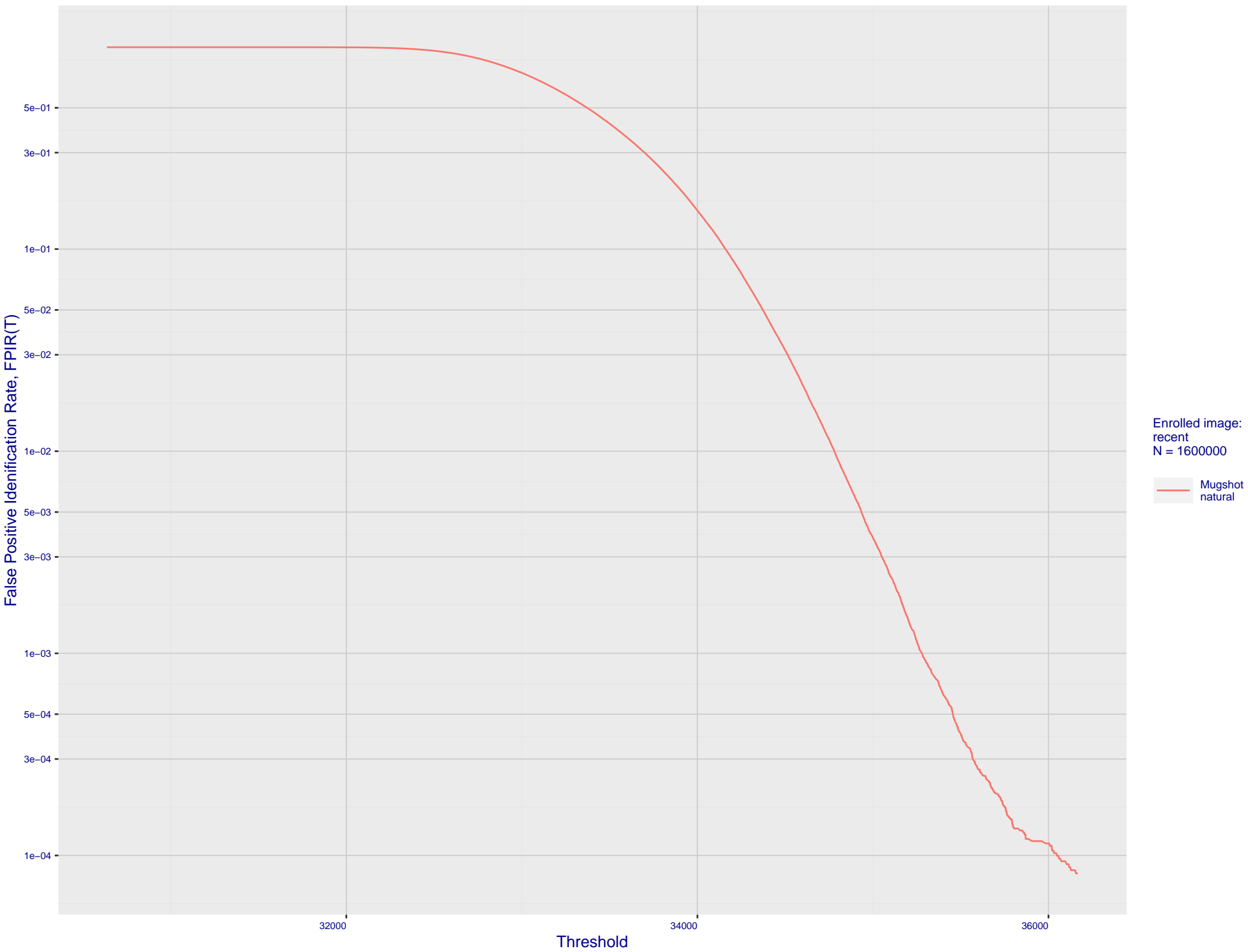
enrolment_style

——— recent−ONE−MATE

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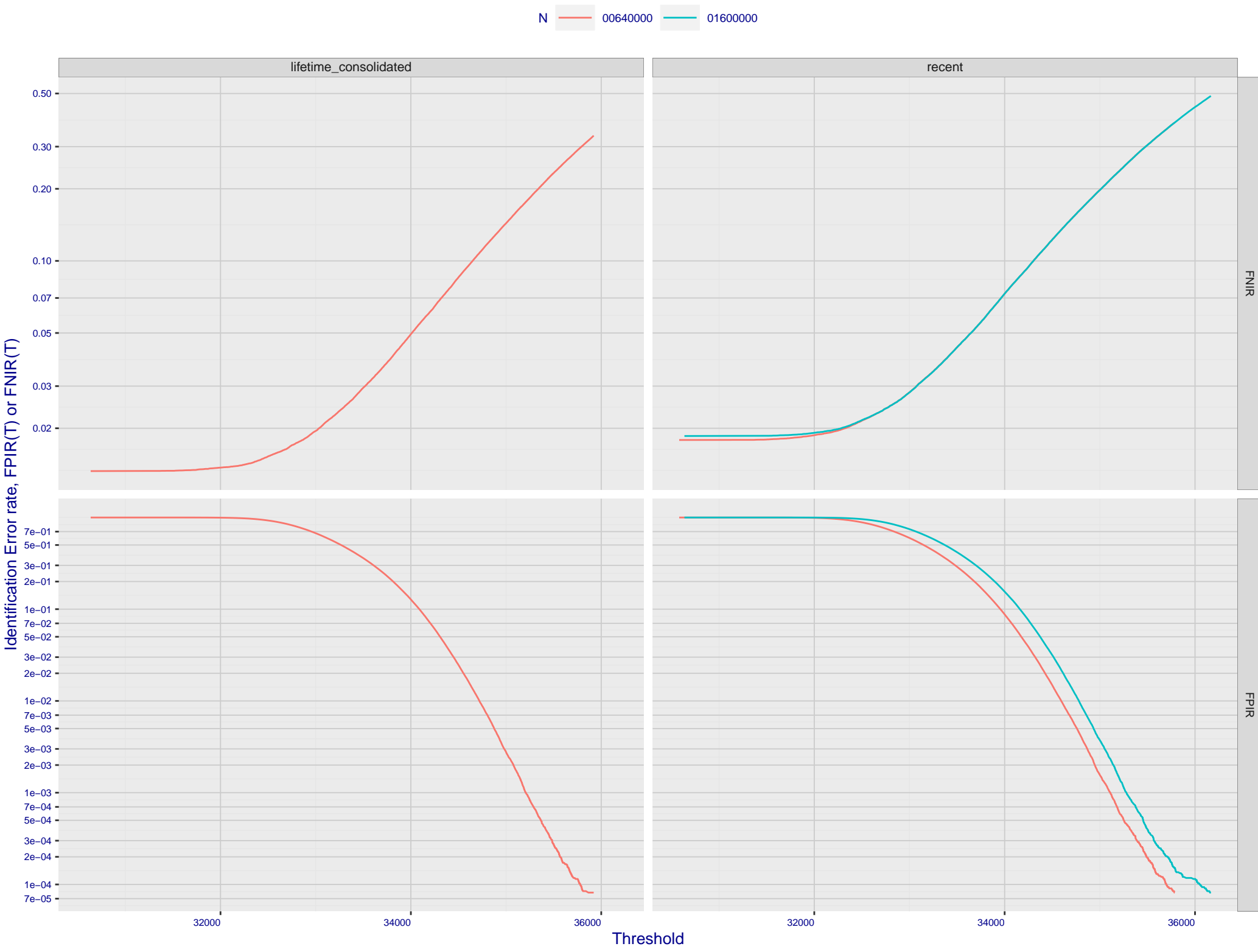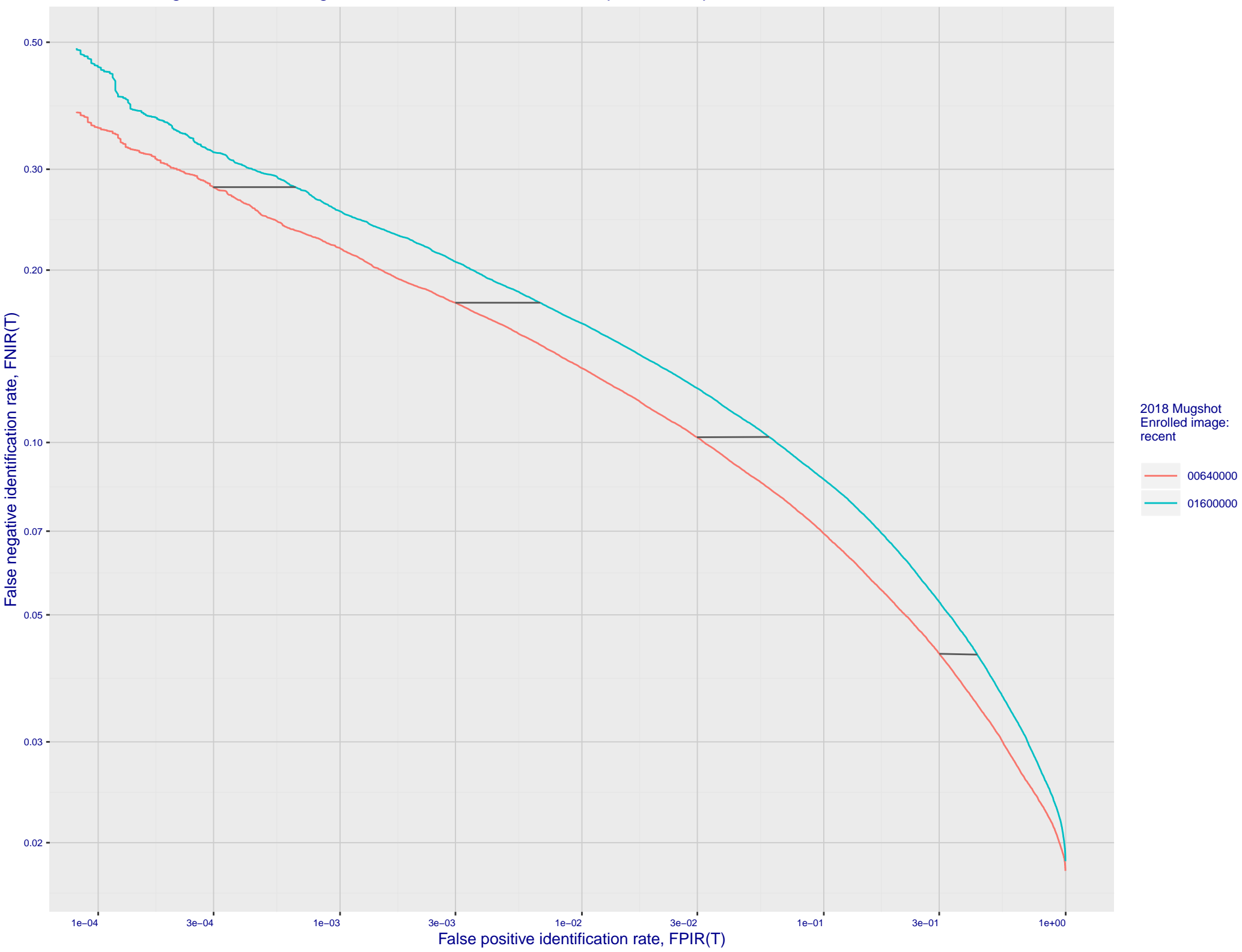
C: FPIR vs. Selectivity for mugshot images, N = 1600000 subjects enrolled with one recent mate
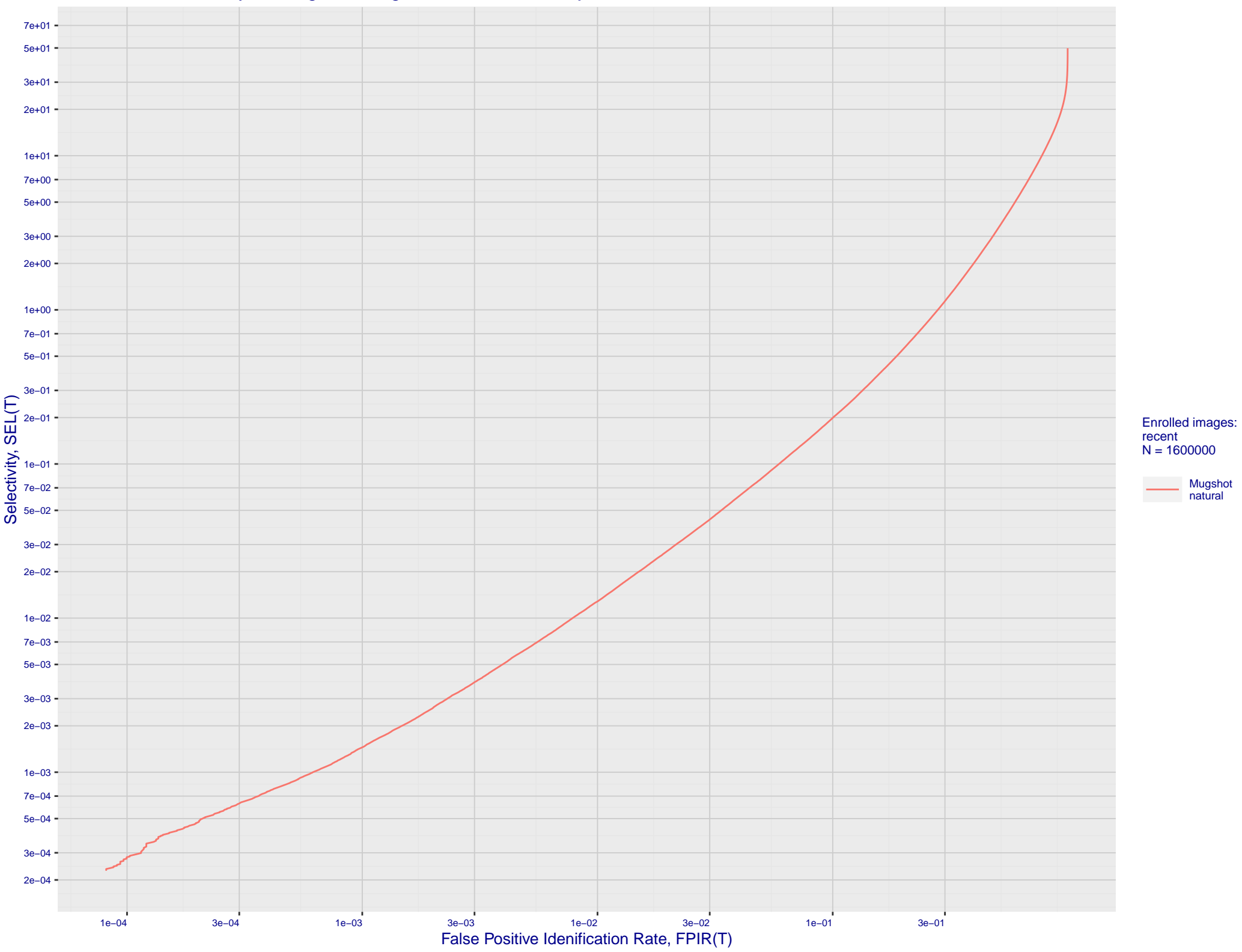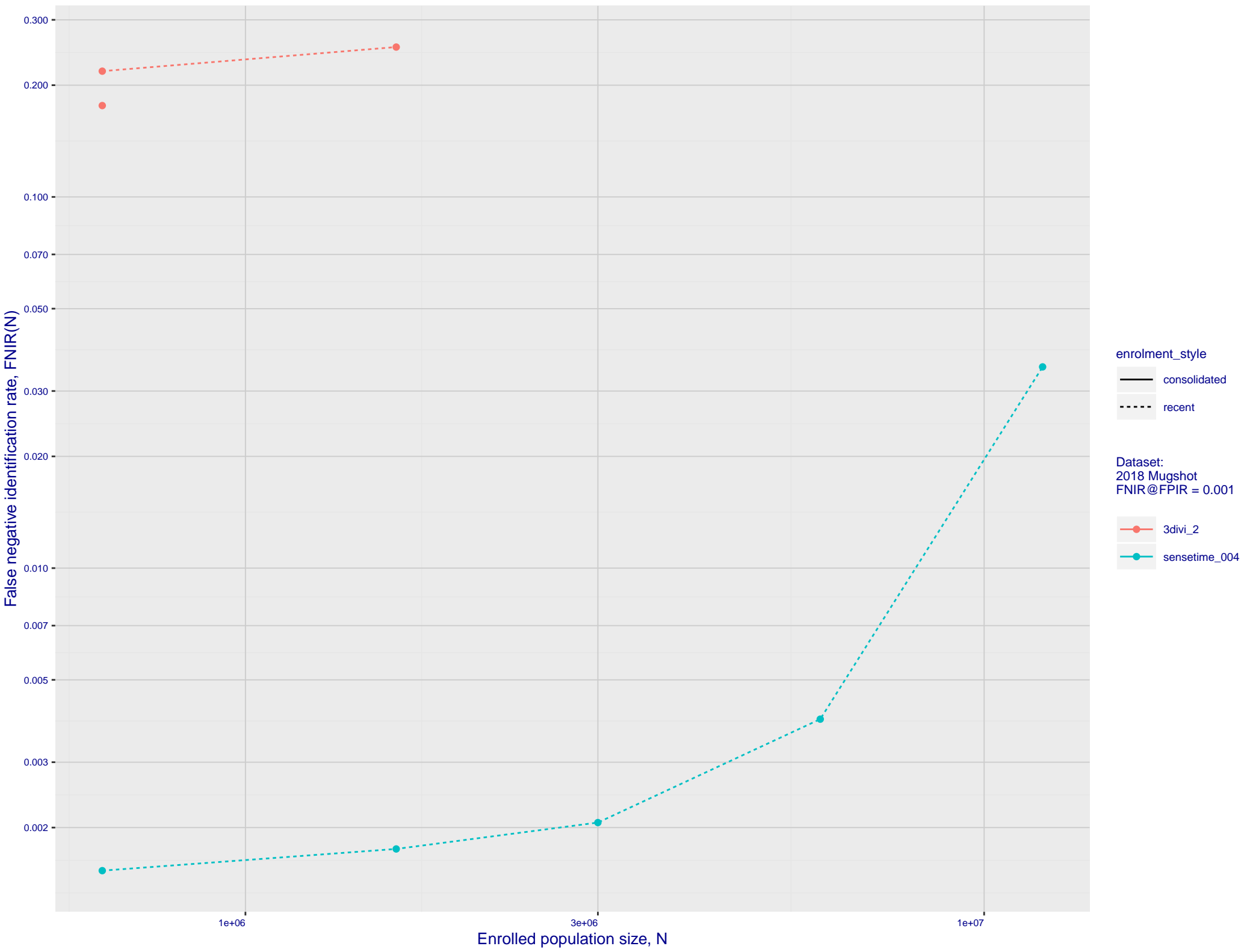
D: FPIR dependence on T by probe type for N = 1600000 subjects

False Positive Idenification Rate, FPIR(T)

Threshold

Enrolled image:
recent
N = 1600000

Mugshot
natural

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: 3divi_2

Developer: 3Divi

Submission Date: 2018_02_15

Template size: 528 bytes

Template time (2.5 percentile): 392 msec

Template time (median): 425 msec

Template time (97.5 percentile): 489 msec

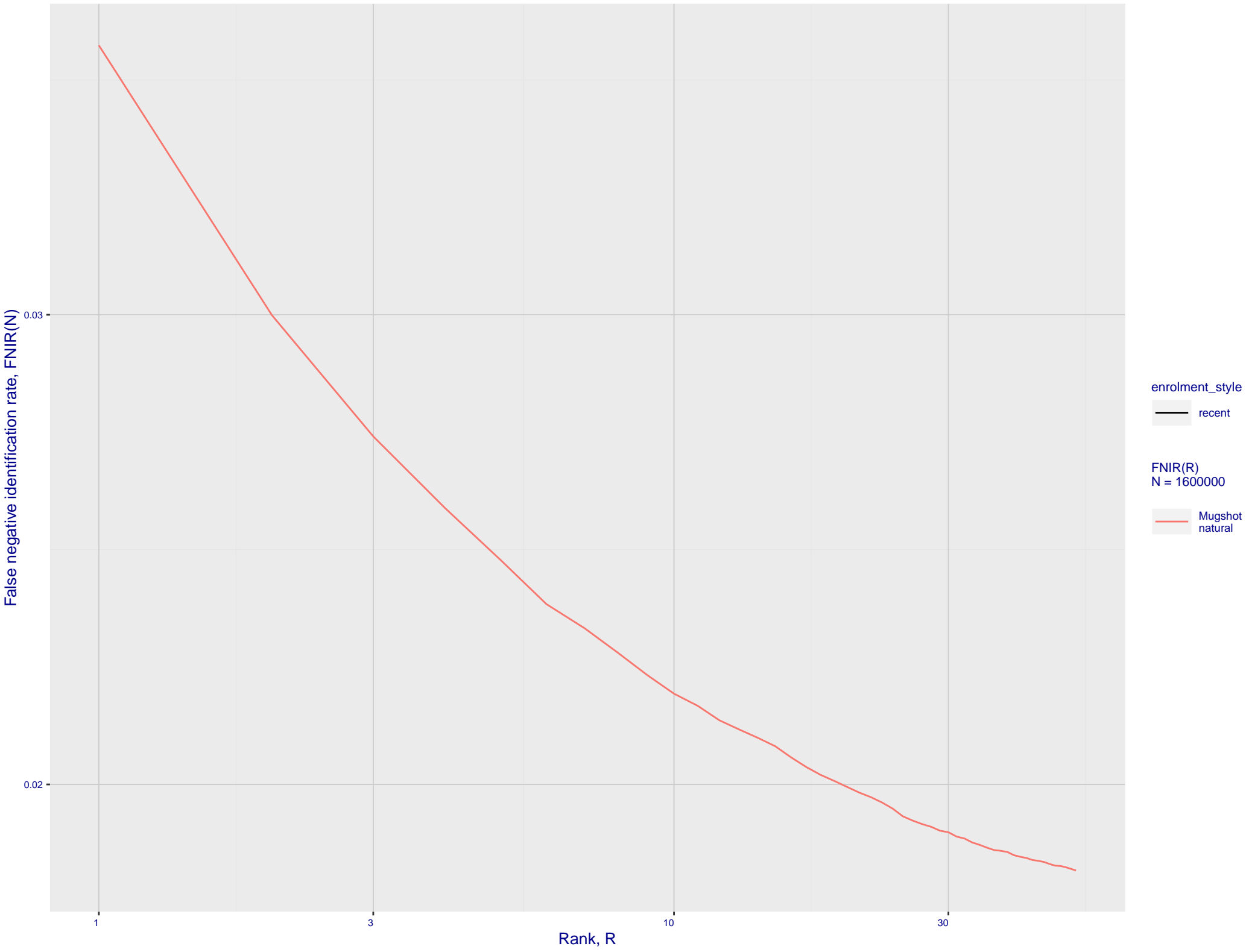Frontal mugshot investigation rank 175 –– FNIR(1600000, 0, 1) = 0.0379 vs. lowest 0.0010 from sensetime_004

Frontal mugshot identification rank 175 –– FNIR(1600000, T, L+1) = 0.2534 vs. lowest 0.0018 from sensetime_004

H: Investigational mode: FNIR(N, 1, 0) vs. most accurate (yitu_4)
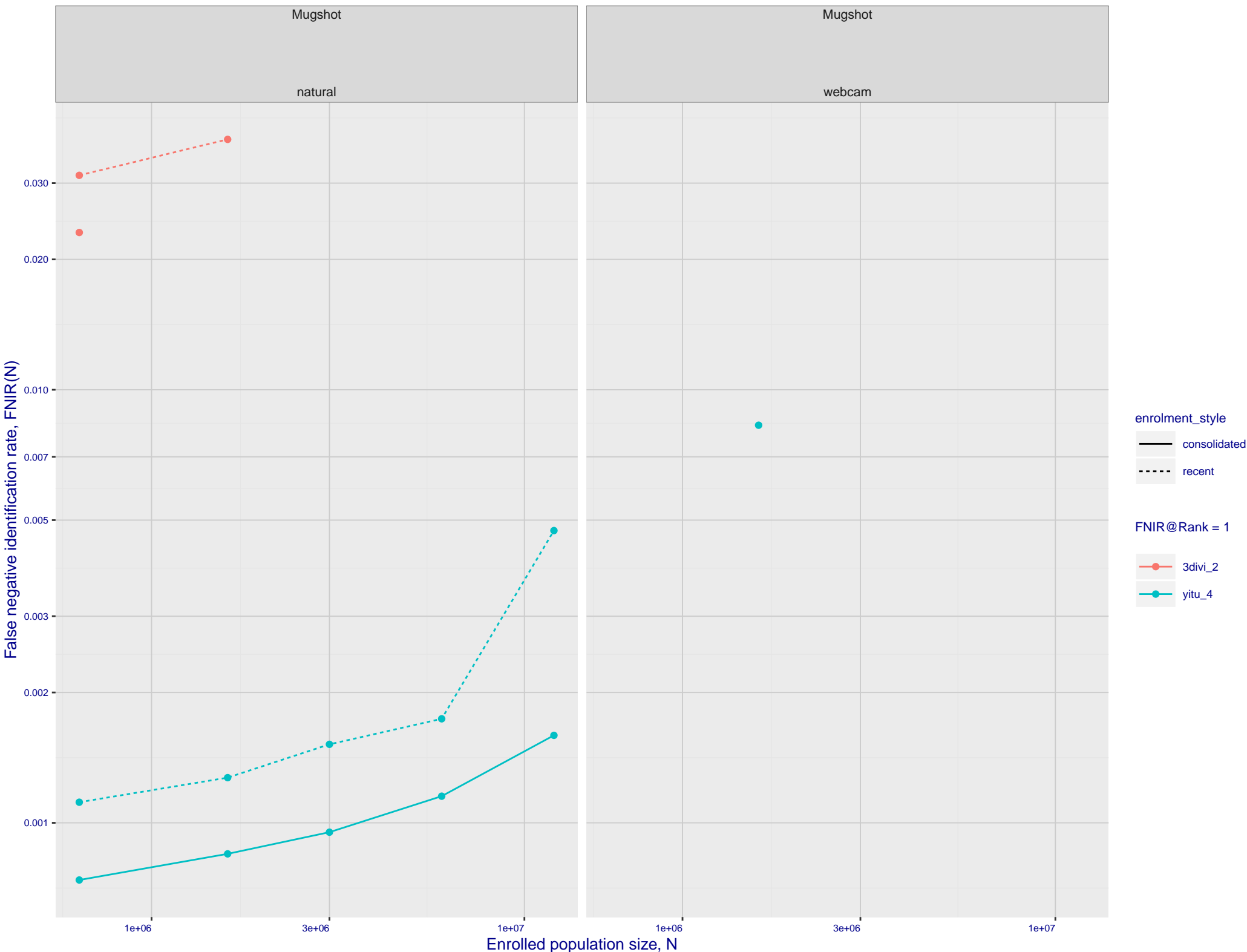
I: Investigational mode: FNIR(1600000, R, 0) by probe type

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