

Skeletal muscle mitochondrial dysfunction in contemporary antiretroviral therapy: a single cell analysis.

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Supplementary material

Two-dimensional plots of mitochondrial respiratory chain complex abundance in individual myofibres from ART-treated PWH, age-matched HIV negative controls and ART-naïve PWH.

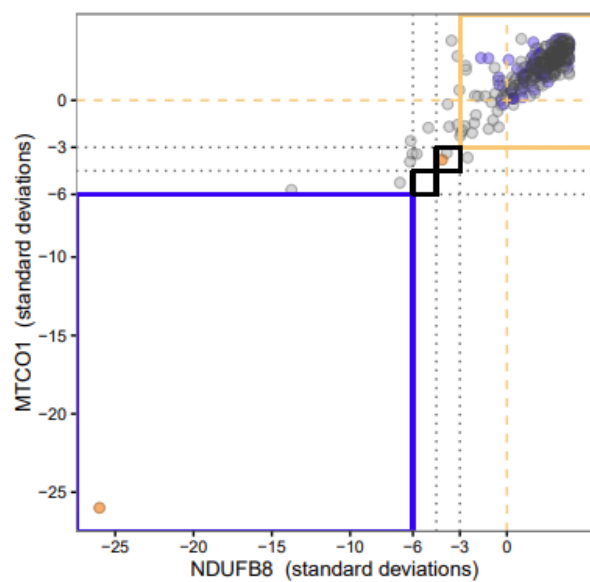
Each panel shows an individual participant (ART-treated PWH, n 45; HIV negative, 15; ART-naïve PWH, 13). Each dot is an individual myofibre (mean 850 myofibres analysed per sample).

X-axis is complex 1 (CI, NDUFB8), y-axis is complex 4 (CIV, MTCO1). Scale is abundance of CI / CIV expressed as a z-score (standard deviations) relative to calibrator samples from young healthy persons aged 18-30 years. Raw CI / CIV signal is background corrected to a no primary control and then expressed relative to mitochondrial mass (VDAC1 / porin) for that myofibre.

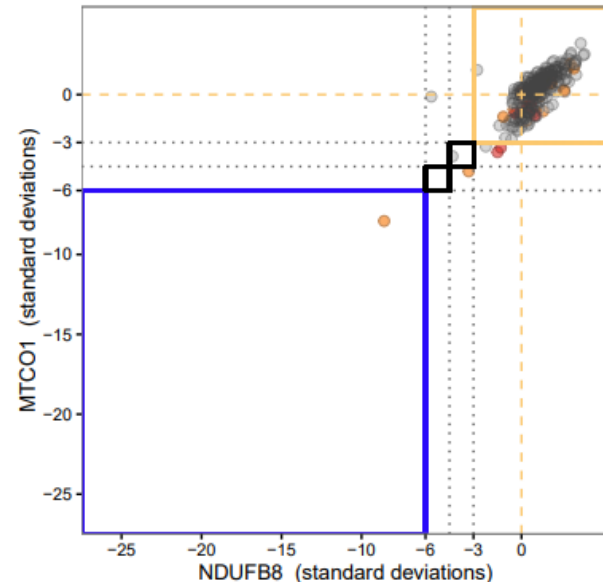
Upper right quadrant (bounded by thick orange lines) shows myofibres with normal CI and CIV abundance ($z > -3$). Lower left quadrant (bounded by thick blue lines) shows myofibres deficient in both CI and CIV ($z < -6$). Upper left quadrant shows myofibres deficient in CI only. Lower right quadrant shows myofibres deficient in CIV only. Myofibres with z-score between -6 and -3 have an intermediate level of CI / CIV abundance.

Individual myofibres are coloured according to mitochondrial mass (abundance of VDAC1 / porin) with scale as indicated below each panel.

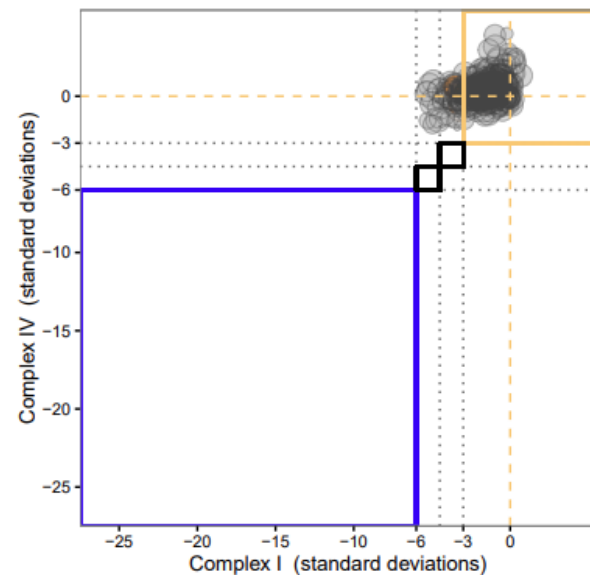
ART-treated PWH



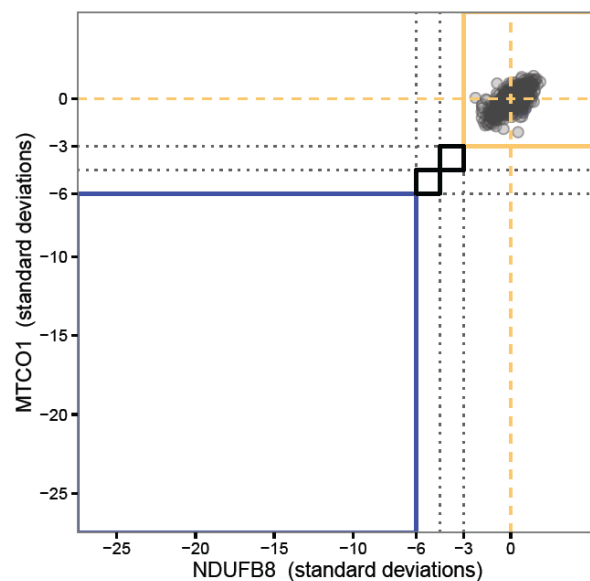
Porin ● Very low ● Low ● Norm ● High



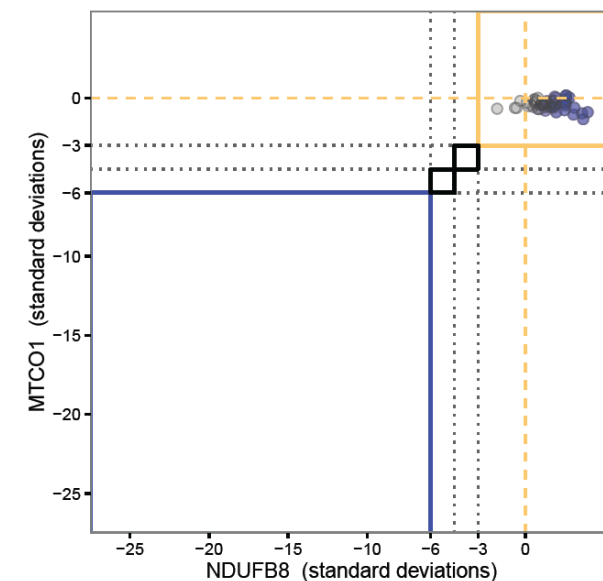
Porin ● Norm ● High ● Very high



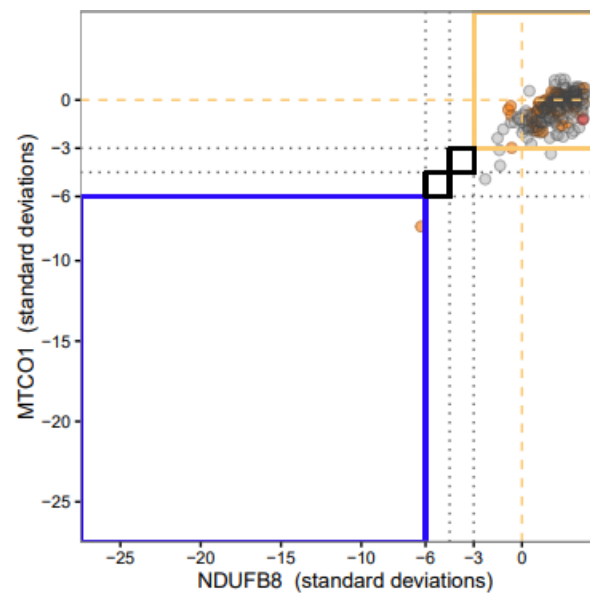
Porin ● Norm ● High



Porin ● Very low ● Low ● Norm

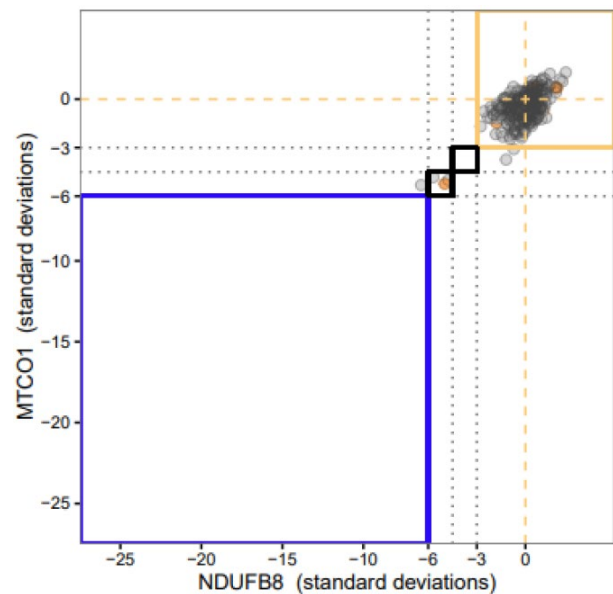


Porin ● Very low ● Low ● Norm

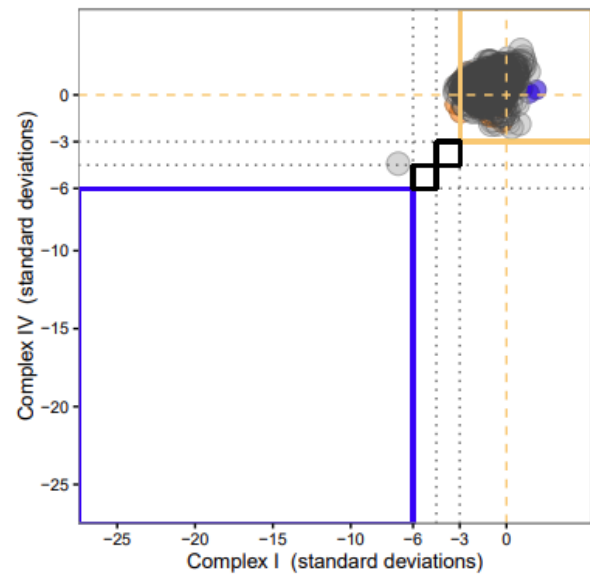


Porin ● Norm ● High ● Very high

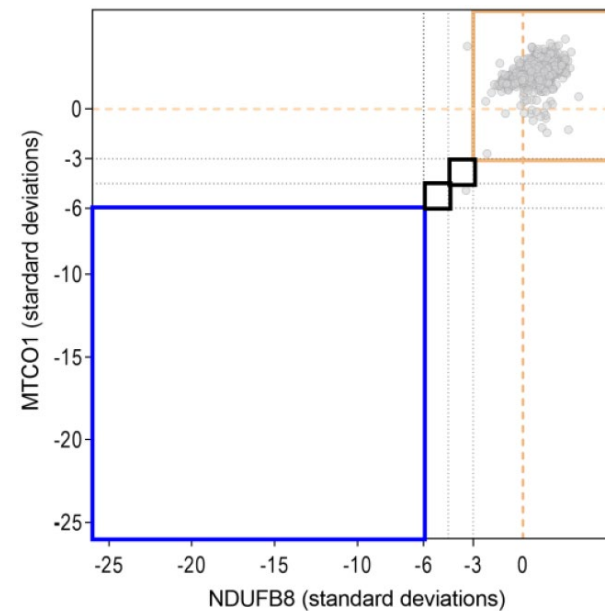
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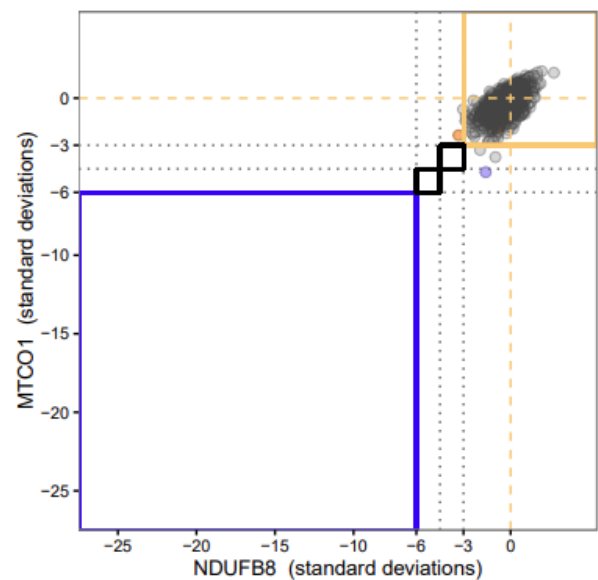
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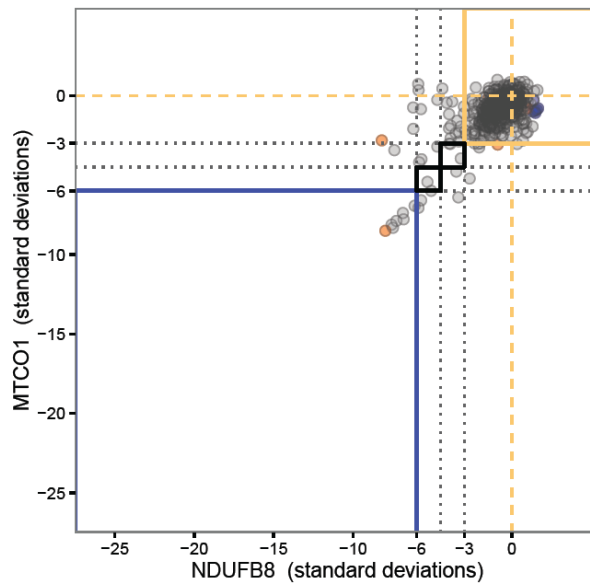
Porin ● Very low ● Low ● Norm ● High ● Very high



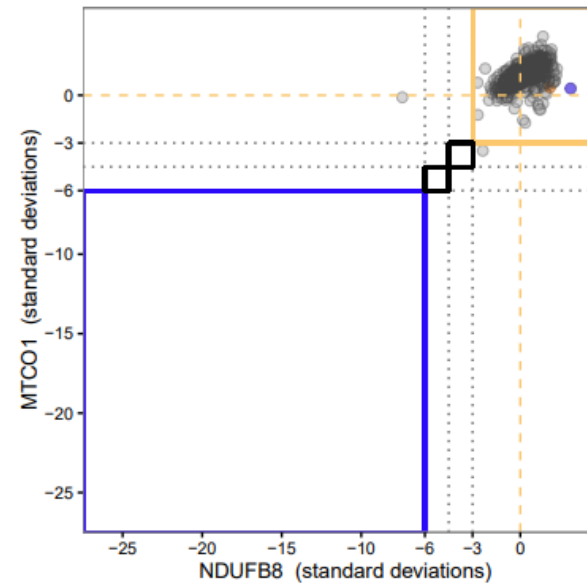
Porin ● Norm



Porin ● Low ● Norm ● High ● Very high

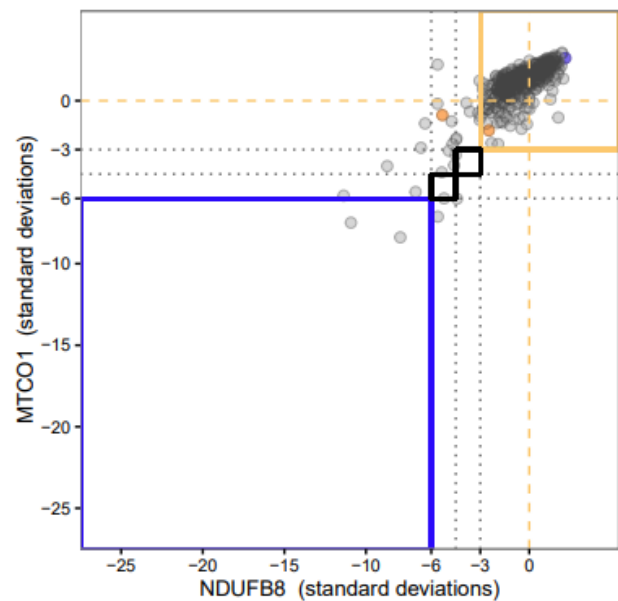


Porin ● Very low ● Low ● Norm ● High

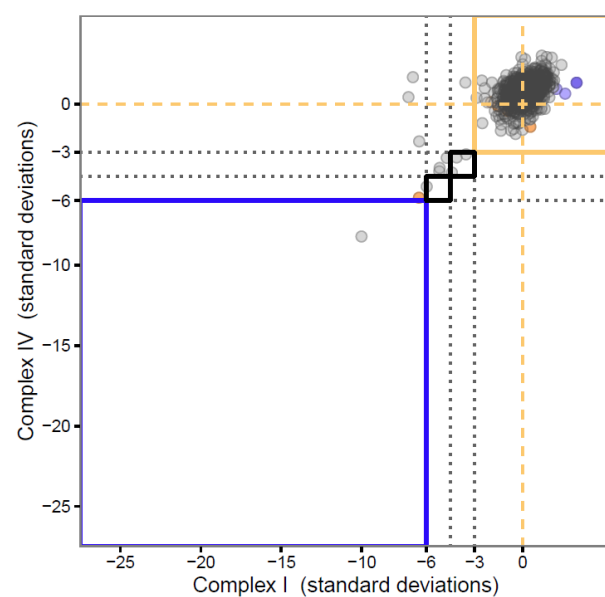


Porin ● Very low ● Low ● Norm ● High

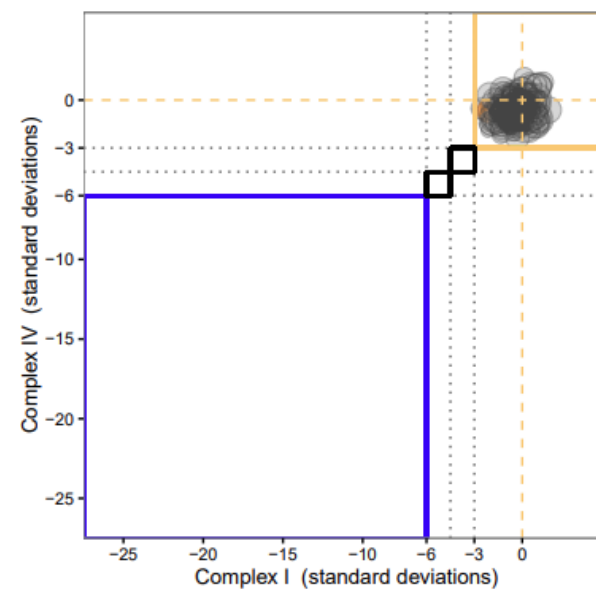
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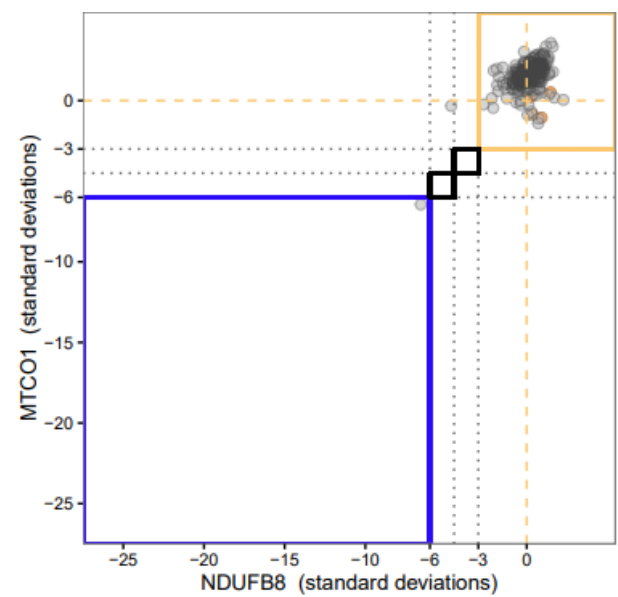
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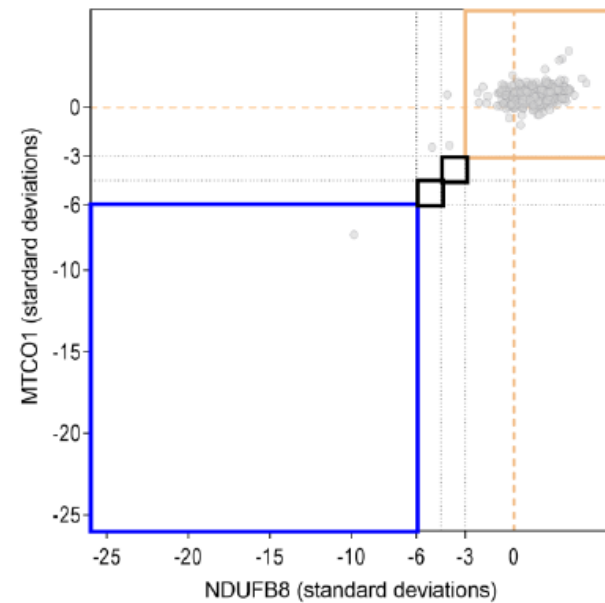
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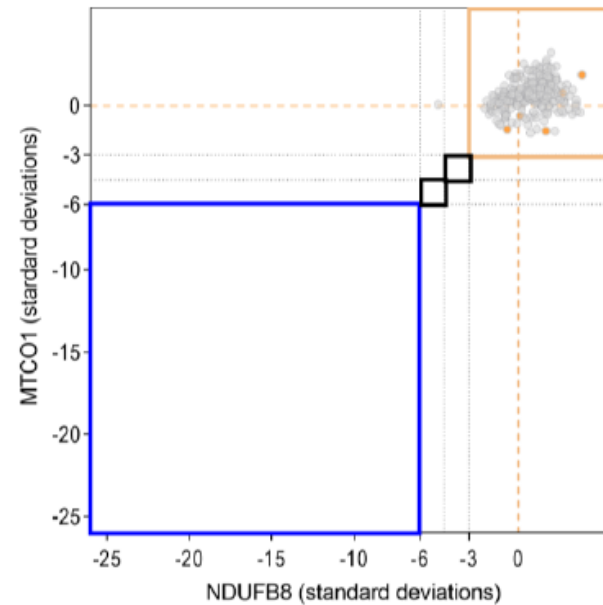
Porin ● Norm ● High



Porin ● Norm ● High

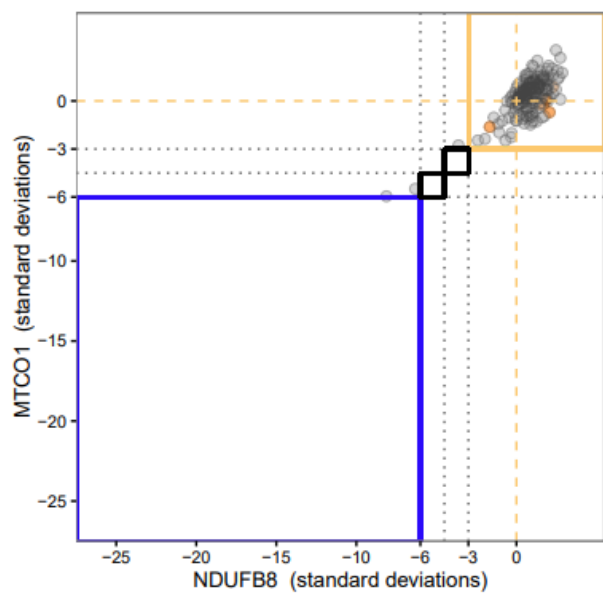


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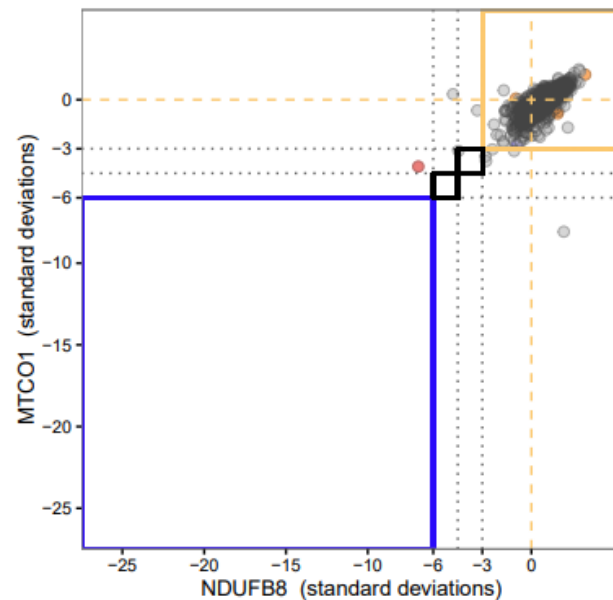


● Norm ● High

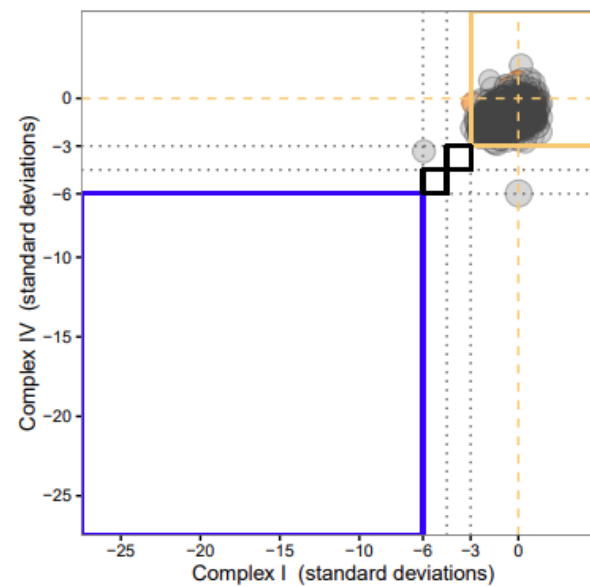
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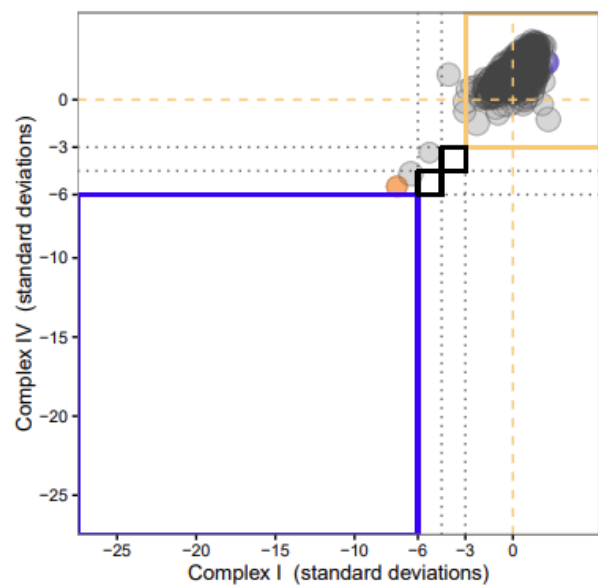
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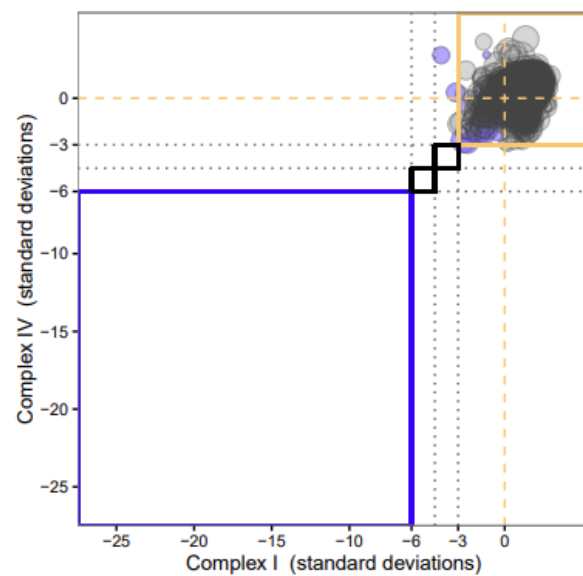
Porin ● Low ● Norm ● High ● Very high



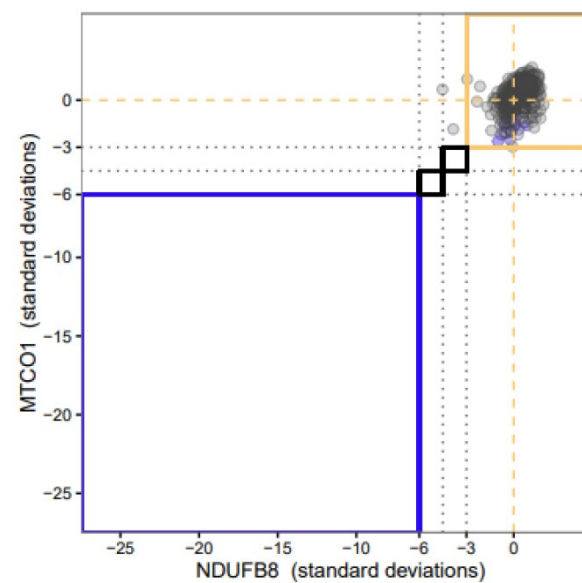
Porin ● Norm ● High



Porin ● Very low ● Norm ● High

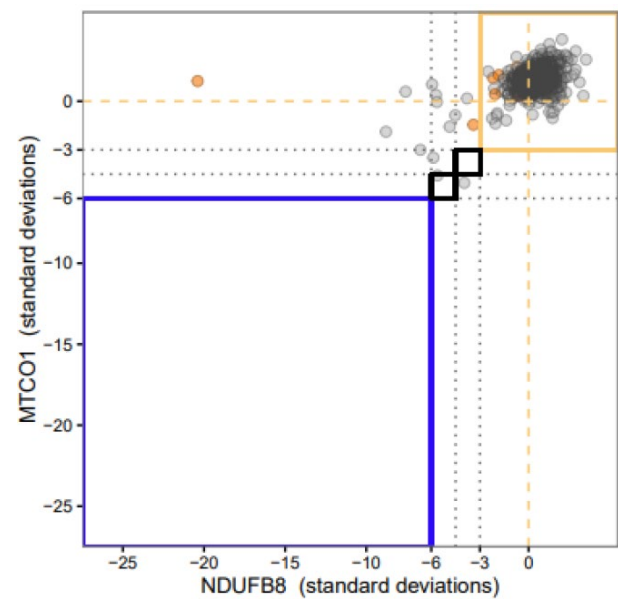


Porin ● Low ● Norm

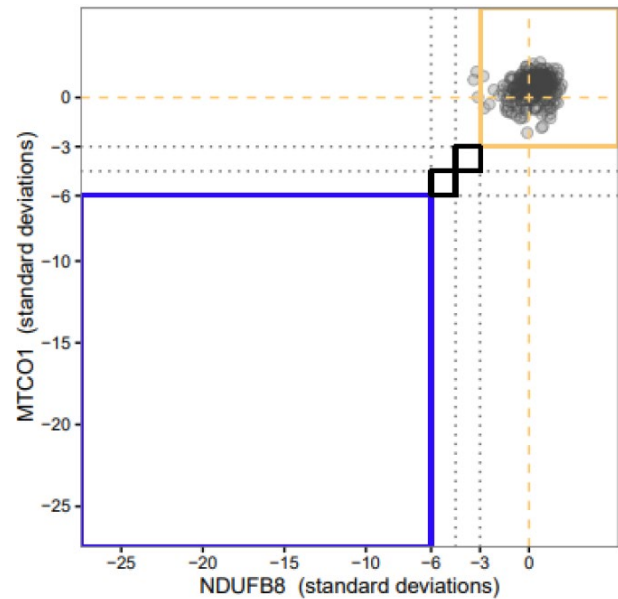


Porin ● Low ● Norm

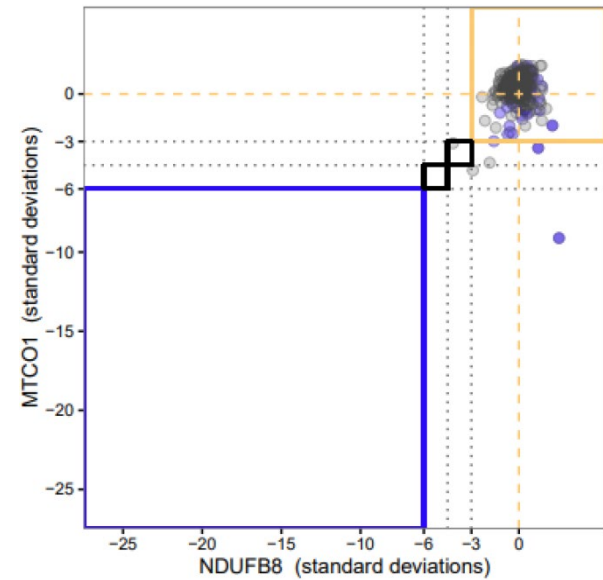
ART-treated PWH



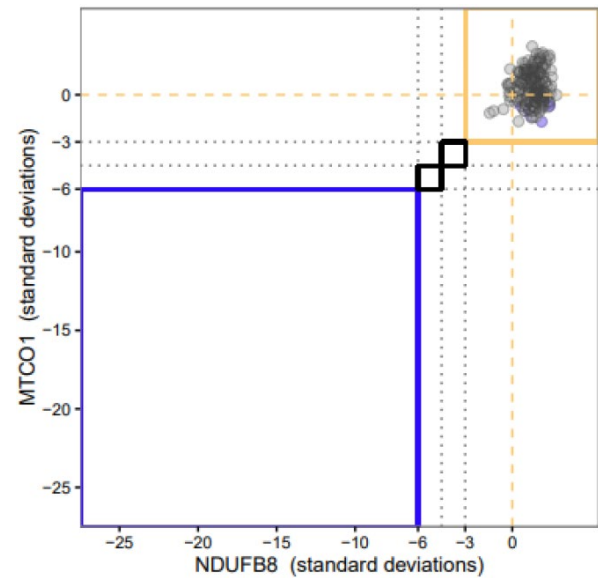
Porin ● Very low ● Norm ● High



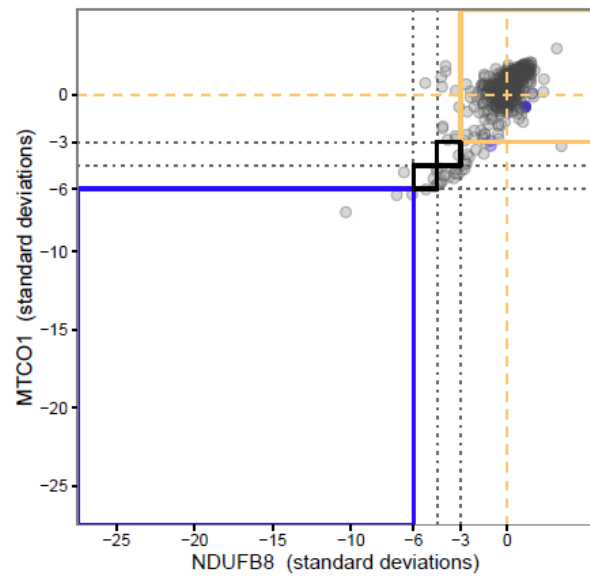
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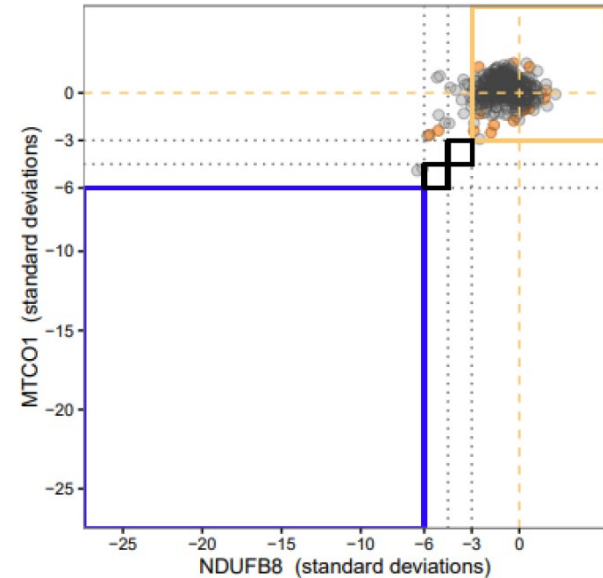
Porin ● Very low ● Low ● Norm



Porin ● Low ● Norm

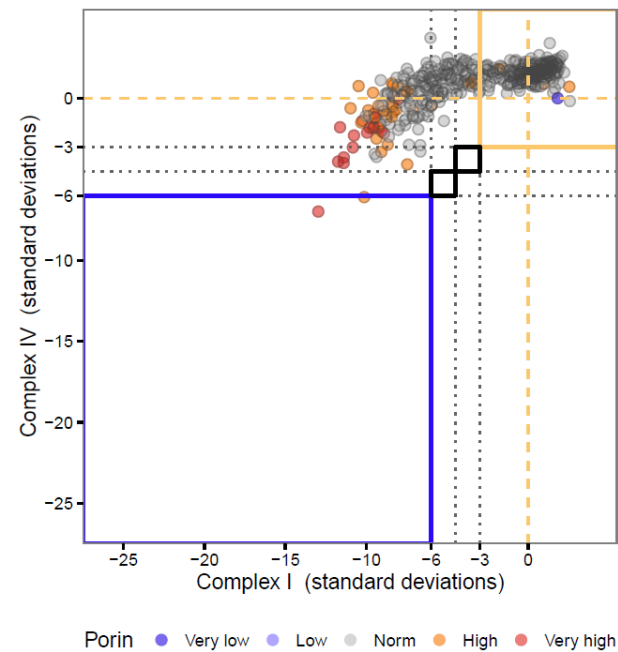
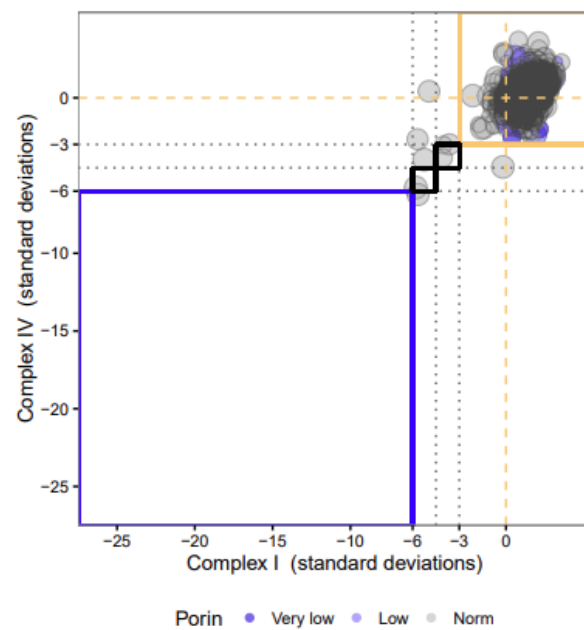
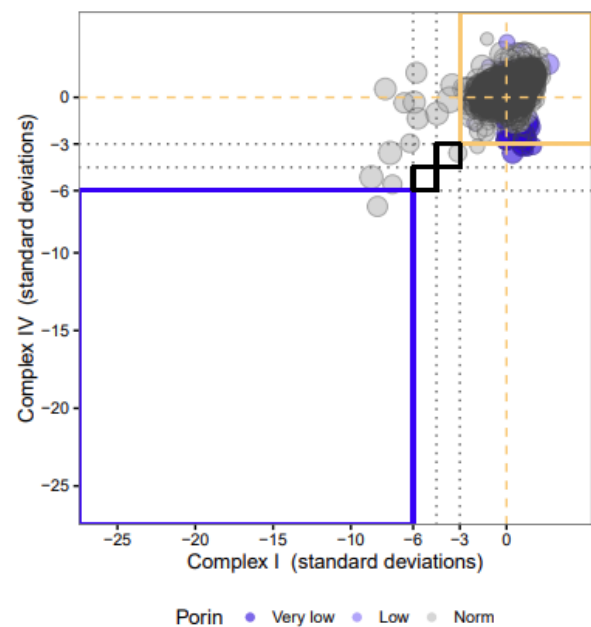
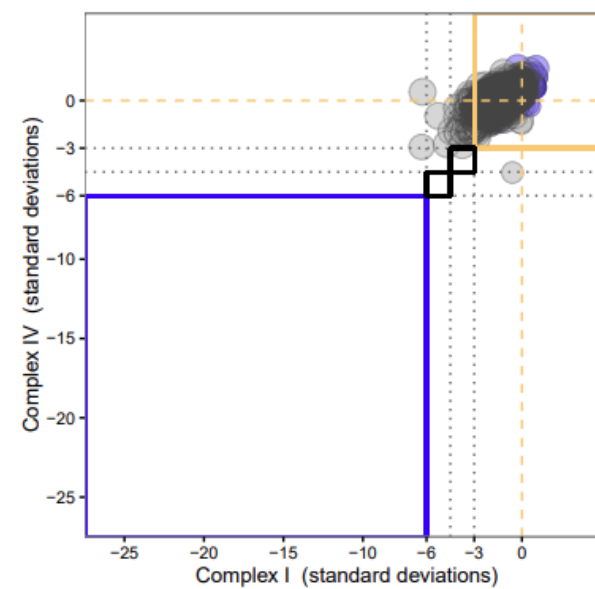
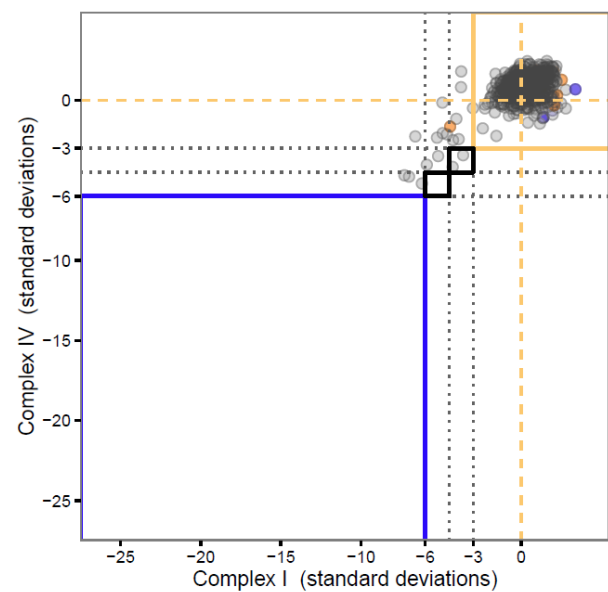
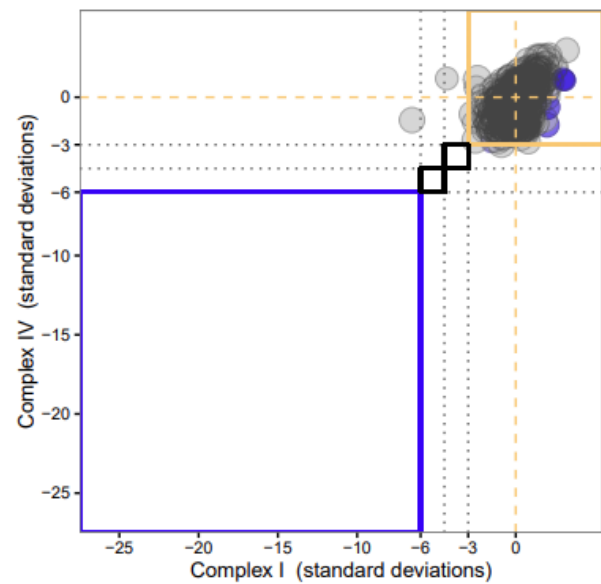


Porin ● Very low ● Low ● Norm

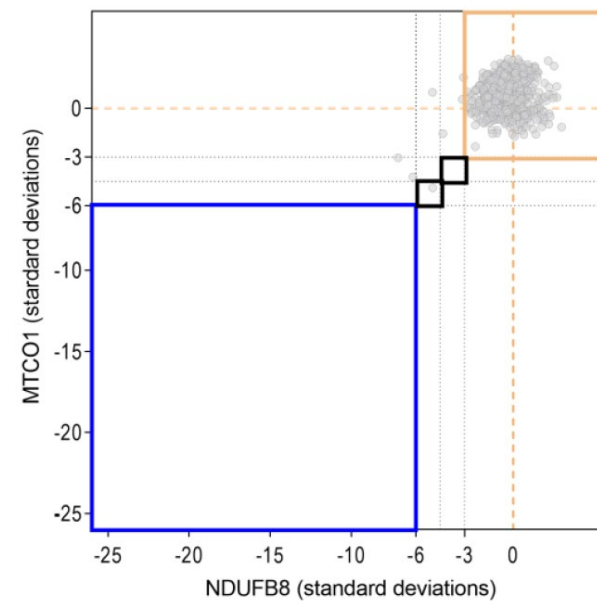
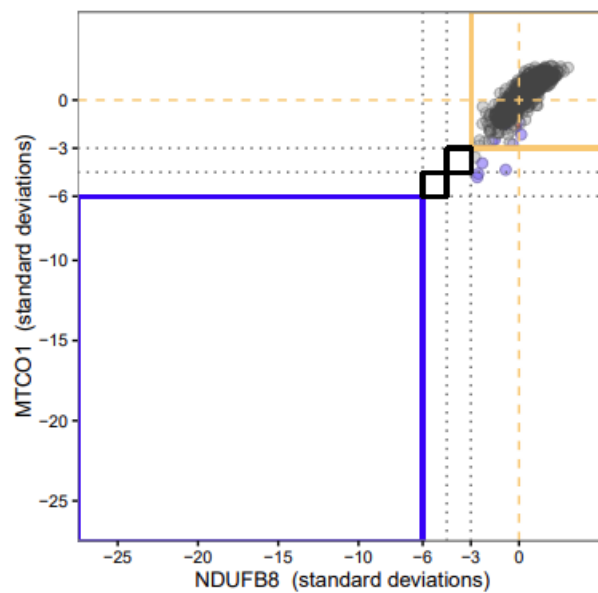
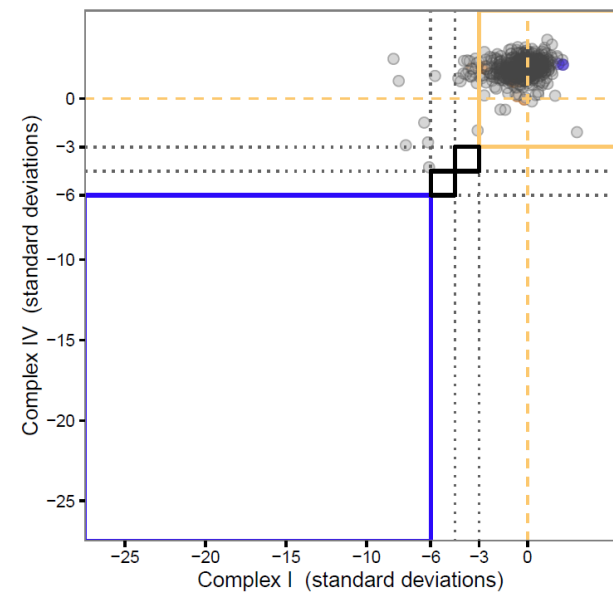
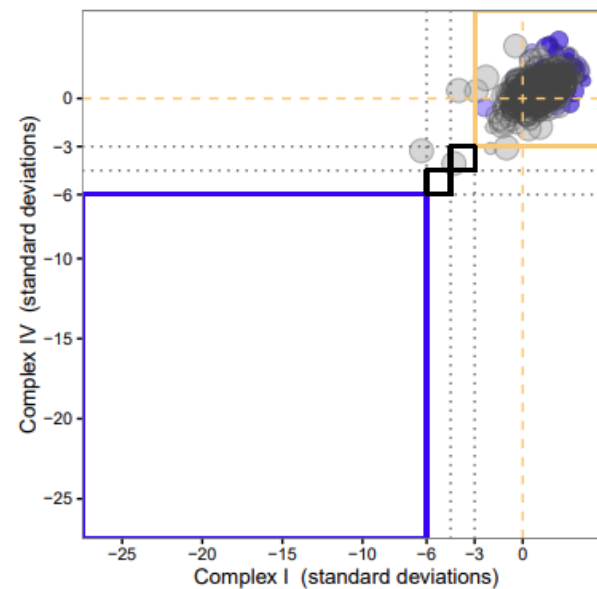
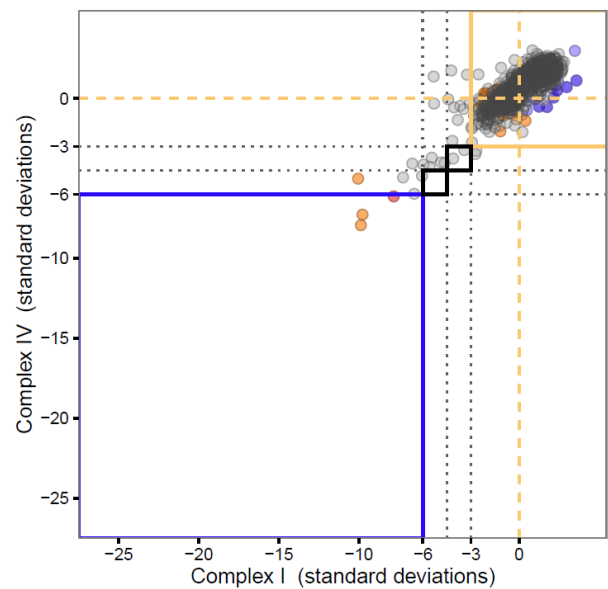
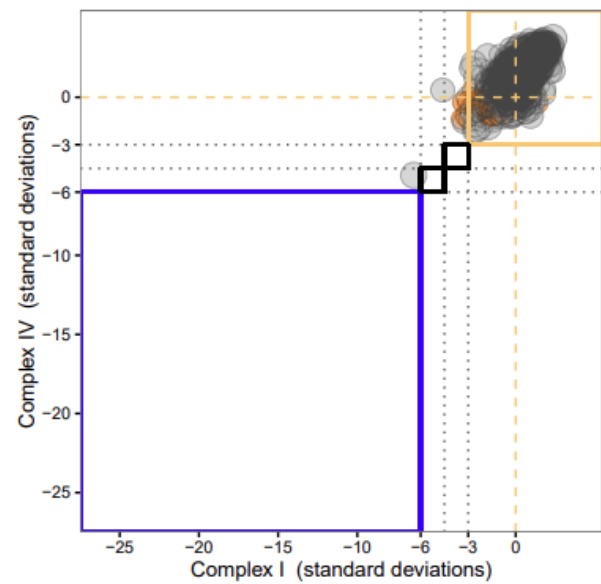


Porin ● Norm ● High

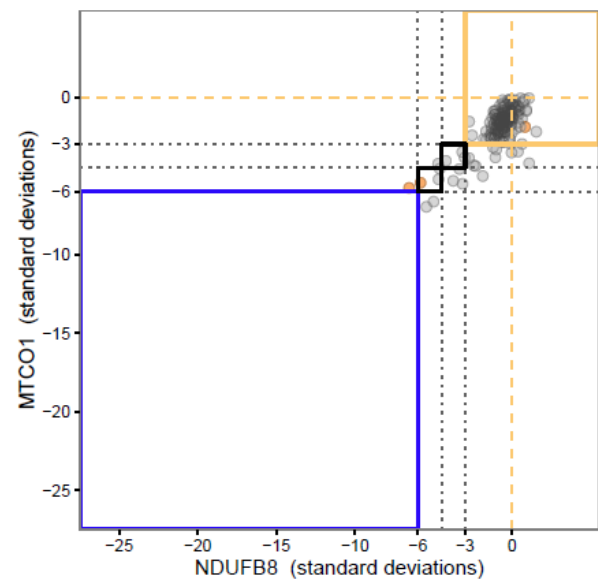
ART-treated PWH



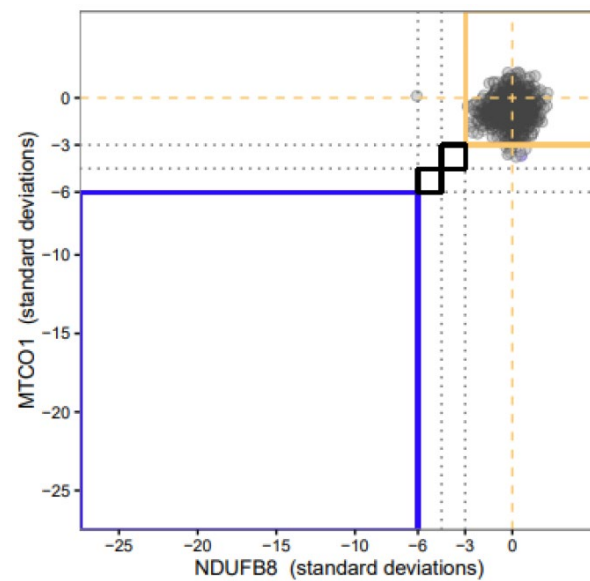
ART-treated PWH



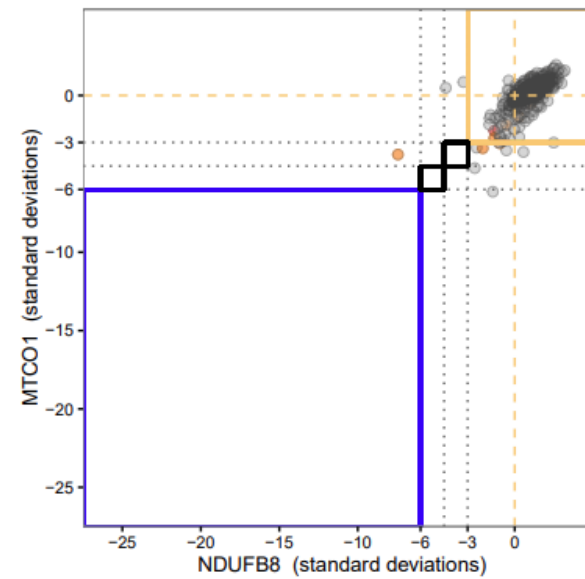
ART-treated PWH



Porin ● Norm ● High

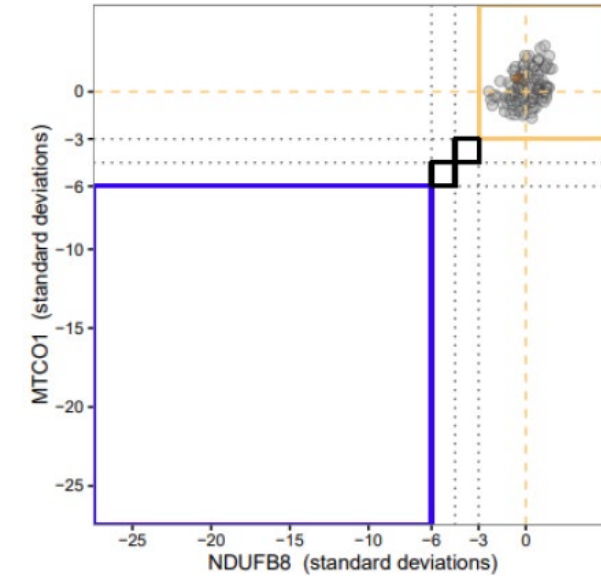
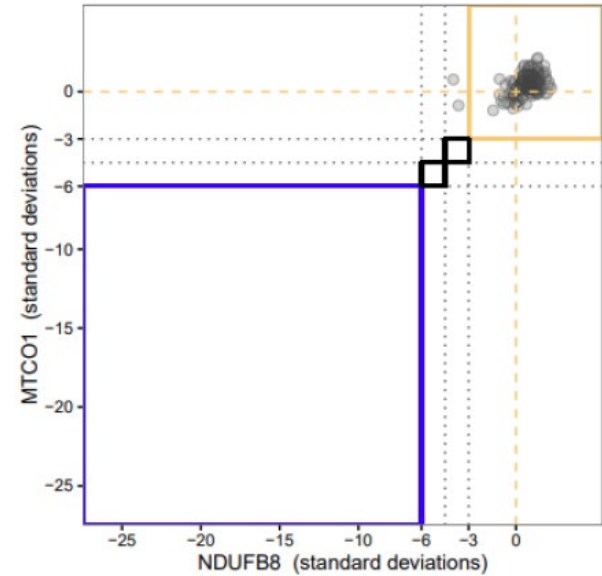
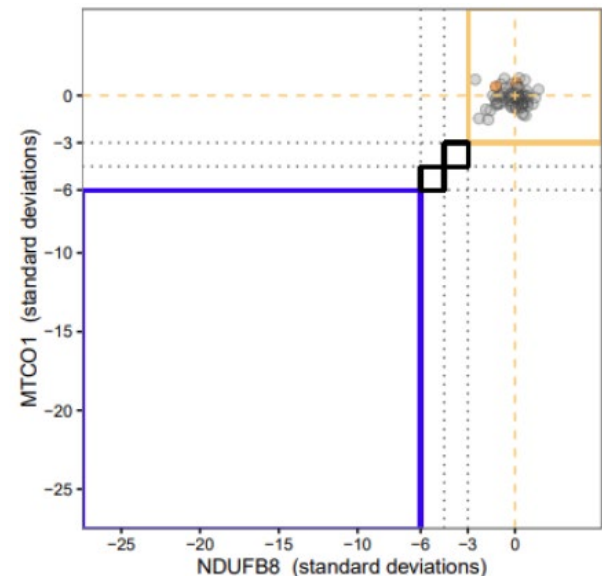
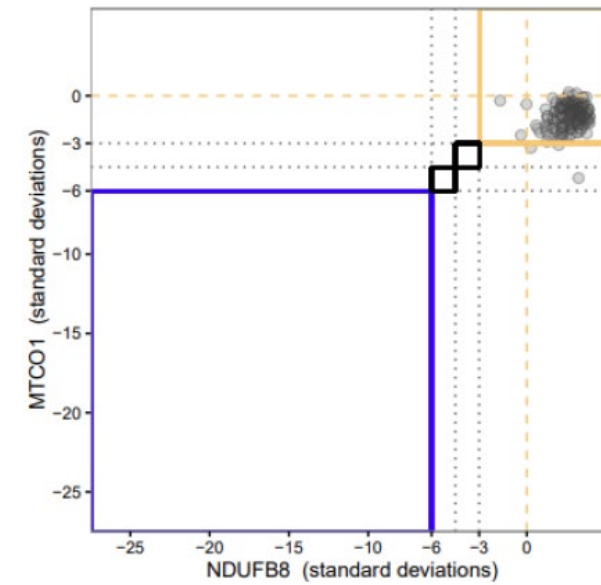
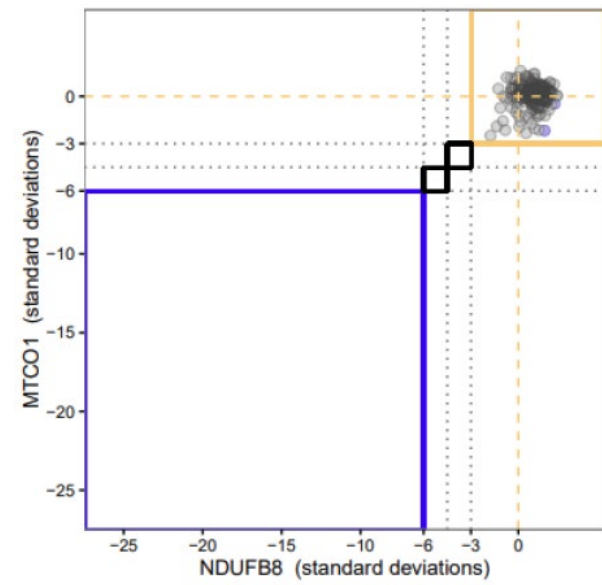
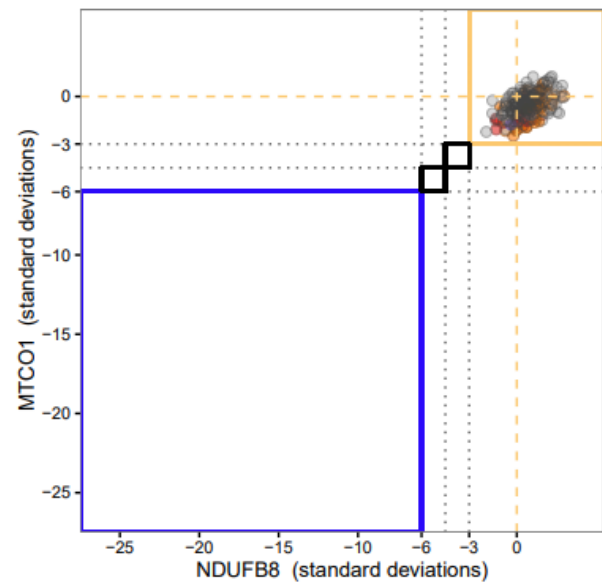


Porin ● Low ● Norm

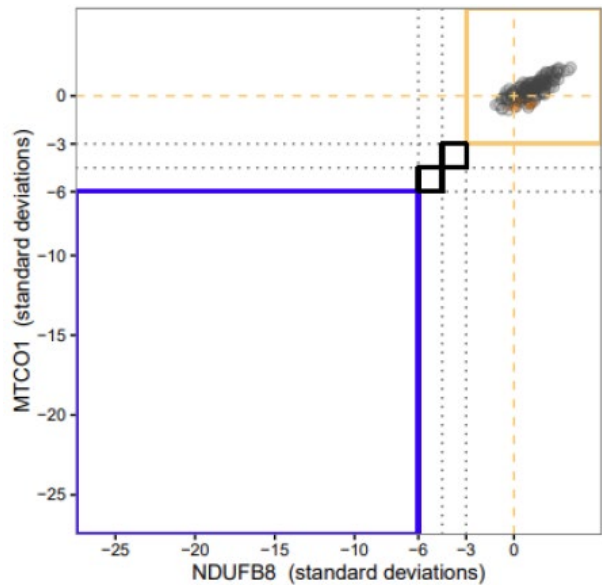


Porin ● Norm ● High ● Very high

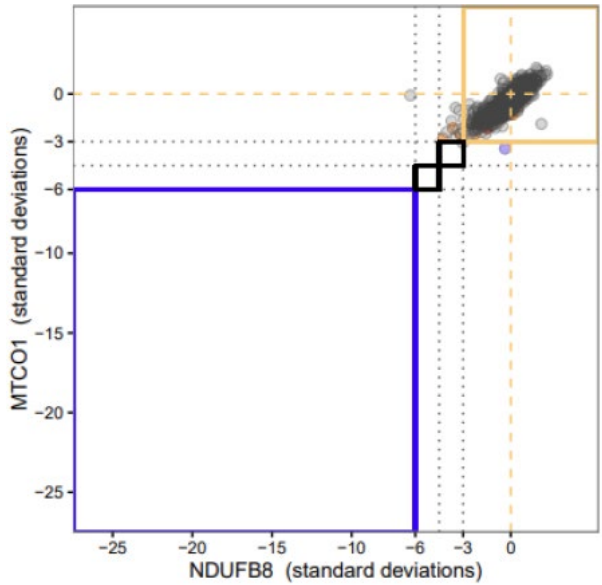
HIV negative



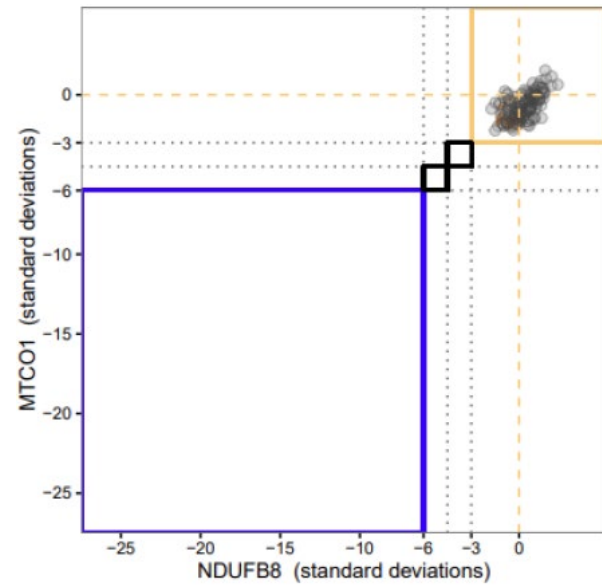
HIV negative



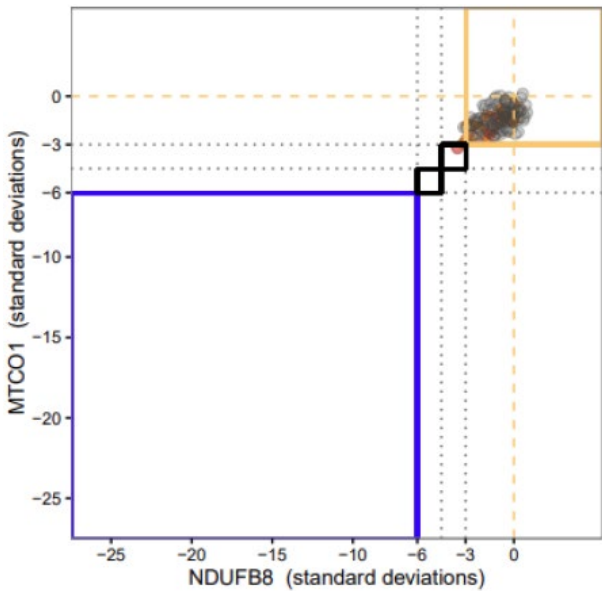
Porin ● Norm ● High



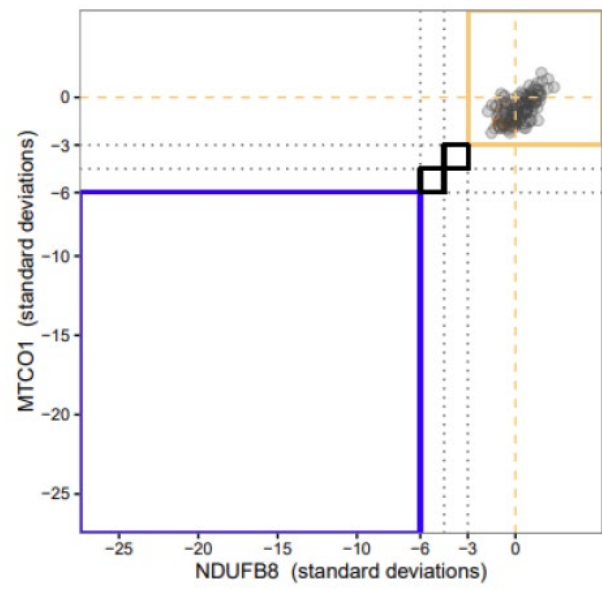
Porin ● Low ● Norm ● High ● Very high



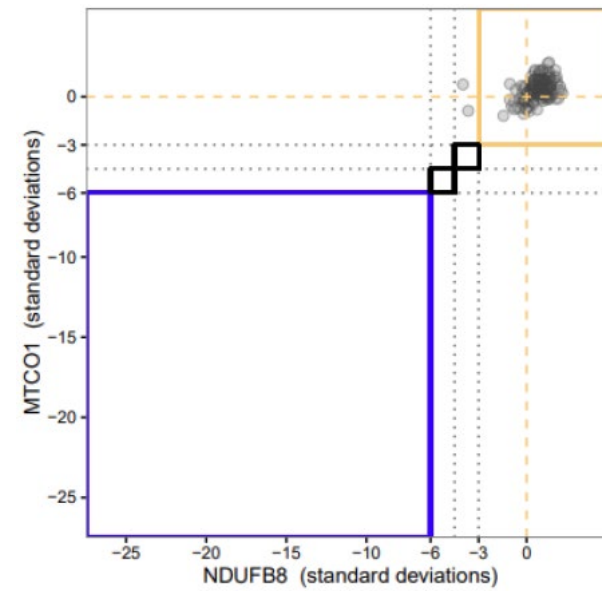
Porin ● Norm ● High ● Very high



Porin ● Norm ● High ● Very high

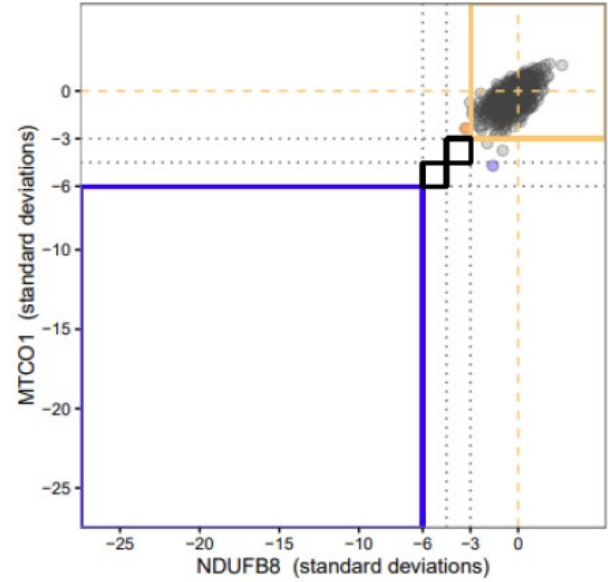


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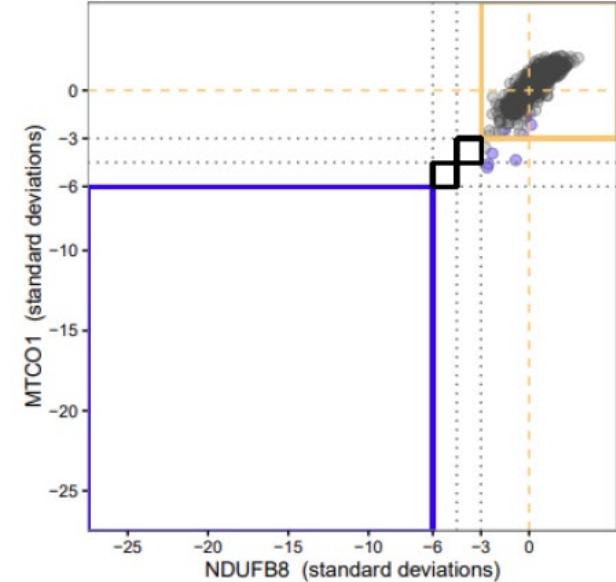


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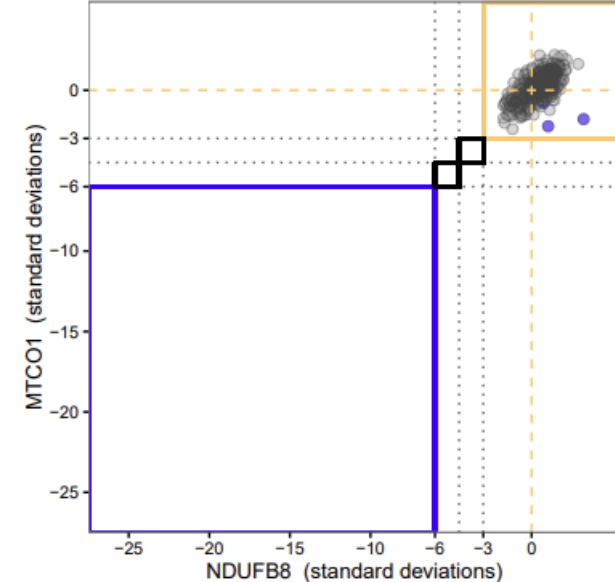
HIV negative



Porin ● Low ● Norm ● High ● Very high

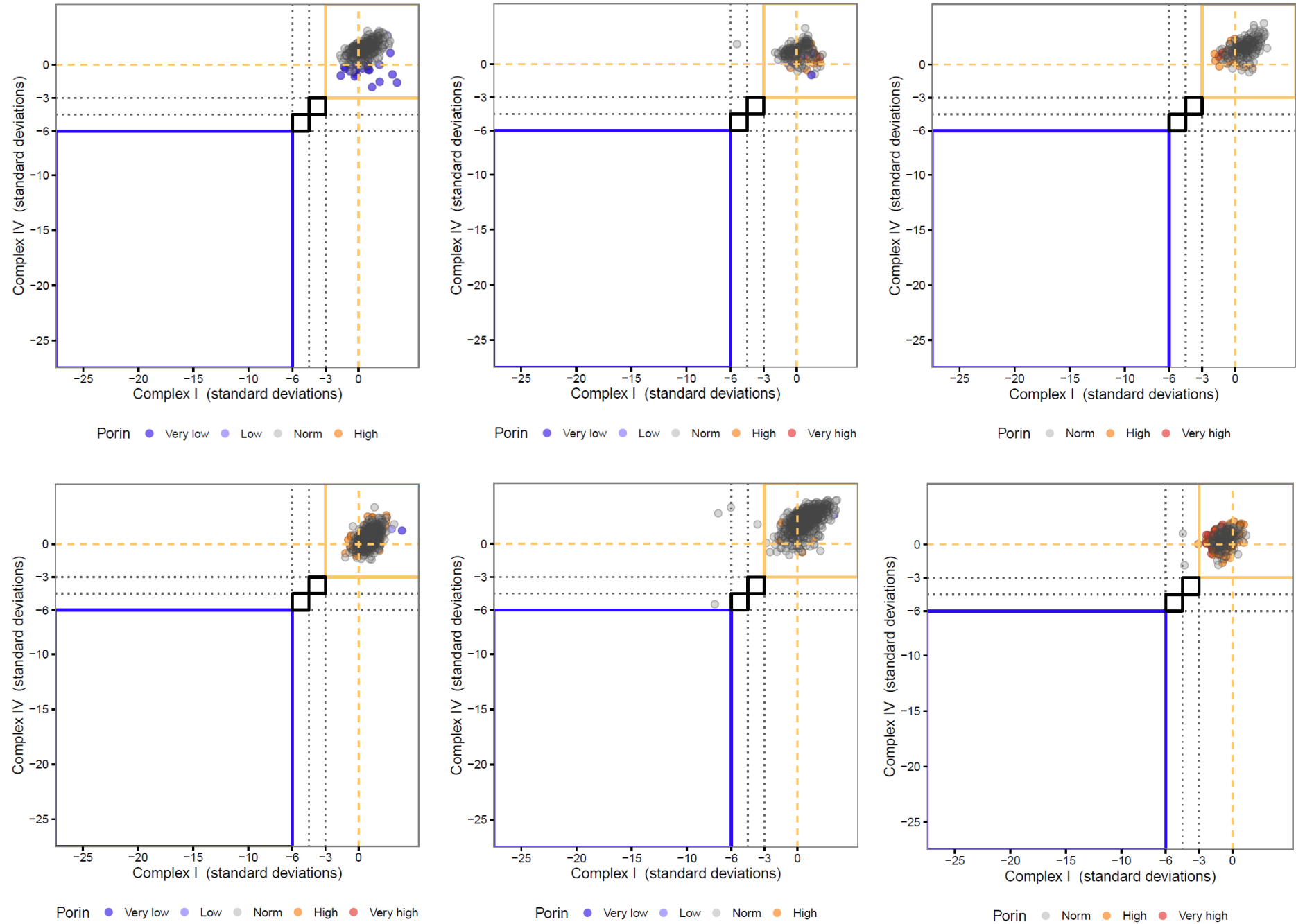


Porin ● Low ● Norm ● High



Porin ● Very low ● Norm ● High

ART-naive PWH



ART-naive PWH

