



**Supplementary Figure 1.** The biomarker oleamide over isocitrate, expressed as the LOG2 ratio, was plotted against each condition (non-carriers vs carriers). For carriers, the FXTAS stages were indicated. The data are shown as boxes, with each box enclosing 90% of the data. The bottom and top of each box represent 5% and 95% of the data. The 3 lines drawn inside each box represent the following: the middle line, the median value of the data (50%), whereas the lower and upper dashed lines represent 25% and 75% of the data, respectively.