

Figure 1 displays the distribution of gene lists by the number of genes in the set. The x-axis represents the Gene List Index, ranging from 0 to 18113 (in list) and 115 (in gene set). The y-axis represents the density function  $f(x)$  (top panel) and the cumulative distribution function  $F(x)$  (bottom panel).

The top panel shows the density function  $f(x)$  (red line) plotted against the Gene List Index. The curve starts at 0, rises to a peak at 2925, and then gradually decreases, crossing the x-axis at 8811. A horizontal dashed line is drawn at  $f(x) = 0$ .

The middle panel shows the number of gene lists (black vertical bars) plotted against the Gene List Index. The distribution is highly concentrated at low indices, with a peak at 2925.

The bottom panel shows the cumulative distribution function  $F(x)$  (green area) plotted against the Gene List Index. The curve starts at 0, rises sharply to a peak at 2925, and then gradually decreases, crossing the x-axis at 8811. The area under the curve is shaded green.

Key features of the distribution include:

- Peak at 2925
- Zero crossing at 8811
- Gene List Index: 0, 5000, 10000, 15000
- Number of genes: 18113 (in list), 115 (in gene set)

ES = 0.574 NES = 1.46 Nom. p-val= 0.0646 FWER= 0.895 FDR= 0.192

[illegible]