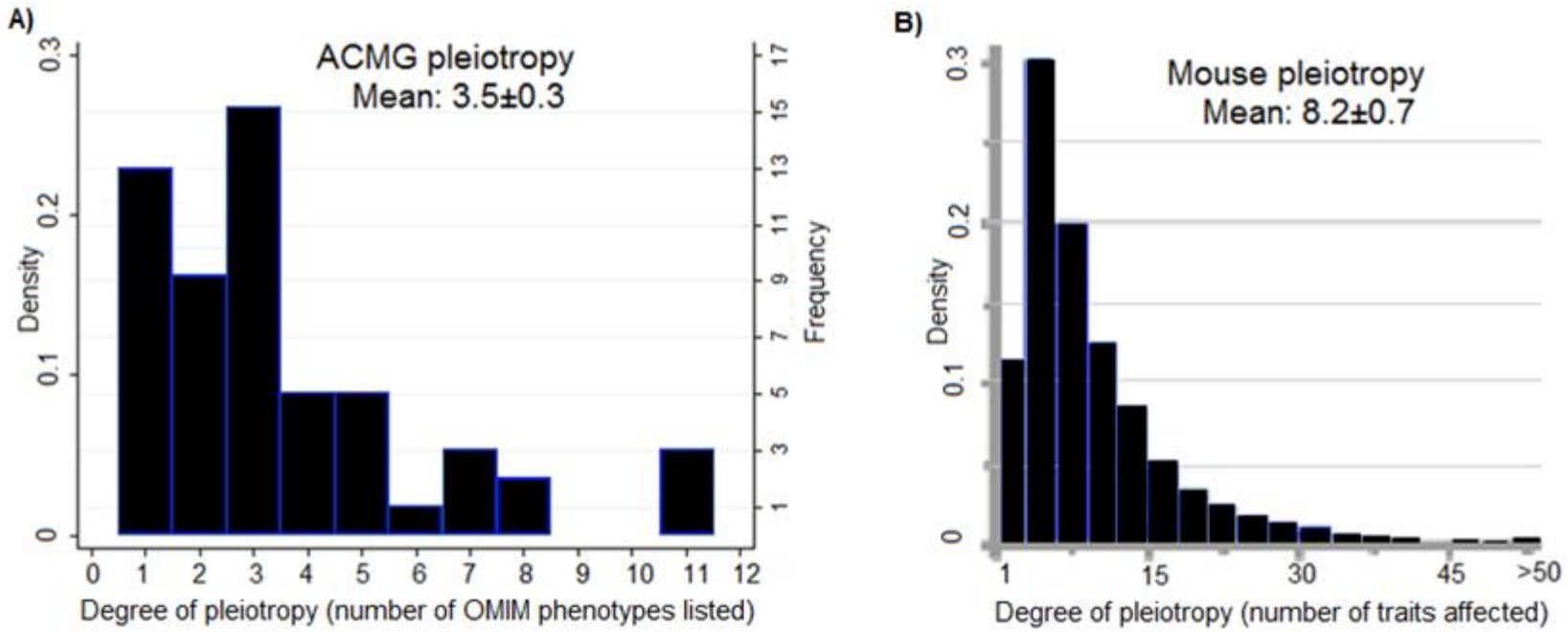
Supplementary Online Content

Kocarnik JM, Fullerton SM. Returning pleiotropic results from genetic testing to patients and research participants. *JAMA*. doi:10.1001/jama.2014.369

eFigure. Frequency Distributions of the Degree of Pleiotropy Observed in the Genes Listed in the ACMG Policy Statement and a Pleiotropy Screen in Mice

This supplementary material has been provided by the authors to give readers additional information about their work.

eFigure 1. Frequency distributions of the degree of pleiotropy observed in the genes listed in the ACMG policy statement and a pleiotropy screen in mice.



A) Number of unique MIM phenotypes associated with the 56 genes recommended for incidental return by the American College of Medical Genetics and Genomics. The number of MIM phenotypes (x-axis) for each gene was counted as the number of unique phenotype MIM numbers listed for each MIM gene given in the ACMG recommendations (mean = 3.5±0.3 phenotypes/gene). B) Frequency distribution of the degree of pleiotropy in a mouse knock-in/knock-down experiment, representing 4,915 genes and 308 traits (mean 8.2±0.7 phenotypes/gene). Figure B is modified from Wang et al. The distribution of pleiotropy observed in the ACMG recommendations is somewhat similar to the L-shaped distribution seen in the mouse experiment, suggesting that the distribution of pleiotropic relationships observed for these 56 genes could be representative of relationships that exist across the genome as a whole.

Wang Z, Liao BY, Zhang J. Genomic patterns of pleiotropy and the evolution of complexity. Proceedings of the National Academy of Sciences of the United States of America. 2010;107(42):18034-9. Epub 2010/09/30.