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Supplemental Information

**A Clinical Service to Support the Return
of Secondary Genomic Findings in Human Research**

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Cost estimates for a Secondary Genomics Findings Consultation service in the Intramural Research Program of the National Institutes of Health.

Table S1: Overall Costs

Number of Analyzed Exomes or genomes per year	Number of secondary findings per year	Salaries & Benefits (Table 2)	Sample intake costs	ABI Arrays	PCR Validations	Office & Computer Expenses	Fixed Costs*	Total Projected Cost	Cost per Exome
1,000	50	\$82,600	\$500	\$1,000	\$3,000	\$2,500	\$50,000	\$139,600	\$140
5,000	250	\$188,000	\$2,500	\$1,000	\$15,000	\$5,000	\$50,000	\$261,500	\$52
10,000	500	\$327,600	\$5,000	\$1,000	\$30,000	\$10,000	\$50,000	\$423,600	\$42
20,000	1,000	\$516,000	\$10,000	\$2,000	\$60,000	\$15,000	\$50,000	\$653,000	\$33

Fixed costs include software licensing, sequencer service contract and amortization, etc.

Table S2: Staffing Costs

	Annual Personnel Cost	Number of Exomes/Genomes Sequenced			
		1,000	5,000	10,000	20,000
Clinical Support	\$40,000	\$4,000	\$20,000	\$40,000	\$80,000
Bioinformatics	\$200,000	\$20,000	\$40,000	\$80,000	\$80,000
Lab Technician	\$60,000	\$9,000	\$12,000	\$30,000	\$60,000
Lab Director	\$200,000	\$40,000	\$80,000	\$120,000	\$200,000
Genetic Counselor	\$96,000	\$9,600	\$36,000	\$57,600	\$96,000
Lab costs					
Total		\$82,600	\$188,000	\$327,600	\$516,000
Per exome/genome		\$82.60	\$37.60	\$32.76	\$25.80

We have specified personnel costs using an estimated fraction of effort (e.g., for 1,000 exomes per year, we estimate it would require about 10% effort or 4 hours per week of a support person whose salary and benefits would be \$40,000 per year).

Laboratory costs were estimated to be

Scope of Staff Work:

Clinical Support: Arranging for sample intake/shipping, ordering, & patient scheduling.

Bioinformatician: Running filters to screen submitted variants for basic pathogenicity criteria, identifying relevant publications & database entries for variants that pass filters, programming duties, & updating filters.

Lab technician: Sample accessioning, DNA isolation, database entry, PCR validations, organizing and preparing data for Lab Dir.

Lab Director: CLIA licensing, training staff, monitoring literature, performing final pathogenicity determinations, reviewing and signing final reports, proposing gene list changes.

Genetic Counselor: Returning findings to research participants (obtain pedigree, provide genetic counseling, and communicating result to identified local provider).