EXAMPLE OF A COMPARISON REPORT FOR MULTIPLE TEST EVALUATION (Mock CGP Data)

- May 2022

Center for Genomic Interpretation

ELEVATEGENETICS BRILLIANT

Advanced *in silico* proficiency testing. For Research Use Only. Not for clinical use.

COMPARATIVE REPORT ISSUED to [CLIENT]: 18 March 2022

Test Providers	Test Provider Contacts
Laboratory A: Test A	**Laboratory A:** Name & email
Laboratory B: Test B	**Laboratory B:** Name & email
Laboratory C: Test C	**Laboratory C:** Name & email
Laboratory D: Test D	**Laboratory D:** Name & email
Laboratory E: Test E	**Laboratory E:** Name & email

DID THE TEST RECOMMEND THE CORRECT FDA-APPROVED DRUG(S)?

Mock Patient #	Test Type: Comprehensive Genomic Profiling				
	Lab A	Lab B	Lab C	Lab D	Lab E
1	Correct	Incorrect	Correct	Correct	Correct
2	Correct	Correct	Correct	Correct	Incorrect
3	Correct	Incorrect	Correct	Correct	Incorrect
4	Correct	Correct	Correct	Correct	Incorrect
5	Correct	Incorrect	Incorrect	Correct	Incorrect
6	Incorrect	Incorrect	Correct	Incorrect	Correct
7	Correct	Correct	Correct	Correct	Correct
8	Incorrect	Correct	Correct	Incorrect	Correct
9	Correct	Incorrect	Correct	Correct	Correct
10	Incorrect	Correct	Correct	Correct	Correct

Clinical Impact Challenges in Mock Patient *in silico* Samples

Clinical Challenge	Mock Patient #	Details	Test				
			A	B	C	D	E
CDx Variant Detection & Labeling	1	Recommend CDx	✓	✗	✓	✓	✓
	3	Recommend CDx	✓	✗	✓	✓	✗
	4	Recommend CDx	✓	✓	✓	✓	✗
	5	Recommend CDx	✓	✗	✗	✓	✗
	6	Recommend CDx	✗	✗	✓	✗	✓
Germline Detection & Reporting	2	Report germline mutation and suggest follow-up confirmation testing	✓	✓	✓	✓	✓
	8	Report germline mutation and suggest follow-up confirmation testing & recommend CDx	✗	✓	✓	✗	✓
Variant Class-ification	1	Exon skipping status is unclear and should be reported as such	✓	✓	✓	✓	✓
	2	Appropriate variant naming for obliterated RNA transcripts	✓	✓	✓	✓	✗
	3	Exon skipping unclear	✓	✓	✓	✓	✓
	4	Obliterated transcript	✓	✓	✓	✓	✓
	9	Obliterated transcript	✓	✗	✓	✓	✓
	10	Exon skipping unclear	✗	✓	✓	✓	✓

Report Methods and Disclaimer

For details on each laboratory's individual performance, please see the individual laboratory report. This report is a high-level overview for comparative purposes only and does not represent all analyses performed by CGI.

The variants tested represent both simple and complex classification challenges. While some variants had clear indications for classification based on status as an FDA-approved companion diagnostic (CDx), other complex classifications were graded more broadly based on the presentation of the variant and justification given on the final report.

Report Summary

In silico proficiency testing samples were given a rating of **Correct** if the final report for the sample clearly highlighted the most appropriate biomarker indicated treatment based on the treatment CDx Intended Use and the drug label for Indications and Usage. *In silico* proficiency testing samples were given a rating of **Incorrect** if the final report for the sample missed or failed to meaningfully highlight the most appropriate biomarker indicated treatment based on the treatment CDx Intended Use and the drug label for Indications and Usage.

Clinical Impacts Challenges

In silico proficiency testing samples each contained *in silico* variants intended to test certain clinically relevant technical and variant classification challenges. They are categorized and scored with a **check mark** if the laboratory got the result **correct** on the final report and intermediate steps, or marked with an **X mark** if the laboratory **failed to correctly** handle the *in silico* variant challenge.