

2023

# Genetic Test Price Transparency Report

Reimbursement trends for frequently  
ordered genetic tests

*November 2023*

# INTRODUCTION

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For more than a decade Concert has provided information and insight on the landscape of genetic testing, highlighting the patterns of genetic test usage and reimbursement. In 2022, Concert released the first-ever Genetic Test Price Transparency Report. Concert is following up that report with this 2023 Genetic Test Price Transparency Report.

In the near term, Concert anticipates that this report will open the door for additional complementary analyses. And in the longer term, greater transparency can create market opportunities for existing players and for new entrants, spurring competition that lowers costs, increases patient (or consumer) value, and ultimately improves health outcomes.

Concert's data and systems make this unique report possible. After organizing more than 175,000 testing products and using patented machine learning on a claims dataset of nearly 46 million commercial lives, the resulting report shows the prices, price variability and historic trends by test category for a large portion of the commercially insured population in the United States.

## KEY OBSERVATIONS

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As in the 2022 report, the significant price decreases long-theorized<sup>1</sup> have not yet reached commercially insured health consumers. However, aggregate price increases have flattened and most categories had price decreases in the last year.

- **Aggregate Price Increases Flattening.** From 2018 to 2022, the median prices for the top 20 categories increased over 20% on average. Only 0.7% of that increase occurred in the last year (between 2021 and 2022).
- **Most Categories Seeing Price Decreases.** From 2018 to 2022, nine test categories had flat or decreasing median prices. Whereas in the last year, fifteen test categories had price decreases and two had price increases (Pharmacogenetic Neuropsychiatric Panel Tests and Exome Sequencing Tests).

Price variability and the use of stacked codes decreased slightly but remained high, indicating opportunity for prices to decrease further.

- **Price Variability Decreasing Marginally.** Average price variability decreased from 79.87% to 77.57% between 2021 and 2022, with five categories having price variability greater than 100% in one of the years (Expanded Carrier Panel Tests, BRCA1/2 Sequencing & Deletion/Duplication Tests, Pharmacogenetic Neuropsychiatric Panel Tests, Exome Sequencing Tests, and Non-invasive Prenatal Screening (NIPS) Expanded Panel Tests).
- **Number of Codes Decreasing Slightly.** Average codes per claim declined from 2.71 to 2.40 between 2021 and 2022, with four categories with 3+ codes dropping to three categories (Expanded Carrier Panel Tests, Pharmacogenetic Neuropsychiatric Panel Tests, Cell-Free DNA Cancer Profiling Panel Tests (51 or more genes), Lynch Syndrome / Hereditary Nonpolyposis Colorectal Cancer (HNPCC) Panel Tests; with cfDNA dropping out), and five categories with 2-3 code dropping to four categories.

**Spend Growth Outpacing Most Medical Services.** These pricing trends are amplified by the continued rapid growth in spending on genetic testing. From 2018 to 2022, per member per year (PMPY) spend increased 73%, with 14% of that increase in the last year.

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<sup>1</sup> Hayden, Ericka Check. "Technology: The \$1,000 genome." Nature, 19 March 2014, <https://www.nature.com/articles/507294a>.

## PRICES OF HIGHEST-SPEND TEST CATEGORIES

Price, price variation and code stacking for the highest spend test categories are summarized below. More details for select categories (in **bold**) can be found on the following pages. Report methods, data and definitions can be found at the end of the report.

2022 Spend Rank	2021 Spend Rank	Concert Genetics Test Category	2022 Average Codes	2022 Price Variability	2022 Median Price	2018-2022 Price Change
1	1	FIT-DNA Colorectal Cancer Screening Tests*	1.00	3%	-	2.0%
2	2	<b>Non-invasive Prenatal Testing (NIPT) for Chromosome 13, 18, 21, X, and Y Aneuploidies</b>	1.01	41%	\$637	-9.0%
3	3	<b>Expanded Carrier Panel Tests</b>	8.96	266%	\$1,591	-12.8%
4	4	<b>BRCA1/2 Sequencing Tests &amp; Deletion/Duplication Tests</b>	1.00	126%	\$1,799	-27.6%
5	5	Breast Cancer Treatment and Prognostic Algorithmic Tests	1.00	10%	\$4,052	4.9%
6	6	<b>Thyroid Cancer Diagnostic Algorithmic Tests</b>	1.10	35%	\$3,600	33.3%
7	10	Basic Carrier (CFTR, FMR1, SMN1/2, HBB) Panel Tests	2.34	89%	\$609	0.06%
8	7	<b>Tumor-Type Agnostic Molecular Solid Tumor Profiling Panel Tests (51 or more genes)</b>	1.92	72%	\$2,920	-0.9%
9	8	<b>Pharmacogenetic Neuropsychiatric Panel Tests</b>	7.37	76%	\$1,348	365.7%
10	11	Exome Sequencing Tests	2.75	249%	\$9,545	17.1%
11	12	<b>Pan-Cancer Hereditary Cancer Panel Tests</b>	2.66	79%	\$1,418	-48.7%
12	13	Cell-Free DNA Cancer Profiling Panel Tests (51 or more genes)*	2.58	36%	-	5.7%
13	9	Non-invasive Prenatal Screening (NIPS) Expanded Panel Tests	2.05	106%	\$1,123	16.3%
14	14	Prostate Cancer Treatment and Prognostic Algorithmic Tests	1.00	33%	\$3,485	36.3%
15	15	CFTR Mutation Panel (Carrier Screening) Tests	1.02	58%	\$530	-4.8%
16	>20	Cutaneous Melanoma Prognostic Algorithmic Tests*	1.00	40%	-	30.3%
17	17	Lynch Syndrome / Hereditary Nonpolyposis Colorectal Cancer (HNPCC) Panel Tests	5.65	81%	\$1,782	18.8%
18	>20	Blood-Based Post Heart Transplant Gene Expression Panels for Rejection Risk	1.02	14%	\$3,240	0.0%
19	19	Chromosomal Microarray (SNP and CGH) Tests	1.14	85%	\$732	-15.9%
20	16	Cutaneous Melanoma Risk Assessment Algorithmic Tests	1.46	50%	\$760	0.0% (2020-22)

\* Category has one dominant lab that has been reimbursed for the associated test(s). Prices have been masked.

## DETAILS FOR SELECT TEST CATEGORIES

Below are additional price and coding details for select test categories.

### Non-invasive Prenatal Testing (NIPT) for Chromosome 13, 18, 21, X, and Y Aneuploidies

	2018	2019	2020	2021	2022	2018-2022 Average Annual Price Change	2018-2022 Price Change
<b>Price per Test</b>							
<i>Lower Quartile</i>	\$531	\$564	\$550	\$540	\$531	0.00%	0.00%
<i>Median</i>	\$700	\$700	\$660	\$645	\$637	-1.86%	-8.96%
<i>Upper Quartile</i>	\$800	\$811	\$795	\$750	\$750	-1.28%	-6.25%
<b>Price Variability</b>	51%	44%	45%	39%	41%		
<b>Average Codes per Claim</b>	1.15	1.03	1.03	1.01	1.01		

### Expanded Carrier Panel Tests

	2018	2019	2020	2021	2022	2018-2022 Average Annual Price Change	2018-2022 Price Change
<b>Prices</b>							
<i>Lower Quartile</i>	\$973	\$1,021	\$752	\$791	\$773	-4.51%	-20.60%
<i>Median</i>	\$1,826	\$1,592	\$1,429	\$1,518	\$1,591	-2.71%	-12.84%
<i>Upper Quartile</i>	\$2,313	\$2,927	\$2,594	\$2,767	\$2,831	4.06%	22.01%
<b>Price Variability</b>	138%	187%	245%	250%	266%		
<b>Average Codes per Claim</b>	13.96	11.08	10.77	9.42	8.96		

## BRCA1/2 Sequencing Tests

	2018	2019	2020	2021	2022	2018-2022 Average Annual Price Change	2018-2022 Price Change
<b>Prices</b>							
<i>Lower Quartile</i>	\$1,500	\$1,440	\$1,405	\$1,115	\$1,115	-5.76%	-25.65%
<i>Median</i>	\$2,486	\$1,957	\$2,031	\$1,825	\$1,799	-6.26%	-27.63%
<i>Upper Quartile</i>	\$2,781	\$2,525	\$2,525	\$2,525	\$2,525	-1.92%	-9.22%
<b>Price Variability</b>	85%	75%	80%	126%	126%		
<b>Average Codes per Claim</b>	1.58	1.00	1.00	1.00	1.00		

## Thyroid Cancer Diagnostic Algorithmic Tests

	2018	2019	2020	2021	2022	2018-2022 Average Annual Price Change	2018-2022 Price Change
<b>Prices</b>							
<i>Lower Quartile</i>	\$612	\$1,262	\$2,160	\$2,700	\$2,700	31.52%	293.48%
<i>Median</i>	\$2,700	\$2,767	\$3,600	\$3,600	\$3,600	5.92%	33.33%
<i>Upper Quartile</i>	\$3,950	\$3,634	\$3,700	\$3,708	\$3,634	-1.65%	-8.00%
<b>Price Variability</b>	546%	188%	71%	37%	35%		
<b>Average Codes per Claim</b>	1.28	1.34	1.34	1.19	1.10		

## Tumor-Type Agnostic Molecular Solid Tumor Profiling Panel Tests (51 or more genes)

	2018	2019	2020	2021	2022	2018-2022 Average Annual Price Change	2018-2022 Price Change
<b>Prices</b>							
<i>Lower Quartile</i>	\$2,100	\$2,320	\$2,625	\$2,120	\$2,029	-2.26%	-10.80%
<i>Median</i>	\$2,625	\$3,500	\$3,500	\$2,950	\$2,920	-0.18%	-0.92%
<i>Upper Quartile</i>	\$4,386	\$4,897	\$4,500	\$3,500	\$3,500	-5.63%	-25.16%
<b>Price Variability</b>	109%	111%	71%	65%	72%		
<b>Average Codes per Claim</b>	6.29	4.20	4.27	2.45	1.92		

## Pharmacogenetic Neuropsychiatric Tests

	2018	2019	2020	2021	2022	2018-2022 Average Annual Price Change	2018-2022 Price Change
<b>Prices</b>							
<i>Lower Quartile</i>	\$224	\$238	\$554	\$856	\$973	34.10%	333.72%
<i>Median</i>	\$331	\$714	\$1,155	\$1,200	\$1,348	36.03%	365.74%
<i>Upper Quartile</i>	\$1,162	\$1,366	\$1,564	\$1,700	\$1,714	8.53%	50.61%
<b>Price Variability</b>	418%	474%	183%	99%	76%		
<b>Average Codes per Claim</b>	5.69	6.41	7.46	8.15	7.37		

## Pan-Cancer Hereditary Cancer Panel Tests

	2018	2019	2020	2021	2022	2018-2022 Average Annual Price Change	2018-2022 Price Change
<b>Prices</b>							
<i>Lower Quartile</i>	\$1,908	\$1,491	\$1,380	\$1,156	\$1,074	-10.85%	-43.69%
<i>Median</i>	\$2,818	\$2,525	\$1,490	\$1,483	\$1,418	-12.48%	-48.66%
<i>Upper Quartile</i>	\$3,928	\$3,817	\$2,593	\$2,601	\$1,919	-12.69%	-49.28%
<b>Price Variability</b>	106%	156%	88%	125%	79%		
<b>Average Codes per Claim</b>	5.52	5.36	4.54	3.46	2.66		



# DATA & METHODOLOGY

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## Report Data

The Concert Genetics claims dataset includes genetic testing claims processed by health plans covering an average annual membership of 44.6 million commercially insured individuals nationwide over the analysis period of 2018-2022. The 2018-2022 dataset includes 12.3 million genetic test claims, of which 10.4 million were fully paid (no service lines denied). This report excludes claims that had any genetic test service line denied. The dataset does not contain claims for Medicare Advantage or Medicaid members, and it excludes tests that were not billed to insurance.

Using an algorithm for classification<sup>2</sup>, claims were mapped to the relevant category within the Concert Taxonomy. The Concert Taxonomy is a market taxonomy describing over 175,000 testing products marketed by U.S. Laboratories and maintained as a registry in the Concert Test Catalog database. The test catalog database contains information from public websites and direct integrations, curated and standardized by Concert Genetics. The test catalog data does not include information on in-house tests that are not marketed externally. Tests are categorized by clinical domain and type (scope of analytes assayed by the test). All tests are tracked using a standard identification code, known as the Genetic Testing Unit or GTU, developed and owned by the company.

## Analysis & Definitions

Concert Genetics analyzed claims data for the period from January 2018 through December 2022 to examine commercial payers' spending on genetic tests. Concert identified genetic testing claims using the relevant Healthcare Common Procedure Coding System (HCPCS) codes. Concert defined price as the allowed amount on the claim, which includes both the amount the health plan paid and the amount paid by the patient as copayment or coinsurance. Calendar year is based on the claim service date. Concert Genetics' patented machine learning matched claims data to the appropriate categories in its catalog. Concert analyzed the price and coding distributions for claims/tests for each category to determine lower/median/upper quartile price points and the average number of HCPCS codes. Specific terms and calculations can be found below.

### Price

In this report, price is the amount health plans paid for each test, as determined by the allowed amount on paid claims. The allowed amount includes both the amount the health plan paid and

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<sup>2</sup> Schneider et al. 2019. Systems and methods for tracking, monitoring, and standardizing molecular and diagnostic testing products and services. US Patent 10,223,501, filed November 3, 2017.

the amount paid by the patient as copayment or coinsurance. To avoid disclosure of a particular lab's contracted prices, no prices have been published for test categories with only one laboratory provider.

### Spend Rank

Concert Genetics test categories were ranked by how many total dollars were allowed (“total spend”) by health plans for tests in that category.

### Average Codes / Average Codes per Claim

The average number of HCPCS codes that were billed for tests in the category.

### Price Variability

To provide an indicator of price variability for a test category, Concert Genetics used the Quartile-based Coefficient of Variation. The Quartile-based Coefficient of Variation is calculated by subtracting the Lower Quartile (Q1) price from the Upper Quartile (Q3) price, then dividing the difference by the Lower Quartile (Q1) price ( $\frac{Q3-Q1}{Q1}$ ). Higher percentages indicate greater price variability.

### Lower Quartile/Median/Upper Quartile Prices

Organizing all paid tests/claims in a test category from the lowest paid price to the highest paid price, the:

- Lower quartile price is the price paid for the test 25% of the way through the data series.
- Median price is the price paid for the test in the middle of the data series.
- Upper quartile price is the price paid for the test 75% of the way through the data series.

### 2018-2022 Average Annual Price Change

The compound annual growth rate (CAGR) from 2018 to 2022 of the median prices.

### 2018-2022 Price Change

The percentage that the median price increased or decreased between 2018 and 2022.

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For additional detail, as well as pricing data and services, email [connect@concertgenetics.com](mailto:connect@concertgenetics.com).