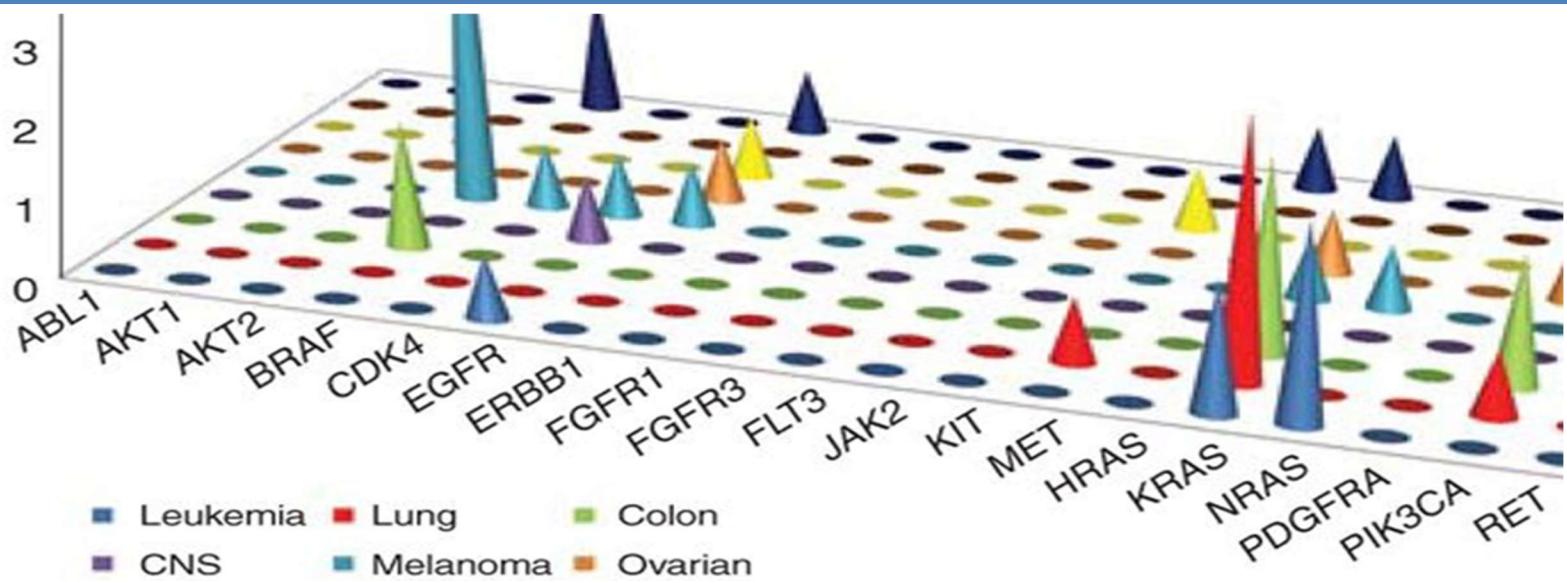


RESEARCH REPORT



GENOMIC CANCER PANEL AND PROFILING MARKETS
BY CANCER, BY APPLICATION, BY TISSUE AND BY GENE TYPE WITH
SCREENING POTENTIAL MARKET SIZE.
WITH EXECUTIVE AND CONSULTANT GUIDES
2024-2028





Howe Sound Research is a market research and consulting company based in Vancouver, British Columbia, Canada. In our spare time we like to sail in a large body of water nearby called Howe Sound. We publish market research reports that address scientific industries with an emphasis on Biotechnology and Clinical Diagnostic markets. We consider ourselves experts in these areas.

We approach market research differently than other companies. At any one time we have a limited number of reports and we update them frequently, sometimes several times a year. Our reports are prepared by people who understand the industry and have worked and studied in the area. This contrasts with the many research mills who produce canned reports on the Handbag market one day and the XRay market the next.

Our intellectual property is encryption protected. If you have issues with this or would like to upgrade to a corporate license that is not encrypted, please contact us at the email above.

Please feel free to contact us if you have any questions. We believe in customer service and are more than willing to provide after sales assistance and custom data.

All Rights Reserved. This document contains copyrighted intellectual property. No part of it may be circulated, copied, quoted, or otherwise reproduced without the approval of Howe Sound Research.

Please respect our intellectual property and do not distribute this document beyond the terms of your license.

Table of Contents

1	Market Guides	25
1.1	Cancer Panel Market - Strategic Situation Analysis	26
1.2	Large Comprehensive Cancer Panel Market - Situation Analysis.....	28
1.3	Guide for Executives, Marketing, Sales and Business Development Staff	31
1.4	Guide for Management Consultants and Investment Advisors.....	33
2	Introduction and Market Definition	34
2.1	What are Cancer Gene Panels and Profiling?	35
2.2	The Sequencing Revolution.....	38
2.3	Market Definition	40
2.3.1	Revenue Market Size.....	40
2.4	Methodology.....	42
2.4.1	Methodology	42
2.4.2	Sources.....	42
2.4.3	Authors	42
2.5	Perspective: Healthcare and the IVD Industry	44
2.5.1	Global Healthcare Spending	44
2.5.2	Spending on Diagnostics.....	45
2.5.3	Important Role of Insurance for Diagnostics.....	47
3	Market Overview.....	48

3.1	Players in a Dynamic Market.....	49
3.1.1	Academic Research Lab	50
3.1.2	Diagnostic Test Developer.....	50
3.1.3	Instrumentation Supplier	51
3.1.4	Chemical/Reagent Supplier.....	51
3.1.5	Pathology Supplier	51
3.1.6	Independent Clinical Laboratory	52
3.1.7	Public National/regional Laboratory	52
3.1.8	Hospital Laboratory	53
3.1.9	Physicians Office Lab (POLS)	53
3.1.10	Audit Body.....	54
3.1.11	Certification Body.....	54
3.2	Oncogenomics	56
3.2.1	Carcinogenesis.....	56
3.2.2	Chromosomes, Genes and Epigenetics.....	58
3.2.2.1	Chromosomes.....	58
3.2.2.2	Genes	60
3.2.2.3	Epigenetics.....	63
3.2.3	Cancer Genes.....	64
3.2.4	Germline vs Somatic	66
3.2.5	Gene Panels, Single Gene Assays and Multiplexing	67
3.2.6	Genomic Profiling.....	68
3.2.7	The Comprehensive Assay	69
3.2.8	Changing Clinical Role	69

3.2.9	The Cancer Screening Market Opportunity.....	71
3.3	Cancer Management vs. Diagnosis.....	72
3.3.1	The Role of Risk Assessment	72
3.3.2	Diagnosis	72
3.3.3	Managing	73
3.3.4	Monitoring	73
3.4	Phases of Adoption – Looking into The Future	74
3.5	Structure of Industry Plays a Part.....	75
3.5.1	Hospital Testing Share	75
3.5.2	Economies of Scale.....	75
3.5.2.1	Hospital vs. Central Lab.....	76
3.5.3	Physician Office Lab's.....	77
3.5.4	Physician's and POCT	78
3.6	Currently Available Large Comprehensive Assays.....	78
3.7	Pricing Profiling vs. Whole Exome (or Genome) Sequencing.....	81
3.7.1	Medicare Profile Pricing	81
3.7.2	Whole Exome Sequencing	81
4	Market Trends	83
4.1	Factors Driving Growth	84
4.1.1	Level of Care	84
4.1.2	Companion Dx	85
4.1.3	Immuno-oncology.....	85
4.1.4	Liability	85
4.1.5	The Aging Effect	85

4.2	Factors Limiting Growth	88
4.2.1	State of knowledge.....	88
4.2.2	Genetic Blizzard.....	89
4.2.3	Protocol Resistance.....	89
4.2.4	Regulation and coverage.....	89
4.3	Instrumentation and Automation	90
4.3.1	Instruments Key to Market Share.....	90
4.3.2	Bioinformatics Plays a Role	90
4.4	Diagnostic Technology Development	91
4.4.1	Next Generation Sequencing Fuels a Revolution.....	92
4.4.2	Single Cell Genomics Changes the Picture	93
4.4.3	Pharmacogenomics Blurs Diagnosis and Treatment.....	94
4.4.4	CGES Testing, A Brave New World	94
4.4.5	Biochips/Giant magneto resistance based assay.....	95
5	Cancer Panels & Profiles Recent Developments	96
5.1	Recent Developments – Importance and How to Use This Section	97
5.1.1	Importance of These Developments	97
5.1.2	How to Use This Section.....	97
5.2	Lucence Assay Gets Coverage for Advanced Solid Tumors	97
5.3	Foundation Medicine, AnHeart Therapeutics to Develop CDx for NSCLC Therapy... 98	98
5.4	Roche CGP Assay Shows Concordance With Other NGS-Based Assays	99
5.5	Precede Biosciences Emerges From Stealth With \$57M	101
5.6	Geneseeq Nabs CE Marks for Cancer Test Kits	102
5.7	Realm IDx Profiling Test Gets National Health Coverage in Japan.....	103

5.8	Foundation Medicine, Merck KGaA to Collaborate on Companion Diagnostics ...	103
5.9	Guardant Health Secures Coverage for Liquid Biopsy Profiling Test.....	104
5.10	Myriad Genetics, Intermountain Precision Genomics Obtain NY Certification for Tumor Profiling.....	105
5.11	Cota, Genomic Testing Coop Ink Oncology Partnership	106
5.12	Euformatics, ViennaLab, Oncompass Win Liquid Biopsy Development Contract ...	107
5.13	Prenetics' Cancer Profiling Test Receives FDA Clearance.....	108
5.14	Genetic Profiling May Identify Patients Who Do Not Need Radiation Therapy	109
5.15	Thermo Fisher Introduces Homologous Score for Cancer Profiling	110
5.16	Genomic Test IDs Cancer Cells Early.....	113
5.17	Caris Life Sciences to Offer Molecular Profiling Services.....	116
5.18	Geneseeq to Build Lab for Cancer Profiling in Brazil	117
5.19	Genetron Health Adds New Assays to Pipeline	118
5.20	Illumina Obtains CE-IVD Marking for TSO Comprehensive Assay	121
5.21	Guardant Health Receives Medicare Coverage for Guardant360 TissueNext™ Test	
	122	
5.22	Cancer Screening Launch Approaches, Guardant Health Plans New Comprehensive Assay	122
5.23	Thermo Fisher, Oncocyte Ink Deal for Cancer IVDs	125
5.24	Local Cancer Genomic Profiling Options Grow, Though Central Labs Will Likely Keep Major Role	127
5.25	Labcorp, CCORN Partner for Precision Oncology	134
5.26	Dante Labs Acquires Cambridge Cancer Genomics	135
5.27	Celomics, Strand Partner on Integrated Platform for NGS Analysis	136
5.28	Myriad Genetics Recalibrates Breast Cancer Panel for All Ancestries	136

5.29	Burning Rock Revenues Rise	142
5.30	Caris Life Sciences to Expand Liquid Biopsy Testing	144
5.31	OncoDiag Announces Multiplex Test for Bladder Cancer Recurrence.....	147
5.32	Intermountain and Myriad Combine Test Offering	151
5.33	Illumina, Geneseeq to Offer Cancer Testing Kits in China.....	156
5.34	Exact Sciences to Offer End-to-End Cancer Testing	157
5.35	Guardant Health Turns to Tumor Tissue Sequencing	160
5.36	Tempus Inks Oncology Testing Collaboration With Bayer.....	164
5.37	Biocartis Collaborating With GeneproDx, Endpoint Health on Tests for Idylla Platform	
	165	
5.38	Wales to Routinely Screen Cancer Patients With Yourgene Elucigene Test	166
5.39	Metastatic Cancer Markers Identified in Clinical WGS Study.....	167
5.40	Stitch Bio Bets on CRISPR Tech	170
5.41	Bayer, LifeLabs Launch Free NTRK Genetic Testing Program	174
5.42	Foundation Medicine Liquid Biopsy Gets FDA Approval for Multiple Companion Dx	
	175	
5.43	Progress, Challenges in Liquid Biopsy Reimbursement.....	176
5.44	Israeli Startup Curesponse Raises \$6M	180
5.45	Invitae, ArcherDX Merge to Advance Precision Oncology Offerings	181
5.46	MD Anderson Precision Oncology Decision Support to Use Philips' Informatics Solution	
	182	
5.47	NeoGenomics, Lilly Oncology Partner for Thyroid Cancer Testing Program.....	182
5.48	Germline Results Guides Precision Therapy in Advanced Cancer	183
5.49	FDA Clears Cancer Genomic Profiling Kit From Personal Genome Diagnostics	188

5.50	ArcherDX, Premier Collaborate to Evaluate Genomic Sequencing Assay for Cancers	189
5.51	Labs Reporting Cancer Risk Mutations from Tumor Testing	190
5.52	Users Begin Integrating Genomics Data for Clinical Decision Support.....	198
5.53	Fujitsu Improves Efficiency in Cancer Genomic Medicine	203
6	Profiles of Key Players.....	206
6.1	10x Genomics, Inc.....	208
6.2	Abbott Laboratories.....	210
6.3	AccuraGen Inc.	212
6.4	Adaptive Biotechnologies.....	213
6.5	Aethlon Medical.....	215
6.6	Agilent	216
6.7	Amoy Diagnostics Co., Ltd.....	218
6.8	Anchor Dx	219
6.9	ANGLE plc.....	220
6.10	ARUP Laboratories.....	221
6.11	AVIVA Systems Biology.....	223
6.12	Baylor Miraca Genetics Laboratories	224
6.13	Beckman Coulter Diagnostics (Danaher)	225
6.14	Becton, Dickinson and Company	226
6.15	BGI Genomics Co. Ltd	228
6.16	Bioarray Genetics.....	230
6.17	Biocartis.....	231
6.18	Biocept, Inc.....	232

6.19	Biodesix Inc.	233
6.20	BioFluidica	234
6.21	BioGenex	235
6.22	BiolVT	237
6.23	Bolidics Ltd.	238
6.24	bioMérieux Diagnostics	239
6.25	Bioneer Corporation	242
6.26	Bio-Rad Laboratories, Inc.	244
6.27	Bio-Reference Laboratories	245
6.28	Bio-Techne	246
6.29	Bioview	248
6.30	Bristol-Myers Squibb	249
6.31	Burning Rock	251
6.32	C2i Genomics	253
6.33	Cardiff Oncology	254
6.34	Caris Molecular Diagnostics	255
6.35	Castle Biosciences, Inc.	256
6.36	Celomics	257
6.37	CellMax Life	258
6.38	Cepheid (Danaher)	259
6.39	Charles River Laboratories	261
6.40	Circulogene	262
6.41	Clearbridge Biomedics	263
6.42	Clinical Genomics	264

6.43	Cytolumina Technologies Corp.	265
6.44	Datar Cancer Genetics Limited	266
6.45	Diagnologix LLC	267
6.46	Diasorin S.p.A.	268
6.47	Element Biosciences	269
6.48	Enzo Biochem	271
6.49	Epic Sciences	272
6.50	Epigenomics AG	273
6.51	Eurofins Scientific	274
6.52	Exact Sciences	275
6.53	Fabric Genomics	276
6.54	Fluxion Biosciences (Cell Microsystems)	277
6.55	Freenome	278
6.56	FUJIFILM Wako Diagnostics	279
6.57	Fujirebio	280
6.58	GeneFirst Ltd.	281
6.59	Genetic Technologies Ltd.	282
6.60	Genetron Holdings	283
6.61	GenomOncology	284
6.62	GILUPI Nanomedizin	285
6.63	Guardant Health	286
6.64	HansaBiomed	287
6.65	HTG Molecular Diagnostics	288
6.66	iCellate	289

6.67	ICON PLC	290
6.68	Illumina	291
6.69	Incell Dx.....	292
6.70	Invata	293
6.71	Invitae Corporation.....	294
6.72	Invivogen	295
6.73	Invivoscribe.....	296
6.74	J&J Innovative Medicine	297
6.75	KEW.....	298
6.76	Lucence Health.....	299
6.77	Lunglife AI Inc	300
6.78	MDNA Life SCIENCES, Inc.....	301
6.79	MDx Health	302
6.80	Menarini Silicon Biosystems.....	303
6.81	Mesa Laboratories, Inc.	304
6.82	Millipore Sigma	306
6.83	Miltenyi Biotec	307
6.84	miR Scientific.....	308
6.85	Myriad Genetics.....	310
6.86	Nanostring.....	312
6.87	NantHealth, Inc.	314
6.88	Natera	316
6.89	NeoGenomics	318
6.90	NGeneBio.....	319

6.91	Novogene.....	320
6.92	Oncimmune.....	321
6.93	Oncocyte.....	322
6.94	OncoDNA	323
6.95	Oraliva.....	324
6.96	Oxford Nanopore Technologies	325
6.97	Panagene.....	327
6.98	Personalis.....	328
6.99	Perthera	329
6.100	PGDx (Labcorp).....	330
6.101	Precipio	331
6.102	PrecisionMed	332
6.103	Predictive Oncology	333
6.104	Prenetics.....	335
6.105	Promega	336
6.106	Qiagen	338
6.107	QuidelOrtho	340
6.108	Rarecells SAS.....	342
6.109	RareCyte	343
6.110	Revvity	344
6.111	Roche Diagnostics	346
6.112	Screencell	348
6.113	Sherlock Biosciences	349
6.114	Siemens Healthineers	350

6.115	simfo GmbH	351
6.116	Singlera Genomics Inc.....	352
6.117	Singular Genomics	353
6.118	Singulomics	355
6.119	SkylineDx.....	357
6.120	Standard BioTools	358
6.121	Stillia Technologies	360
6.122	Sysmex Inostics.....	361
6.123	Thermo Fisher Scientific	363
6.124	Todos Medical	365
6.125	Ultima Genomics	366
6.126	Variantyx	367
6.127	Vela Diagnostics.....	368
6.128	Veracyte	369
6.129	VolitionRX	370
6.130	Vortex Biosciences	371
7	The Global Market for Cancer Gene Panels and Profiles.....	372
7.1	Global Market Overview by Country	373
7.1.1	Table – Global Market by Country.....	373
7.1.2	Chart - Global Market by Country	374
7.2	Global Market by Cancer Type - Overview.....	375
7.2.1	Table – Global Market by Cancer Type	375
7.2.2	Chart – Global Market by Cancer Type – Base/Final Year Comparison	376
7.2.3	Chart – Global Market by Cancer Type – Base Year	377

7.2.4	Chart – Global Market by Cancer Type – Final Year.....	378
7.2.5	Chart – Global Market by Cancer Type – Share by Year	379
7.2.6	Chart – Global Market by Cancer Type – Segment Growth	380
7.3	Global Market by Application - Overview.....	381
7.3.1	Table – Global Market by Application	381
7.3.2	Chart – Global Market by Application – Base/Final Year Comparison	382
7.3.3	Chart – Global Market by Application – Base Year	383
7.3.4	Chart – Global Market by Application – Final Year.....	384
7.3.5	Chart – Global Market by Application – Share by Year.....	385
7.3.6	Chart – Global Market by Application – Segment Growth	386
7.4	Global Market by Tissue - Overview	387
7.4.1	Table – Global Market by Tissue	387
7.4.2	Chart – Global Market by Tissue – Base/Final Year Comparison.....	388
7.4.3	Chart – Global Market by Tissue – Base Year	389
7.4.4	Chart – Global Market by Tissue – Final Year	390
7.4.5	Chart – Global Market by Tissue – Share by Year.....	391
7.4.6	Chart – Global Market by Tissue – Segment Growth.....	392
7.5	Global Market Germline & Somatic - Overview	393
7.5.1	Table – Global Market Germline & Somatic	393
7.5.2	Chart – Global Market Germline & Somatic – Base/Final Year Comparison	394
7.5.3	Chart – Global Market Germline & Somatic – Base Year	395
7.5.4	Chart – Global Market Germline & Somatic – Final Year.....	396
7.5.5	Chart – Global Market Germline & Somatic – Share by Year.....	397
7.5.6	Chart – Global Market Germline & Somatic – Segment Growth	398

8 Global Cancer Gene Panels & Profiles Markets – By Type of Cancer.....	399
8.1 Comprehensive Panels & Profiles.....	400
8.1.1 Table Comprehensive Testing – by Country.....	400
8.1.2 Chart - Comprehensive Testing Growth.....	401
8.2 Breast Cancer Gene Testing	402
8.2.1 Table Breast Cancer Gene Testing – by Country	402
8.2.2 Chart - Breast Cancer Testing Growth.....	403
8.3 Colorectal Cancer Gene Testing	404
8.3.1 Table Colorectal Cancer Gene Testing – by Country	404
8.3.2 Chart - Colorectal Cancer Gene Testing Growth	405
8.4 Gynecological Cancer Gene Testing	406
8.4.1 Table Gynecological Cancer Gene Testing – by Country	406
8.4.2 Chart - Gynecological Cancer Gene Testing Growth.....	407
8.5 Blood Cancer Gene Testing.....	408
8.5.1 Table Blood Cancer Gene Testing – by Country	408
8.5.2 Chart - Blood Cancer Gene Testing Growth	409
8.6 Prostate Cancer Gene Testing.....	410
8.6.1 Table Prostate Cancer Gene Testing – by Country	410
8.6.2 Chart - Prostate Cancer Testing Growth	411
8.7 Lung Cancer Gene Testing	412
8.7.1 Table Lung Cancer Gene Testing – by Country.....	412
8.7.2 Chart - Lung Cancer Gene Testing Growth	413
8.8 Other Cancer Gene Testing	414
8.8.1 Table Other Cancer Gene Testing – by Country	414

8.8.2	Chart - Other Cancer Gene Testing Growth	415
9	Global Cancer Gene Panels & Profiles Markets – By Type of Application.....	416
9.1	Clinical Testing	417
9.1.1	Table Clinical Testing – by Country	417
9.1.2	Chart - Clinical Testing Growth.....	418
9.2	Pharmaceutical Testing	419
9.2.1	Table Pharmaceutical Testing – by Country	419
9.2.2	Chart - Pharmaceutical Testing Growth.....	420
9.3	Research Testing	421
9.3.1	Table Research Testing – by Country.....	421
9.3.2	Chart - Research Testing Growth.....	422
10	Global Cancer Gene Panels & Profiles Markets – By Tissue Type	423
10.1	Solid Tissue.....	424
10.1.1	Table Solid Tissue Testing – by Country.....	424
10.1.2	Chart – Solid Tissue Testing Growth	425
10.2	Liquid Tissue Testing	426
10.2.1	Table Liquid Tissue Testing – by Country	426
10.2.2	Chart - Liquid Tissue Testing Growth.....	427
11	Global Cancer Gene Testing Markets – Germline and Somatic	428
11.1	Global Market Somatic.....	429
11.1.1	Table Somatic – by Country	429
11.1.2	Chart - Somatic Testing Growth	430
11.2	Global Market Germline	431
11.2.1	Table Germline – by Country.....	431

11.2.2	Chart - Germline Testing Growth.....	432
12	Potential Market Opportunity Sizes.....	433
12.1	Potential Cancer Screening by Country: Lung, Breast & Colorectal.....	434
12.2	Potential Cancer Screening by Country: Prostate, Other Cancer & All Cancer.....	436
12.3	Potential Market Size - Cancer Diagnosis.....	438
12.4	Potential Market Size – Therapy Selection.....	440
13	Appendices.....	442
13.1	Growth of Approved IVD Test Menu	443
13.2	Growth of Approved Average IVD Test Fee	444
13.3	The Most Used IVD Assays.....	445
13.4	The Highest Grossing Assays	450
13.5	Laboratory Fees Schedule.....	457

Table of Tables

Table 1 Market Players by Type	50
Table 2 The Base Pairs.....	61
Table 3 Current Assays	78
Table 4 Relevant Pricing Table	81
Table 5 Five Factors Driving Growth.....	84
Table 6 Four Factors Limiting Growth	88
Table 7 Key Diagnostic Laboratory Technology Trends	91
Table 8 Next Generation Sequencing Technologies – Speed and Cost	92
Table 9 - Global Cancer Panel Market by Region.....	373
Table 10 Global Market by Cancer Type	375
Table 11 Global Market by Application.....	381
Table 12 Global Market by Tissue	387
Table 13 Global Market Germline & Somatic	393
Table 14 Comprehensive Testing by Country.....	400
Table 15 Breast Cancer Gene Testing by Country.....	402
Table 16 Colorectal Cancer Gene Testing by Country	404
Table 17 Gynecological Cancer Testing by Country	406
Table 18 Blood Cancer Gene Testing by Country	408
Table 19 Prostate Cancer Gene Testing by Country	410
Table 20 Lung Cancer Gene Testing by Country.....	412

Table 21 Other Cancer Gene Testing by Country	414
Table 22 Clinical Testing by Country	417
Table 23 Pharmaceutical Testing by Country	419
Table 24 Research Testing by Country.....	421
Table 25 Solid Tissue Testing by Country.....	424
Table 26 Liquid Tissue Testing by Country	426
Table 27 Somatic by Country	429
Table 28 Germline by Country.....	431
Table 29 Potential Screening Market: Lung, Breast & Colorectal.....	434
Table 30 Potential Screening Market: Prostate, Other & All.....	436
Table 31 Potential Cancer Diagnosis Market Size	438
Table 32 Potential Cancer Management Market Size	440
Table 33 The Most Common Assays.....	445
Table 34 Largest Revenue Assays.....	451
Table 35 Clinical Lab Fee Schedule	457

Table of Figures

Figure 1 VistSeq Hereditary Cancer Panel.....	37
Figure 2 Global Healthcare Spending	45
Figure 3 The Lab Test Pie	46
Figure 4 The Road to Diagnostics	49
Figure 5 The Genomic Progression of Cancer.....	57
Figure 6 DNA Strands and Chromosomes	58
Figure 7 Karyogram of Human Chromosomes.....	59
Figure 8 Size of Various Genomes	62
Figure 9 Germline vs Somatic Mutations.....	66
Figure 10 Comparing Genomic Diagnostic and Traditional Testing	70
Figure 11 The Changing Age of The World's Population.....	86
Figure 12 Health Care Consumption by Age	87
Figure 13 Cancer Incidence - Age at Diagnosis	87
Figure 14 Base Year Country Global Share	374
Figure 15 Global Market by Cancer - Base vs. Final Year	376
Figure 16 Cancer Panel Market Base Year.....	377
Figure 17 Cancer Panel Market Final Year	378
Figure 18 Cancer Type Share by Year	379
Figure 19 Cancer Type Segment Growth	380
Figure 20 Global Market by Cancer - Base vs. Final Year	382
Figure 21 Cancer Panel Market Base Year.....	383

Figure 22 Cancer Panel Market Final Year	384
Figure 23 Application Share by Year.....	385
Figure 24 Application Segment Growth	386
Figure 25 Global Market by Cancer - Base vs. Final Year	388
Figure 26 Cancer Panel Market Base Year.....	389
Figure 27 Cancer Panel Market Final Year	390
Figure 28 Tissue Share by Year	391
Figure 29 Tissue Segment Growth.....	392
Figure 30 Germline & Somatic - Base vs. Final Year	394
Figure 31 Germline & Somatic Market Base Year	395
Figure 32 Germline & Somatic Market Final Year.....	396
Figure 33 Germline & Somatic Share by Year	397
Figure 34 Germline & Somatic Segment Growth	398
Figure 35 Comprehensive Testing Growth.....	401
Figure 36 Breast Cancer Testing Growth.....	403
Figure 37 Colorectal Cancer Gene Testing Growth	405
Figure 38 Gynecological Cancer Testing Growth	407
Figure 39 Blood Cancer Gene Testing Growth	409
Figure 40 Prostate Cancer Gene Testing Growth	411
Figure 41 Lung Cancer Gene Testing Growth.....	413
Figure 42 Other Cancer Gene Testing Growth	415
Figure 43 Clinical Testing Growth	418
Figure 44 Pharmaceutical Testing Growth.....	420
Figure 45 Research Testing Growth.....	422

Figure 46 Solid Tissue Testing Growth.....	425
Figure 47 Liquid Tissue Testing Growth.....	427
Figure 48 Somatic Testing Growth.....	430
Figure 49 Germline Testing Growth	432
Figure 50 IVD Test Menu Growth	443
Figure 51 IVD Test Average Fees – A Ten Year View	444