INVITAE: Taking genetics from downstream to mainstream

35TH ANNUAL JP MORGAN HEALTHCARE CONFERENCE
SAN FRANCISCO

SEAN GEORGE, CHIEF EXECUTIVE OFFICER
Safe harbor statement

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including statements relating to the company’s expectations regarding its estimated financial results for 2016, including revenue levels, the cost of goods sold, and the number of billable tests delivered; the number of genes in its test menu; the nature and extent of future reimbursement coverage; the company’s expectations regarding continued growth in 2017 and to be cash flow positive by the end of 2018; the timing of any new testing service releases and the benefits and attributes of any such services; potential market opportunities; and the AltaVoice acquisition and its ability to accelerate the company’s genome network. Forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially, and reported results should not be considered as an indication of future performance. These risks and uncertainties include, but are not limited to: the completion of the company’s fourth quarter and year-end 2016 financial statements and audit and any adjustments that may result from that process, including auditor review; the company’s history of losses; the company’s need to scale its infrastructure in advance of demand for its tests and to increase demand for its tests; the company’s ability to develop and commercialize new tests and expand into new markets; the risk that the company may not obtain or maintain sufficient levels of reimbursement for its tests; risks associated with the company’s ability to use rapidly changing genetic data to interpret test results accurately and consistently; the company’s ability to compete; laws and regulations applicable to the company’s business, including privacy laws and potential regulation by the Food and Drug Administration; risks associated with the company’s limited experience with respect to acquisitions and its ability to integrate AltaVoice successfully into its existing business; and the other risks set forth in the company’s filings with the Securities and Exchange Commission, including the risks set forth in the company’s Quarterly Report on Form 10-Q for the quarter ended September 30, 2016. These forward-looking statements speak only as of the date hereof, and Invitae Corporation disclaims any obligation to update these forward-looking statements.

NOTE: Invitae and the Invitae logo are trademarks of Invitae Corporation. All other trademarks and service marks are the property of their respective owners.
Genetics: real progress is catching up with the exuberance

Genomics pioneer Lee Hood: New startup could be the Google or Microsoft of ‘scientific wellness’

Linking Human Genome Sequences to Change Clinical Medicine

Genetics Startup Helix Wants To Create A World Of Personalized Products From Your DNA

Invitae Hopes To Become The "Amazon Of Medical Genetics"

Illumina Promises To Sequence Human Genome For $100 -- But Not Quite Yet
It’s a huge opportunity, everyone with a genome

BRINGING GENETICS INTO MAINSTREAM MEDICINE TO HELP BILLIONS OF PEOPLE

- Everyone has a unique genome that has a significant impact on their health

- There are over 4,000 medically important genetic tests today – most of which are over-priced and under-utilized

- High quality, low priced genetic testing will dramatically increase the total market to everyone with access to healthcare
Best cost infrastructure continues to deliver

**ESTABLISHING LEADERSHIP IN THE RAPIDLY EVOLVING LANDSCAPE**

- Cost of Goods (COGS)
  Steady reduction in COGS to ~$450 in Q3 2016

### COGS per sample

- Q1:15: $1100
- Q3:15: $730
- Q1:16: $600
- Q3:16: $450

Estimates.
Continued aggregation of the world’s genetic tests into a single, high quality, affordable platform

**ESTABLISHING LEADERSHIP IN THE RAPIDLY EVOLVING LANDSCAPE**

- **Cost of Goods (COGS)**
  Steady reduction in COGS to ~$450 in Q3 2016

- **Content**
  Expanded to more than 1,100 genes in production and leap-frogged our 3,000 gene target to prepare 20,000 gene exome ready for release this quarter.

![Content available diagram](image)
Tripled our volume year-over-year with a dramatically more efficient commercial model

**ESTABLISHING LEADERSHIP IN THE RAPIDLY EVOLVING LANDSCAPE**

- **Cost of Goods (COGS)**
  Steady reduction in COGS to ~$450 in Q3 2016

- **Content**
  Expanded to more than 1,100 genes in production and leap-frogged our 3,000 gene target to prepare 20,000 gene exome ready for release this quarter.

- **Volume**
  Grew our volume by ~200% year-over-year with targeted sales force speaking to highest quality (as good or better than competition based on head-to-head data) at affordable prices - and clinicians love our mission.

Volume by billable report:

- Q1:16 - 9,700
- Q2:16 - 12,000
- Q3:16 - 15,200
- Q4:16 - 20,000

Estimates.
Oncology represents a rapidly growing opportunity, but is one of many disease areas we will address

**ESTABLISHING LEADERSHIP IN THE RAPIDLY EVOLVING LANDSCAPE**

- **Cost of Goods (COGS)**
  Steady reduction in COGS to ~$450 in Q3 2016

- **Content**
  Expanded to more than 1,100 genes in production and leap-frogged our 3,000 gene target to prepare 20,000 gene exome ready for release this quarter.

- **Volume**
  Grew our volume by ~200% year-over-year with targeted sales force speaking to highest quality (as good or better than competition based on head-to-head data) at affordable prices - and clinicians love our mission.

![Non-oncology volume graph](image-url)
Unprecedented payer economics…rapidly evolving dynamics

**ESTABLISHING LEADERSHIP IN THE RAPIDLY EVOLVING LANDSCAPE**

- **Cost of Goods (COGS)**
  Steady reduction in COGS to ~$450 in Q3 2016

- **Content**
  Expanded to more than 1,100 genes in production and leap-frogged our 3,000 gene target to prepare 20,000 gene exome ready for release this quarter.

- **Volume**
  Grew our volume by ~200% year-over-year with targeted sales force speaking to highest quality (as good or better than competition based on head-to-head data) at affordable prices - and clinicians love our mission.

- **Reimbursement**
  Significantly expanded in-network coverage to more than 175 million lives by contracting with Medicare and the largest private payers.

---

**Covered lives network**

- **Q1:16** 5.5M
- **Q2:16** 41M
- **Q3:16** 95M
- **Q4:16** 175M

Estimates.

© Invitae Corporation. All Rights Reserved. | CONFIDENTIAL | 9
Revenue growth set to outpace volume growth in 2017

**Establishing Leadership in the Rapidly Evolving Landscape**

- **Cost of Goods (COGS)**
  Steady reduction in COGS to ~$450 in Q3 2016

- **Content**
  Expanded to more than 1,100 genes in production and leap-frogged our 3,000 gene target to prepare 20,000 gene exome ready for release this quarter.

- **Volume**
  Grew our volume by ~200% year-over-year with targeted sales force speaking to highest quality (as good or better than competition based on head-to-head data) at affordable prices - and clinicians love our mission.

- **Reimbursement**
  Significantly expanded in-network coverage to more than 175 million lives by contracting with Medicare and the largest private payers.

- **Revenue**
  Increasingly predictable throughout 2017

---

[Graph showing revenue growth from Q1:16 to Q3:16 with data points: 4.0M (Q1:16), 5.6M (Q2:16), 6.4M (Q3:16).]
Building the foundation for long-term growth

**ESTABLISHING LEADERSHIP IN THE RAPIDLY EVOLVING LANDSCAPE**

- **Cost of Goods (COGS)**
  Steady reduction in COGS to ~$450 in Q3 2016

- **Content**
  Expanded to more than 1,100 genes in production and leap-frogged our 3,000 gene target to prepare 20,000 gene exome ready for release this quarter.

- **Volume**
  Grew our volume by ~200% year-over-year with targeted sales force speaking to highest quality (as good or better than competition based on head-to-head data) at affordable prices - and clinicians love our mission.

- **Reimbursement**
  Significantly expanded in-network coverage to more than 175 million lives by contracting with Medicare and the largest private payers.

- **Revenue**
  Increasingly predictable throughout 2017

- **Business Model**
  Guiding to positive cash flow by end of 2018, demonstrating operating leverage to build a dynamic industry leader with 50%GM, 20% S&M, etc.

**Gross margin positive**

- **Q1:16** $209
- **Q2:16** $74
- **Q3:16** $64
- **Q4:16**

Estimates.
Invitae is no longer a concept story – but a company with what we believe is the fastest growing market share in the genetic testing industry, on a clear path to lead in bringing genetics from downstream to mainstream medicine.
A simple yet powerful strategy to improve healthcare

1. Lower costs
2. Attract Partners
3. Expand content
4. Drive Volume
5. Lower prices
6. Improve customer experience

Growth
Partners contribute to the acceleration of our mission

Lower costs

Expand content

Lower prices

Improve customer experience

Drive Volume

Growth

Attract Partners

Partners contribute to the acceleration of our mission.
Patient advocacy groups represent influential voices in facilitating diagnosis and treatment

- Serve as influential custodians of patient and clinician relationships
- Help drive awareness of a proper diagnosis and potential treatments
- Identify large populations with demand for genetic information to aid in maintenance, treatment and biopharma discovery
Commercial partnerships benefitting from a developing win/win/win ecosystem

- Driving the market toward comprehensive, high quality value-based genetic information management

- Leverage our infrastructure for medical interpretation at scale into newly developing markets

- Address lower cost screening markets with best-in-class offering
Pipeline of personalized medicines expands markets, drives volume

**REPRESENTATIVE HEREDITARY DISEASE COMPANIES**

- Clinical trial screening
- Sponsored testing programs
- Physician/patient identification and outreach
- Hereditary disease treatment research
An acquisition that accelerates the Invitae genome network

- A patient-centered data company optimizing the search for better treatments
- Builds and hosts Patient Insights Networks (PINs), which collect, curate and share patient and clinician reported health data
- Shares Invitae’s core principles that i) patients own and control their data and that ii) genetic and clinical information is more valuable when shared

- Disease Education
- Learn from Other Patients
- Take Surveys
- Get Reminders
- Upload Medical Records
- Import Clinical Data
- Adhere to Protocols
- Get Screened for Clinical Trials
Easy and engaging patient experience

Mast Cell Connect is a patient registry to advance understanding of mastocytosis and help speed the development of new therapies that improve mastocytosis patients' lives. Share your experiences, get updates on research, and contribute to the advancement of understanding and treatment of mastocytosis.

Why join?
- Learn from other patients’ experiences and you will gain access to data and patients’ responses that may help you understand your own disease.
- Find out about clinical trials and research studies that may be of interest to you.
- Share your experience in a way that will benefit future patients and those who care about them.

Account Information
- Kyle Brown
- Kyle@altavoice.com

Medical Surveys
- Mast Cell Survey

Healthcare Providers
- Add
- Add your doctors and healthcare providers

Testing Results
- Invitations
- Invite friends or extended family members to join.

View Copy of Informed Consent
An acquisition that accelerates the Invitae genome network

<table>
<thead>
<tr>
<th>Reach</th>
<th>Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;75,000 patients</td>
<td>National Institutes of Health</td>
</tr>
<tr>
<td>80+ registry programs</td>
<td>blueprint medicines</td>
</tr>
<tr>
<td>400+ diseases</td>
<td>Mayo Clinic Cancer Center</td>
</tr>
<tr>
<td>100+ advocacy organizations</td>
<td>AstraZeneca</td>
</tr>
<tr>
<td>Industry sponsors</td>
<td>Memorial Sloan Kettering Cancer Center</td>
</tr>
<tr>
<td>9 PCORI PPRN programs</td>
<td>IRDiRC</td>
</tr>
<tr>
<td>2 NIH programs</td>
<td>TRUE NORTH THERAPEUTICS</td>
</tr>
<tr>
<td>International presence</td>
<td>Jazz Pharmaceuticals</td>
</tr>
<tr>
<td></td>
<td>LOTUS TISSUE REPAIR</td>
</tr>
<tr>
<td></td>
<td>GEISINGER</td>
</tr>
</tbody>
</table>
Exome lays the groundwork for genome management

<table>
<thead>
<tr>
<th>REASON FOR TESTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of test:</td>
</tr>
<tr>
<td>Panel / Gene Test</td>
</tr>
<tr>
<td>Family Variant Test / VUS Resolution</td>
</tr>
<tr>
<td>Collaboration / Research Study</td>
</tr>
<tr>
<td>Exome</td>
</tr>
</tbody>
</table>

Exome test options

- Proband only
- Duo
- Trio

Moving the market away from figuring out what question to ask – to asking a question and getting the answer.

The same comprehensive quality, speed and pricing clients have come to expect from Invitae
Genetics will inform medicine over the course of a patient’s lifetime

Genome Management services on behalf of the individual, partnering with

- Provider networks
- Payers and governments
- Family members
- Advocacy organizations
- Testing and monitoring partners
- Biopharmaceutical developers
- Other…

<table>
<thead>
<tr>
<th>MEDICAL CONDITION</th>
<th>Clinical diagnostics</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEDICATIONS</td>
<td>PGx screening</td>
</tr>
<tr>
<td>HAVING KIDS</td>
<td>Carrier testing</td>
</tr>
<tr>
<td>INJURIES OR SURGERIES</td>
<td>Bleeding disorders</td>
</tr>
<tr>
<td>HEALTH ISSUES</td>
<td>Focused clinical trials</td>
</tr>
<tr>
<td>AGING GRACEFULLY</td>
<td>Preventative health</td>
</tr>
</tbody>
</table>
The flywheel is in motion...

1. Lower prices
2. Expand content
3. Improve customer experience
4. Drive Volume
5. Attract Partners
6. Lower costs
7. Growth