



CANCER GENETICS

# EMPOWERING PERSONALIZED CANCER TREATMENT

LYMPHOMA

MULTIPLE MYELOMA

LEUKEMIA

RENAL CANCER

CERVICAL CANCER

2013  
ANNUAL REPORT



Cancer Genetics is focused on empowering personalized cancer treatment through the development of innovative products and services that drive patient value across the DIAGNOSIS, MANAGEMENT and TREATMENT of cancer.

## CANCER GENETICS

Meadows Office Complex  
201 Route 17 North, 2nd Floor  
Rutherford, NJ 07070

### CORPORATE

Tel: +1 201-528-9200  
Fax: +1 201-528-9201

### CLIENT SERVICES

Tel: +1 201-528-9187  
Toll Free: 888-334-4988  
Fax: +1 201-933-0787

[contact@cancergenetics.com](mailto:contact@cancergenetics.com) | [www.cancergenetics.com](http://www.cancergenetics.com)





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# A LETTER FROM OUR CEO

“2013 has been a watershed year for CGI’s shareholders, partners and employees and positions us to become a leader in transforming patient care in cancer.”



## Dear Fellow Shareholders & Partners,

This past year was one of great growth and accomplishment for Cancer Genetics. We successfully transitioned into a public company and raised over \$60 million in three capital raises. With a larger portfolio of validated genomic tests, and a more established customer and partner base, we are executing on our mission to empower personalized cancer treatment.

We are at the forefront of applying disease-specific, genomic insights into cancer care, and continue to invest in developing and validating new tests while commercializing our existing portfolio. Our 5 unique molecular tests for leukemias, lymphomas, kidney and cervical cancer have the potential to revolutionize care by improving patient outcomes while reducing time and costs of treatment.

Global healthcare companies are beginning to take notice of our business model, ability to execute, and proven portfolio. In 2013 our focus on commercialization facilitated a 63% increase in testing volume, and a 54% increase in revenues over 2012. We also accomplished major milestones in our strategy to develop meaningful partnerships with global biotech and pharma companies – we announced significant agreements with Roche and Gilead Sciences. Additionally, we developed a joint venture in next-generation sequencing with Mayo Clinic called Oncospire Genomics.

At the heart of CGI’s mission is our belief that genomics will transform cancer care, improve lives, and that powerful new tests should be made widely available. This is an exciting time for Cancer Genetics as we become a truly global organization impacting oncology through personalized molecular diagnostics.

Thank you for your interest in our company, our unique products and services, and our mission.

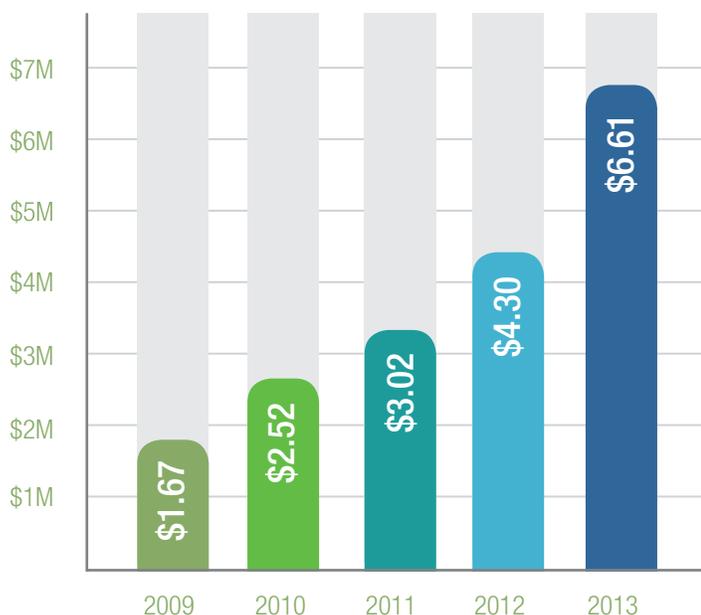
A handwritten signature in black ink that reads "Panna L. Sharma." The signature is written in a cursive, flowing style.

Panna Sharma

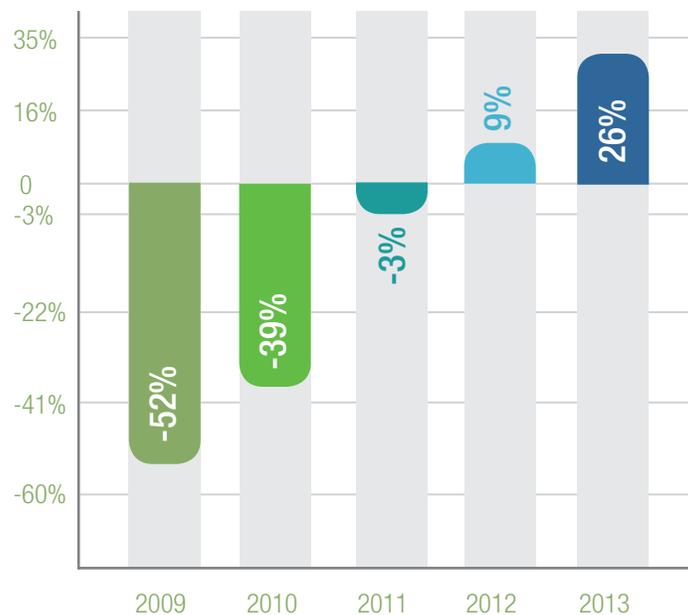
President and Chief Executive Officer

In 2013 CGI experienced strong revenue growth, driven by the adoption of our unique tests and comprehensive approach to oncology testing. CGI's full-year revenue was \$6.6 million, an increase of 54% over 2012. During 2013, 10,771 tests were reported to physicians, pathologists, cancer centers and biotech and pharma customers, up 63% from 2012.

### 2009–2013 Revenue Growth



### 2009–2013 Gross Profit Margins



### Capital Raises

Date	Capital Raises	Net Proceeds
Apr 10	OTC Public Listing	\$5M
Aug 19	Uplisting to NASDAQ	\$13.3M
Oct 28	Follow-On Offering	\$42.3M

### Stock Price (2013)



## BOARD OF DIRECTORS

As of April 1, 2014

John Pappajohn, Non-Executive Chairman  
 Keith Brownlie, CPA  
 Edmund Cannon

Raju S.K. Chaganti, PhD, Founder  
 Franklyn Prendergast, MD, PhD  
 Paul Rothman, MD

# INNOVATIVE PRODUCTS

## That Deliver Patient Value

“Our innovative genomics research program puts CGI at the forefront of diagnostics, allowing us to impact cancer patient care and management.”

### Jane Houldsworth, Ph.D.

Vice President of Research and Development



### Next-Generation Sequencing

Next-generation sequencing performs massively parallel sequencing of genomes, allowing analysis of known and unknown genomic alterations in cancer cells. CGI believes next-generation sequencing will rapidly become a powerful tool for the personalized diagnosis and management of cancer.

### CGH Microarrays

Microarray based technology allows a large number of genetic alterations to be assessed in a single experiment. One application of this technology, known as array CGH, is utilized to evaluate DNA copy number changes (gains/losses) observed frequently in tumor genomes. CGI has designed disease-specific, targeted microarrays for diagnostic and prognostic purposes in a variety of cancers.

### DNA-FISH Probes

Fluorescent in situ hybridization (FISH) allows the detection of chromosomal aberrations. A single-stranded, fluorescent-labeled nucleic acid sequence (probe) complementary to a target genomic sequence is hybridized to chromosomes and nuclei in order to detect the presence and absence of a given chromosomal abnormality. The advantage of FISH is that it can be applied to non-dividing cells and a variety of patient samples. FISH is a method of choice for diagnosis, prognosis, treatment response, and minimal residual disease detection in hematopoietic neoplasms and solid tumors.

# 2013 Genomic Test Launches

## Our Proprietary Products and Tests

Products being developed at CGI are poised to transform cancer patient management, increase treatment efficacy, and reduce healthcare costs. CGI has developed genomic products that are being used in the clinical setting to inform cancer treatment. They include DNA-FISH Probes, CGH Microarrays and Next-Generation Sequencing based tests .



### B-Cell Leukemias and Lymphomas

The Mature B-cell Neoplasm Array (MatBA®), CGI's Array-CGH tests for hematopoietic neoplasms, detects chromosomal changes associated with mature B-cell neoplasms and supports the diagnosis and prognosis of non-Hodgkin lymphomas. MatBA® is currently available for CLL & SLL, DLBCL, FL and MCL.



### Urogenital Cancers: Kidney

UroGenRA™, CGI's Array-CGH test for kidney cancer, detects genomic copy number alterations (CNA) with prognostic, predictive and diagnostic value in kidney cancers. The first application of UroGenRA™ Array CGH, UroGenRA™-Kidney allows for sub-typing of kidney cancer and predicts benign vs. malignant tumors.



### Cervical Cancer

The FISH-based HPV-Associated Cancer Test, FHACT™, is the only four-color genomic test that can be used for cervical cancer screening and detection as an additional step to avoid unnecessary colposcopies. FHACT™ can be used on leftover PAP specimens without bringing the patient back in for additional sampling.



CGI Core Values:  
**Knowledge, Innovation, Leadership**

# CGI Services

## Comprehensive Focus on Unmet Areas in Oncology



CGI's Complete™ offering is a suite of proprietary and esoteric tests that provides a comprehensive answer to help manage cancer patients. To date, CGI has launched a Complete™ offering for Hematopoetic Neoplasms (Chronic Lymphocytic Leukemia, Diffuse Large B-cell Lymphoma, Mantle Cell Lymphoma), and Kidney Cancer.



Select One™ allows biopharma companies to develop and manage their clinical trials with greater efficacy through the use of biomarker and genomic based technology. CGI select One is used to select and monitor patients for clinical trials. Additionally, Select One™ allows CGI's biopharma customers to leverage our proprietary technology to select the right therapeutic option for specific classes of patients.



ExpandDX™ helps community hospitals increase their capabilities in oncology testing, allowing them to provide more value to patients locally and stay more competitive for today's evolving cancer care market.

NUMBER OF COMMUNITY  
HOSPITALS IN US\*

**4,000**

ACTIVE ONCOLOGY TRIALS  
IN CGI'S AREAS OF FOCUS\*\*

**4,550**

\*Source: AHA (American Hospital Association)

\*\*Source: ClinicalTrials.GOV

# CGI TOP ACHIEVEMENTS

- ⌘ Improved testing volume by 63% and revenue by 54% in 2013 over 2012
- ⌘ Delivered oncology test results on over 10,700 tests
- ⌘ Launched joint venture with Mayo Clinic in next-generation sequencing
- ⌘ Granted 3 patents in renal and B-cell cancers
- ⌘ Company went public (IPO)



Growth-Stage, Oncology-Focused  
Personalized-Diagnostics Company

# 2013

- ⌘ Raised over \$60M in three public offerings
- ⌘ Expanded experienced sales and commercial team across US
- ⌘ Announced agreement with Gilead Sciences focused on CLL
- ⌘ Successful migration of DNA probe manufacturing to India
- ⌘ Launched FHACT™ cervical cancer test

# GROWTH STRATEGY

## 01 Increase Geographic Coverage

There is significant opportunity to partner with community hospitals domestically, and to penetrate emerging markets globally. In the US, 85% of cancers are diagnosed in community hospitals. ExpandDX™ allows community hospitals to partner with CGI, providing state-of-the-art diagnostics for their cancer patients. This program generated ~36% of our revenue in 2013, and continues to experience double-digit growth. In addition, we continue to expand into the global market, with strong regional partners in Europe, Brazil, Central and Latin America, India, and Mexico. These partners provide us with international exposure and accounted for approximately 8% of revenue in 2013.

## 02 Partner with Biopharma through Select One™

Biopharma continues moving toward biomarker-based therapeutics and targeted, population-specific trials. We are ideally positioned to partner with these companies in order to help them with patient selection, stratification, and monitoring for clinical trials. CGI's Select One™ program offers biopharma companies support for their Phase 1-3 clinical trial testing and is currently our fastest growing program. Through Select One™ we are developing companion diagnostic programs for biotechs, and providing extensive genomic profiling for clinical trials.

## 03 Focus on Payers and Reimbursement

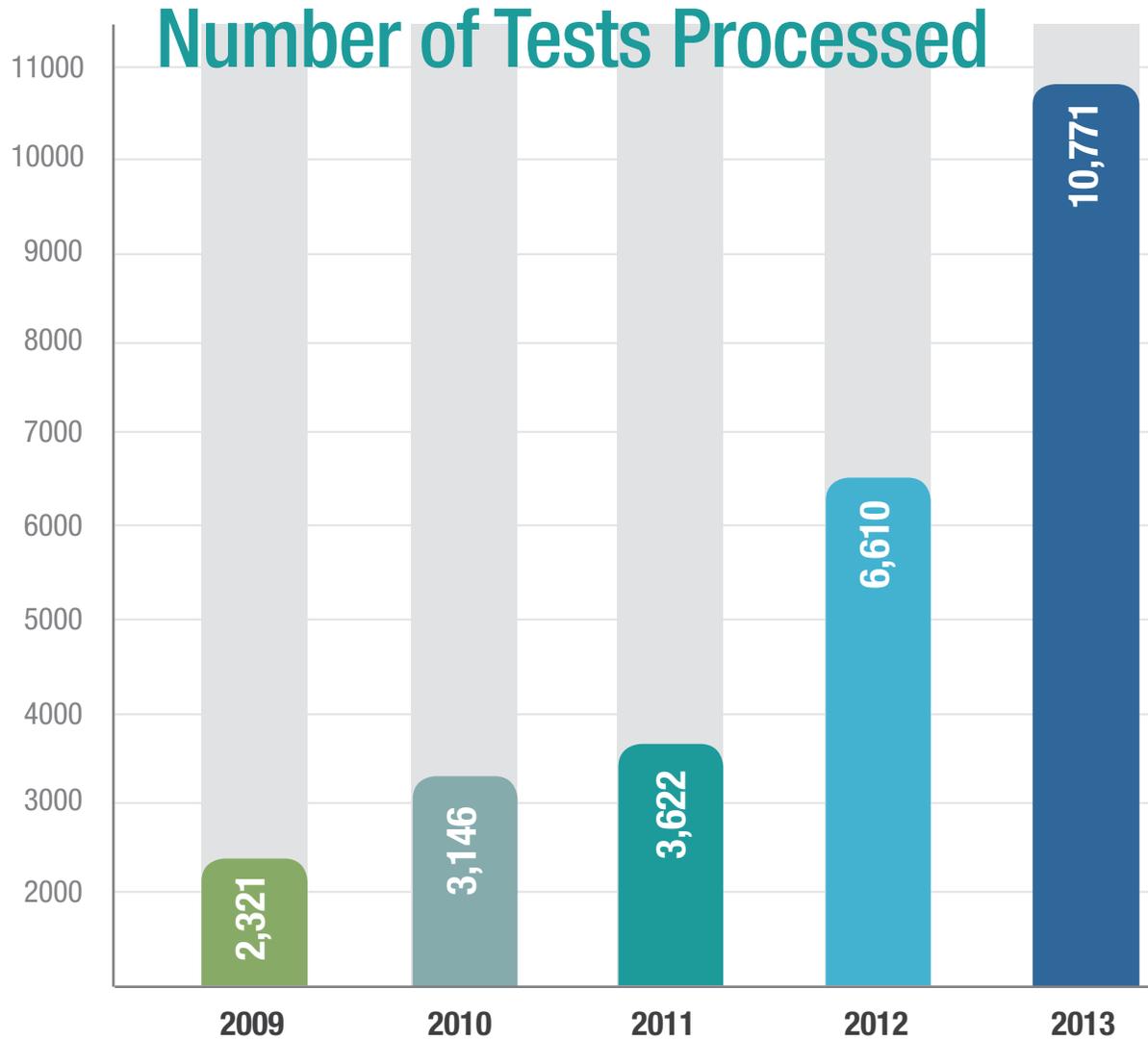
Reimbursement models are rapidly changing, and there is a growing focus on providing more accountable care. Ensuring that healthcare providers see the added value in our testing and proprietary services is central to our long-term value. We are working with payers, cost management organizations, and insurance providers to demonstrate the clinical value and cost-effectiveness of our products and services.

## 04 Continue Investment in Our Proprietary Portfolio

CGI is built on a foundation of tremendous genetic knowledge. Over the past two years we launched 5 proprietary tests, including diagnostics for Lymphomas, Leukemias, Kidney, and Cervical cancers. We currently have unique microarrays in the pipeline for Follicular Lymphoma, Multiple Myeloma, and Ovarian cancers. In addition to continued research, development, and commercialization of new products, we will continue investing in the existing products – improving their performance and sensitivity, refining the algorithms, and driving the value and usage of these services through additional clinical validations.

## 05 Joint Venture in Next-Generation Sequencing with Mayo Clinic

Oncospire Genomics™ will improve cancer care by discovering and commercializing diagnostic tests that utilize next-generation sequencing. This partnership positions us at the forefront of accelerating cancer biomarker discovery research already underway at Mayo, and leverages the significant investment they have made in genomic infrastructure, investigation, and curation of highly annotated patient specimens.



# 2013

NUMBER OF TESTS DELIVERED

# 10,771

PROPRIETARY  
MOLECULAR  
TESTS IN MARKET

# 6

EMPLOYEES

# 67

COUNTRIES  
WE SERVE

# 27

# HELPING DOCTORS

## Discover, Diagnose & Decide

Molecular diagnostics are changing our understanding of cancer while providing new tools to diagnose & treat patients.

CGI is committed to providing oncologists and pathologists clinically relevant and actionable insights for their patients. Our diagnostic tests provide information that is needed to make genomically informed decisions about disease sub-typing, prognosis, and therapeutic choice. With our focused, state-of-the-art oncology reference lab, and our proprietary genomic tests, we are committed to improving outcomes, while lowering healthcare costs and increasing treatment efficacy.

### DR. SHARMA, MD

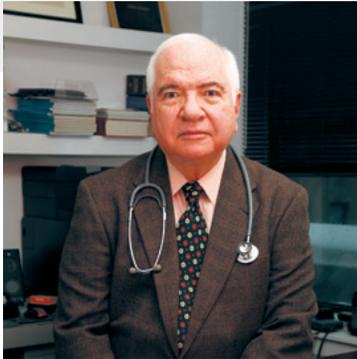


Trained at UT Southwestern Medical Center in Dallas, TX, Dr. Balesh Sharma is a hematology and oncology specialist who has been in community practice since 1998. He runs a large community cancer center for the Texas Oncology group, which is the largest of its kind in the world.

“CGI is an extremely well run lab with dedicated and knowledgeable individuals who consistently produce high quality results. CGI understands the crucial role pathology and genomics play in treatment decision making. Their well-trained team of pathologists, geneticists and technical staff stand tall among their peers. CGI is dedicated to quality, cutting edge technology, and helping community physicians take care of their patients. Their methods and analysis of results allow effective management of hematologic cancers and solid tumors.”

– Dr. Sharma

## DR. HIRSCHMAN, MD

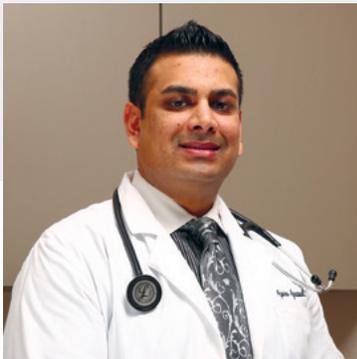


Dr. Richard Hirschman is an attending physician at Mount Sinai Beth Israel specializing in hematology and oncology. Dr. Hirschman studied medicine at Johns Hopkins University School of Medicine, and is board certified in internal medicine, hematology, and medical oncology. He formerly served as a clinical associate of the clinical hematology branch of the National Institute of Arthritis and Metabolic Diseases at the National Institutes of Health. Dr. Hirschman was named in the 2011 edition of Castle Connolly's "Top Doctors: New York Metro Area."

"I have been treating cancer patients for more than 40 years. CGI is simply the best lab with the most comprehensive panels and best customer service."

– Dr. Hirschman

## DR. AGRAWAL, MD



Dr. Apurv Agrawal is trained in medical oncology, hematology, internal medicine, geriatric medicine, and hospice & palliative care, and has additional training in managing clinical trials. He has a strong background in malignant hematology.

"CGI provides personalized, high-quality cancer diagnostic testing that helps me make informed decisions and provide personalized cancer care to patients. CGI has allowed me to choose personalized treatments that my patients are most likely to respond to. Their unique product lines provide information on patient prognosis, and predict treatment outcomes."

– Dr. Agrawal

# COLLABORATIONS AND PARTNERSHIPS

CGI has established strong research collaborations with key thought leaders in oncology and major cancer centers in the U.S. and abroad. These collaborations enable us to develop and validate proprietary tests in a clinical setting by providing access to robust patient data. CGI's abundant knowledge in oncology and vast testing capabilities allow these proprietary tests to be tailored to the collaborators' needs and specifications. Below is a summary of our active key collaborations.

## Cleveland Clinic

CGI and Cleveland Clinic have been collaborating on a renal cell carcinoma diagnostic focused on validating genomic biomarkers from DNA. CGI received numerous clinical specimens from the Cleveland Clinic. Associated clinical and laboratory data was used for the validation of CGI's proprietary microarray, UroGenRA™–Kidney. Samples were analyzed in CGI's clinical laboratory and resulting data will be published jointly.

## Dana Farber Cancer Institute

In 2013, a research collaboration with the Dana Farber Cancer Institute was initiated in order to clinically validate a chronic lymphocytic leukemia (CLL) outcome scheme. CGI provided the collaborating doctor with genomic regions to be used to classify a robust number of specimens for outcome in CLL. The regions provided were determined using CGI's MatBA®-CLL array.

## Georgia Health Sciences University

CGI and Georgia Health Sciences University entered into a research collaboration agreement for the development of molecular testing to facilitate diagnosis, prognosis, and management of DLBCL patients. The specimens provided will be used to identify and further validate genomic biomarkers for DLBCL using CGI's proprietary MatBA®-DLBCL array. CGI also entered into a biological material transfer agreement for the validation of CGI's proprietary FHACT™ probe for the diagnosis and disease management of head and neck cancers.

## Hackensack University Medical Center

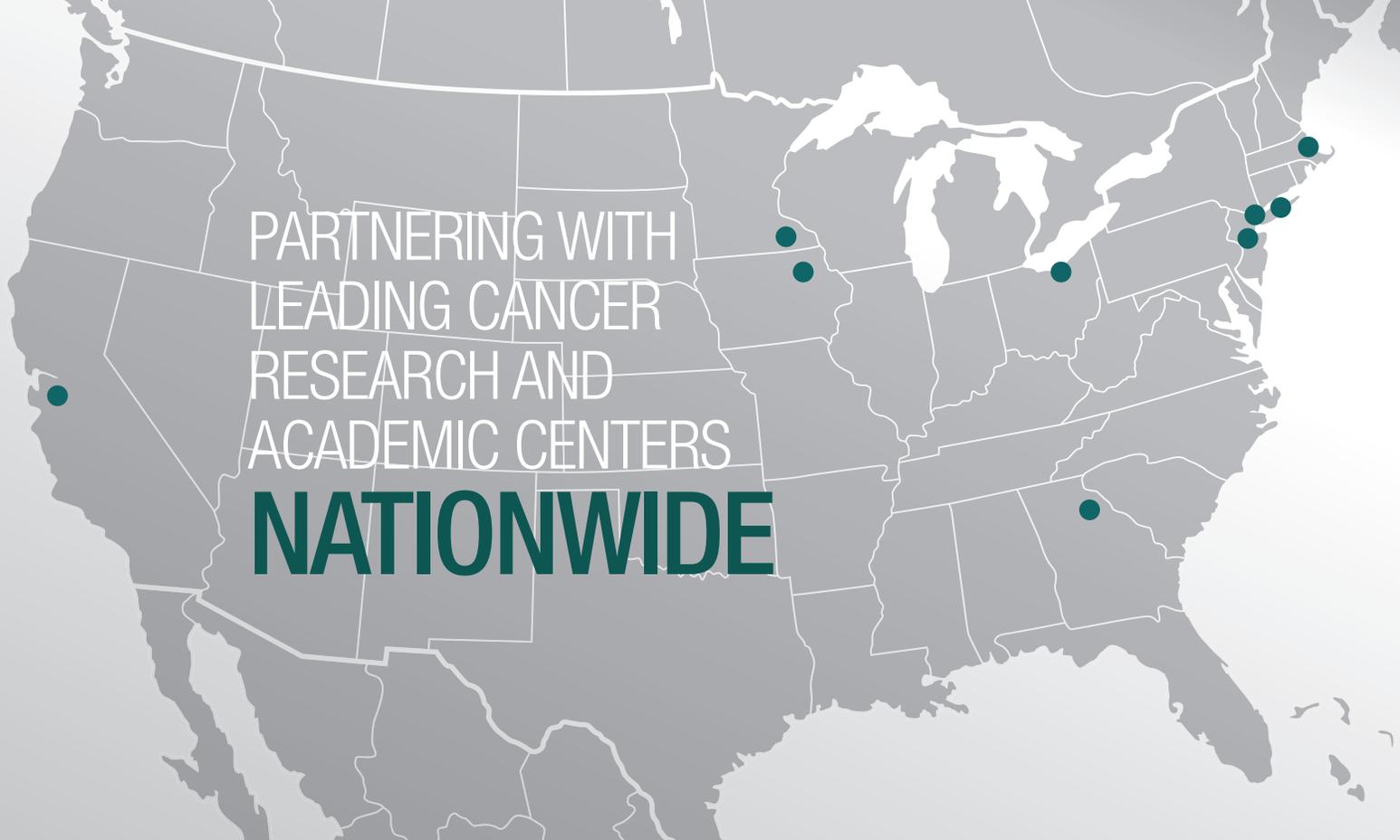
CGI entered into an agreement with the John Theurer Cancer Center at the Hackensack University Medical Center, providing CGI with samples for chronic lymphocytic leukemia (CLL) testing. CGI analyzes these specimens with its proprietary MatBA®-CLL array-CGH assay and uses the results to further increase the value and validation of MatBA®-CLL.

## Kamineni Hospital (India)

CGI and Kamineni Hospital are collaborating to evaluate FHACT™, CGI's proprietary FISH-based HPV-Associated Cancer Test, as a screening tool for the identification of pre-cancerous and cancerous cervical cells. In February of 2014, Kamineni launched FHACT™ as a key diagnostic tool in evaluating and managing cervical cancer in its multi-center hospital system.

## Mayo Clinic

In 2013, CGI and Mayo Clinic launched joint venture, Oncospire Genomics to discover, validate, and develop next-generation sequencing-based cancer panels in targeted categories. This partnership will lead to the development of commercial diagnostic products and services, as well as early stage therapeutic markers.



## National Cancer Institute

The collaboration with NCI was formed to investigate FISH (Fluorescence in situ hybridization) as a screening tool for the detection of HPV-associated pre-cancerous and cancerous cells. NCI provided liquid biopsy specimens for analysis by FFACT™

## North Shore-Long Island Jewish Health System

CGI's partnership with North Shore-Long Island Jewish Health System was established for the clinical validation of CGI's proprietary microarray, MatBA® -CLL. We are also involved in collaborative studies for additional molecular biomarkers of CLL.

## University of Iowa Cancer Center

CGI and the University of Iowa are involved in the evaluation of FFACT™ for clinical usage, and the validation of the DLBCL microarray.

## Stanford University

Stanford University granted CGI a worldwide, nonexclusive license under U.S. Patent for the classification of diffuse large B-cell lymphoma (DLBCL) using a method and algorithm developed at Stanford.

## Memorial Sloan-Kettering Cancer Center

Memorial Sloan-Kettering Cancer Center and CGI have formed multiple collaborations across multiple cancer categories. Current collaborative efforts are focused on kidney cancer, chronic lymphocytic leukemia (CLL), diffuse large B-cell lymphoma (DLBCL), mantle cell lymphoma (MCL), and follicular lymphoma (FL).

# IMPACT OF CANCER

## Number of New Cases Annually

### LEUKEMIA

GLOBAL:  
**351,965**

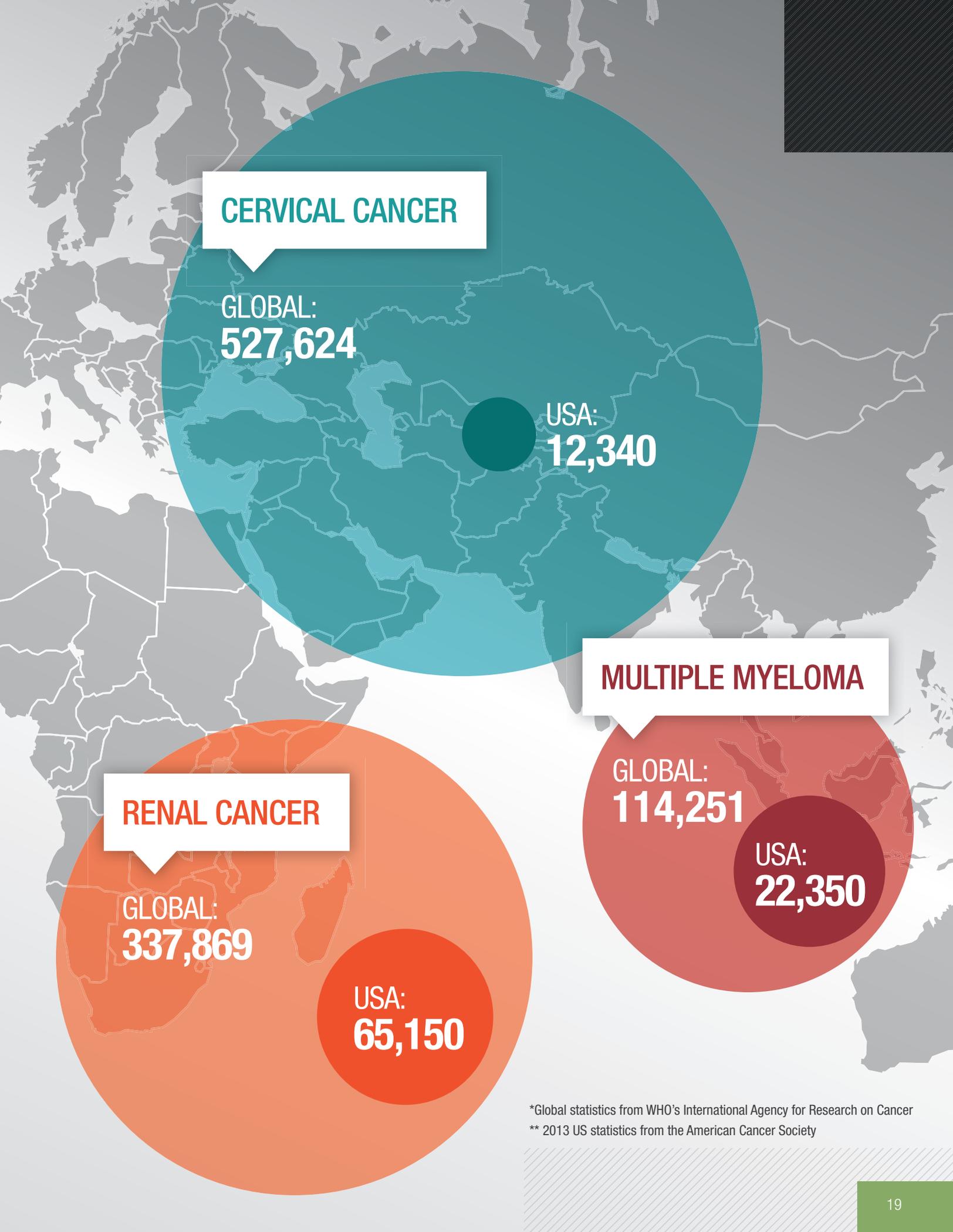
USA:  
**48,610**

### LYMPHOMA

GLOBAL:  
**385,741**

USA:  
**69,740**

CGI focuses on cancer categories that have nearly **1.7 MILLION NEW CASES** globally every year.



## CERVICAL CANCER

GLOBAL:  
**527,624**

USA:  
**12,340**

## RENAL CANCER

GLOBAL:  
**337,869**

USA:  
**65,150**

## MULTIPLE MYELOMA

GLOBAL:  
**114,251**

USA:  
**22,350**

\*Global statistics from WHO's International Agency for Research on Cancer

\*\* 2013 US statistics from the American Cancer Society

# WHAT OUR PARTNERS ARE SAYING...

"When we began our relationship with Cancer Genetics, we were looking for a provider that would guarantee us the quality of the test, since that directly impacts patient care and outcome. For our patients every minute is crucial and we also wanted the focus on quality to be accompanied by excellent response and turnaround times. Over the past two years of the relationship, Cancer Genetics has continually demonstrated their commitment to both our quality requirements and response time needs. These shared values with Roche are proof that they understand the importance of getting treatment and solutions to our patients. Since day one, Cancer Genetics has been a true business partner."

Alvaro Soto  
CEO of Roche Services

"Cancer Genetics has positioned itself to benefit from the transition of traditional diagnostics to genomic-based testing."

Chris Bunge  
Manalapan Oracle Capital Management



“Genetic testing within oncology is evolving at a tremendous rate. Our newest partner, Cancer Genetics, provides our growing marketplace with a robust catalog of more than 100 regulatory approved oncology testing products and solutions for easy search, comparison, and ordering.”

Mark Harris, PhD, MBA  
NextGxDx CEO

“Individualized medicine and genomic testing give us a fundamental understanding of the inner workings of wellness and disease. We recognize the transformative power of these tools and are committed to using every resource at our disposal to bring individualized medicine to our patients. That is why this joint venture is so important.”

Gianrico Farrugia, MD  
Director, Mayo Clinic’s Center for Individualized Medicine

“The company is on the cutting edge of developing and applying genomic tests for the identification of lesions that enable personalized medicine; the information from these tests can also be used to develop targeted therapies.”

Dr. Riccardo Dalla-Favera, Columbia University  
“Targeted Therapy and Companion Diagnostics Go Hand in Hand” – *Future of Cancer Care*

# ONCOSPIRE

Cancer Genetics, Inc. and Mayo Clinic Formed a Joint Venture to Develop **Next-Generation Sequencing** Focused on Areas of Critical Need in Oncology



# A JOINT VENTURE BETWEEN MAYO CLINIC AND CGI



Discover.  
Personalize.  
Deliver.

In May 2013, CGI and Mayo Clinic agreed to form Oncospire Genomics (“Oncospire”) as an equally owned joint venture. Oncospire will pursue the development of novel next-generation sequencing (NGS) based diagnostic panels that seek to provide clinically relevant and actionable insights in areas of critical need in oncology. The joint-venture will initially pursue the development of NGS panels for lung cancer, multiple myeloma, and follicular lymphoma.

With over 1.6 million new cases diagnosed annually, **LUNG CANCER** is a category where earlier diagnosis and differentiation is critical to improved patient outcomes. To date, only a handful of biomarkers for lung cancer have been identified, and they do not fully address the need for diagnostic and predictive information.

Likewise, there are approximately 200,000 new cases of **MULTIPLE MYELOMA** diagnosed annually, and no comprehensive genomic panel that can be utilized to predict early transformation from monoclonal gammopathy of undetermined significance (“MGUS”) to multiple myeloma. Currently available tests are expensive, invasive, and often require multiple biopsies.

**FOLLICULAR LYMPHOMA** represents approximately 30% of all non-Hodgkin lymphomas, and is the second most common lymphoma in the U.S. We believe predicting the risk progression of follicular lymphoma is a key unmet clinical need, with a potential market of up to 45,000 tests annually based on disease prevalence and number of biopsies performed.

The “team science” based approach, a multi-disciplinary approach that combines leading clinicians with world-class scientists, pathologists, bioinformaticians and laboratory medicine professionals, will combine Mayo Clinic’s next-generation sequencing capabilities and world-class biobank with CGI’s scientific leadership, disease-focused genomic knowledge, and commercial acumen.

CGI recently invested \$1 million in Oncospire, and will invest up to an additional \$5 million upon Oncospire achieving project development milestones.

Mayo Clinic is a nonprofit worldwide leader in medical care, research and education for people from all walks of life.

# BOARD OF DIRECTORS

As of April 1, 2014



## John Pappajohn, non-executive Chairman

Mr. Pappajohn has served on our board since 2008 and was appointed chairman in January 2014. Mr. Pappajohn is a pioneer in the venture capital industry. He has founded multiple financial firms and businesses, has been involved in over 100 start-up companies, and has served as a director of over 40 public companies – many in the bioscience and health-related industries. He currently serves on the boards of the following public companies: American CareSource Holdings, Inc. and CNS Response. Mr. Pappajohn previously served on the boards of PharmAthene, Inc., Careguide, Inc., ConMed Healthcare Management, Inc., and SpectraScience, Inc.

## Keith Brownlie, CPA

Keith Brownlie, CPA has been a director since June 2011. Mr. Brownlie has served as a member of the Board of Directors of Epiccept Corporation. He formerly worked with the accounting firm of Ernst & Young LLP, where he served as audit partner for numerous public companies and was the Life Sciences Industry Leader for the New York metro area. During that time, he was involved with over 100 public and private financings, and M&A transactions. Mr. Brownlie co-founded the New Jersey Entrepreneur of the Year Program and was vice president and trustee of the New Jersey Society of CPAs. He also served as accounting advisor to the board of the Biotechnology Council of New Jersey.



## Franklyn Prendergast, MD, PhD

Dr. Prendergast has served on our Board of Directors since 2012. He is the Edmond and Marion Guggenheim Professor of Biochemistry and Molecular Biology and Professor of Molecular Pharmacology and Experimental Therapeutics at Mayo Medical School, and Director Emeritus, Mayo Clinic Center for Individualized Medicine. Dr. Prendergast is an emeritus member of the Mayo Clinic board of governors and Board of Trustees, and has held several teaching positions at the Mayo Medical School since 1975. He has served in numerous advisory roles for the National Institute of Health and the National Research Council of the National Academy of Sciences, and is a member of the Board of Directors of the Translational Genomics Research Institute and the Infectious Disease Research Institute (IDRI). He also currently serves on the Board of Directors of Eli Lilly & Co., DemeRx, Inc., and Ativa.



## Raju S.K. Chaganti, PhD

Dr. Chaganti is our founder and served as the chairman of our Board until January 2014. Dr. Chaganti is an internationally recognized leader in cancer cytogenetics and molecular genetics, and co-discovered patents for lymphoma and kidney cancers. He currently is the incumbent of the William Snee E. Chair at the Memorial Sloan-Kettering Cancer Center (MSKCC), where he is on the faculty of the Department of Medicine and Cell Biology Program. He is also a professor at the Gernster Sloan-Kettering Graduate School of Biomedical Sciences at Cornell University Medical College. Dr. Chaganti was the chief of MSKCC's cytogenetics service and is certified by the American Board of Medical Genetics, with a sub-specialty in clinical cytogenetics.



## Edmund Cannon

Edmond Cannon has been a member of our Board of Directors since 2005. He is founder and president of the Clinical Research Center of Cape Cod, which specializes in finding specimens for the diagnostics and pharmaceutical industries, and in setting up studies to support FDA submissions. Mr. Cannon was previously a marketing and operations consultant at Franey Medical Labs and was a vice president and co-founder of Alletess, Inc.

## Paul Rothman, MD

Dr. Paul B. Rothman joined our Board of Directors in February 2014. Dr. Rothman is dean and CEO of both the Johns Hopkins Health System and the School of Medicine. A rheumatologist and molecular immunologist, he came to Hopkins in July 2012 after having served as Dean of the Carver College of Medicine at the University of Iowa. He previously served as head of internal medicine at the University of Iowa, and prior to that as vice chairman for research and founding director of the Division of Pulmonary, Allergy and Critical Care Medicine at Columbia University College of Physicians and Surgeons.



## Panna Sharma

Mr. Sharma became a member of our board of directors and our Chief Executive Officer in May 2010. Additionally, he serves as the general manager of Oncospire Genomics, a joint venture with Mayo Clinic. He previously was managing partner and founder of TSG Partners, where he established several life science capital market indices that are used today in the life science industry. He has led over 70 buy and sell-side transactions for life sciences, healthcare and biopharma companies. Mr. Sharma formerly served as Chief Strategy Officer, iXL Enterprises, Inc. ("iXL"), was a partner at Interactive Solutions, Inc., and served as a consultant to Putnam Investment Management, LLC and Bank of America Corporation. Mr. Sharma has also served on the Board of Directors of EpicEdge and as chairman of the Advisory Board for EndoChoice.

# MANAGEMENT TEAM



**Panna Sharma**

**President and Chief Executive Officer**

Mr. Sharma became a member of our board of directors and our Chief Executive Officer in May of 2010. Additionally he serves as the General Manager of Oncospire Genomics, a joint venture with Mayo Clinic focused on next generation sequencing in oncology.



**Weiyi Chen, PhD, HCLD (ABB)**

**Molecular Diagnostics Director**

Dr. Chen came to CGI in 2005. She has over 10 years of research experience in the genetics of lymphoma and over 8 years in clinical molecular diagnosis. Dr. Chen trained in the Molecular Research Laboratory at MSKCC. Dr. Chen is certified as a High-Complexity Clinical Laboratory Director (HCLD) from the American Board of Bioanalysis (ABB), and holds a Certificate of Qualification as a laboratory director from the New York State Department of Health. She is an active member of the Association of Molecular Pathology.



**Cory Hickmon**

**Director of National Clinical Sales**

Cory Hickmon joins Cancer Genetics with over 23 years of oncology sales and sales leadership experience. His career focus has been in esoteric oncology testing market; he is devoted to building and leading successful sales teams in the rapidly growing genetic and genomic space. Mr. Hickmon began his career with Impath, which was later acquired by Genzyme Genetics. During the acquisition, he was promoted to Southwest Regional Director, and his skills in building out sales teams were utilized as Genzyme experienced rapid expansion.



**Jane Houldsworth, PhD**

**Vice President of Research and Development**

Dr. Houldsworth joined CGI in 2007. She has over 25 years of experience in translational research and has a long standing interest in the biology and genetics of lymphoma and male germ cell tumors. She is an active member of the American Society of Hematology (ASH) and the American Association for Cancer Research (AACR). She also holds a New York State certificate of qualification as a laboratory director for oncology, molecular and cellular tumor markers.



## Pal Singh-Kahlon, PhD, FACMG

### Cytogenetics Director

Dr. Singh-Kahlon joined CGI in 2010 and has 20 years of experience in the field of clinical cytogenetics from academic institutions and reference laboratories. Dr. Singh-Kahlon is recognized as a leader in the field of cytogenetics, and is board certified by the American Board of Medical Genetics. He holds a Certificate of Qualification (COQ) for the states of New York and New Jersey.



## Marie-Agnes Michellod, PhD

### Director of Marketing and Regulatory Affairs

Dr. Michellod joined CGI in 2008. Her scientific background is in genetics and signaling pathway characterization and she has strong knowledge in molecular biology and immunohistochemistry. After defending her Ph.D. in Paris (France) in 2003, Dr. Michellod pursued two Post-Doctoral trainings at Rutgers University (NJ) where her studies involved cell cycle deregulation. Dr. Michellod has a certificate in Regulatory Affairs and managed the implementation of a Quality Management System for the DNA-FISH Probe manufacturing and ensures compliance with the E.U. directive. She currently oversees the maintenance of this system and manages the global DNA-FISH Probe distribution. Dr. Michellod also serves as manager for CGI's marketing department.



## Ed Sitar

### Chief Financial Officer

Ed Sitar joined Cancer Genetics in early 2014 and brings over 30 years of experience of financial knowledge in the healthcare industry. Prior to joining CGI, Mr. Sitar served as Chief Financial Officer - New Business at Healthagen, a subsidiary of Aetna, where he was responsible for leading concept companies to commercialization. From 2001 to 2010, he was Executive VP and Chief Financial Officer, Cadent Holdings. His other experience includes time as CFO of MIM Corporation (currently known as Bioscrip), and VP of Finance for Vital Signs.



## Lan Wang, MD

### Medical Director

Dr. Wang joined CGI in 2007. She is certified by the American Board of Pathology, as well as Hematopathology. In New Jersey, Dr. Wang holds a Medical License and Bioanalytical Laboratory Director License from the Board of Medical Examiners. She also has a Certificate of Qualification from New York State as a Laboratory Director in Histopathology and Cytopathology. Dr. Wang holds the position of Staff Pathologist/Hematopathologist and serves as a cancer liaison physician at Chilton Memorial Hospital in New Jersey.

# RAJU S.K. CHAGANTI, PhD

## CGI FOUNDER

Cancer Genetics, Inc., was founded in 1999. By then I had spent more than 20 years in cancer genomics, focusing mainly on lymphoid malignancies at the Memorial Sloan-Kettering Cancer Center. During this period, molecular biology and genome analysis were being integrated into cancer studies. Many new genetic markers along with their clinical importance were being defined by us and others.

At the time, there were few, if any, cancer diagnostics companies based solely on advances in genome analysis. I thought that developing an entity in the private sector with this focus would be a good business venture. Additionally, I felt that such an entity – with close ties to academia – could advance the field and complement the work already being done within academia.

With these thoughts in mind, we formed Cancer Genetics in Cambridge, MA. The company got started with Dr. Ramana Tantravahi, a well-respected cancer cytogeneticist who had just retired from the Dana Farber Cancer Institute as Head of Cytogenetics, leading the company's cytogenetics work. Dr. Nallasivam Palanisamy, a postdoctoral colleague in my laboratory at Memorial Sloan Kettering, organized a genomics focused Research & Development group.

At the time, I was making day trips to Cambridge at least twice a month to supervise activities there which, while also fulfilling with my full time responsibilities at the Memorial Sloan-Kettering Cancer Center. In 2004, we moved the company to a small space rented at the Hackensack University Hospital in Hackensack, New Jersey which allowed me to be at the company more often.

Three years later, we built the current state of the art facility in Rutherford, NJ, permitting us to expand both the breadth and depth of the programs; the rest, as they say, is history!



# CGI PATENTS

## Tool for Diagnosis and Prognosis of Mature B-Cell Neoplasms

- US Issued Patent 8,580,713
- US Issued Patent 8,557,747
- Europe 10803548.6
- India 6657/DELNP/2012
- Canada 2,785,656

## Methods of Analyzing Chromosomal Translocations Using Fluorescence In Situ Hybridization (FISH)

- US Issued Patent 7,585,964
- US Issued Patent 7,964,345
- Canada 2,447,320

## Panel for the Detection and Differentiation of Renal Cortical Neoplasms

- US 11/932,422
- Europe 08844570.5

## Methods for Detecting Human Papilloma Virus-Associated Cancers

- US 13/227,027
- US 13/474,111
- PCT/US2011/050681

## Methods and Tools for the Diagnosis of Female Gynecological Cancers and Precancers

- US 61/581,350

“Creating unique, IP-protected tests is a critical element to our long-term strategy and delivering value to shareholders, especially in an environment where molecular diagnostics becomes more central in patient care and management.”



There were an estimated **14.1 million cancer cases** around the world in 2012...  
This number is expected to increase to **24 million by 2035**.

– World Cancer Research Fund



**LYMPHOMA**

- 385,741 new cases yearly
- CGI's offers microarray-based testing for DLBCL, FL, MCL through MatBA®

**MULTIPLE MYELOMA**

- 114,251 new cases annually
- CGI is developing technology and tests in this category

**RENAL CANCER**

- 338,000 new cases annually
- CGI offers microarray-based testing for kidney cancer through UroGenRA®-Kidney

**LEUKEMIA**

- 351,965 new cases annually
- CGI Offers a comprehensive molecular panels and microarrays for CLL

**CERVICAL CANCER**

- 527,624 new cases annually
- CGI's FHACT™ can diagnose cervical cancer from a pap smear sample.

Cancer Genetics is focused on empowering personalized cancer treatment through the development of innovative products and services that drive patient value across the **DIAGNOSIS, MANAGEMENT and TREATMENT** of cancer.