On behalf of the National Society of Genetic Counselors (NSGC) Annual Education Conference (AEC) Planning Subcommittee and the NSGC Board of Directors, thank you for joining us!

NSGC is building a stronger future for genomic health with more than 32 educational sessions designed to support your professional development. Sessions will cover a variety of topics at the forefront of genomics such as genetic test utilization, the clinical and psychosocial complexities of obtaining a diagnosis, and informed consent for genomic sequencing. Educational highlights you do not want to miss include the pre-conference symposium “Practicing with Change: Best Practices in Prenatal Screening and Diagnosis” (page 11), the Dr. Beverly Rollnick Memorial Lecture (page 14) and the NSGC Professional Issues Panel (page 14). Reference pages 11-16 for sessions submitted/sponsored by your NSGC Special Interest Group (SIG). Maximize your AEC experience by building your schedule to include education sessions specific to your professional interests.

Valuable experiences await you outside of lecture room walls as well. Take advantage of the Welcome Reception, SIG meetings and the new AEConneect area to network with 1,800 of your peers. Visit the Exhibitor Suite to see the latest product offerings and services within the profession. Catch up with old friends and make new connections during receptions, program reunions and daily breaks. Attend the State of the Society address, the NSGC Business Meeting and the new SIG Fair to learn more about the latest efforts of your professional organization. Experience all of the incredible activities this week has to offer!

We hope you enjoy your time here in New Orleans, absorbing content on the latest innovations and developments in the profession of genetic counseling, all while enjoying the rich culture of this amazing city!

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Download the Official NSGC 2014 AEC Mobile App

NSGC is delivering everything AEC directly to your fingertips via the 2014 NSGC AEC mobile app. Download the app to gain early access to session descriptions, speakers and scheduling. Use the interactive maps to navigate the show floor with ease, search the exhibitor directory and stay in-the-know with show alerts.

With your smartphone or tablet, search for “NSGC 2014 AEC” in your app store or direct your mobile browser to http://m.core-apps.com/nsgc_ec2014.

Engage with NSGC and fellow genetic counselors at the AEC on social media using hashtag #NSGC2014.
Statement of Purpose
The 33rd Annual Education Conference (AEC) focuses specifically on the educational needs of genetic counselors. The AEC addresses a wide variety of genetic counseling practice areas and provides the latest information for the genetic counseling profession. Attendees will gain important information to support and enhance their current practice at sessions such as: Lesbian, Gay, Bisexual, Transgender, Queer/Questioning (LGBTQ) Clients in Genetic Counseling; Awkward Questions? Complex Answers? Let’s Start the Discussion and Tumor Genomic Testing: Technology, Clinical Implications and the Role of the Genetic Counselor. The Exhibit Suite will provide current information and the opportunity to talk with exhibitors about new developments in genetics. The pre-conference symposia will provide in-depth information on specific topics relevant to the field of genetic counseling.

Evaluation Process
Please assist NSGC in evaluating the AEC sessions; your input will help us plan future conferences.

Educational Session Evaluations
Participants are asked to complete online evaluations to provide input regarding individual speakers and educational content. For each educational session, please evaluate each speaker based on the time slot for the presentation. The speaker in the first time slot is speaker “1,” the speaker in the second time slot is speaker “2,” and so on. We ask all attendees to complete an online session evaluation for each session attended. Although individuals claiming CEUs MUST complete evaluations, NSGC greatly appreciates feedback from all attendees.

Poster Evaluation
Participants are asked to complete an electronic poster evaluation for attending the Posters with Authors sessions (301 and 309). Those seeking CEUs for viewing posters MUST complete a poster evaluation.

Concurrent Papers Evaluation
The Concurrent Papers sessions (302 – 305 and 410 – 413) feature six back-to-back presentations in four different categories, which run concurrently. The speaker in the first 15 minute time slot is considered speaker “a,” the speaker in the second 15 minute time slot is considered speaker “b”, and so on. For example, the second speaker in session 302 will be listed as 302b. If you plan to attend all six abstracts within the same category (no room change), complete six evaluations for that session number (example: complete evaluations 302a, 302b, 302c, 302d, 302e and 302f). If you plan to change categories/rooms between abstracts, complete the evaluation that corresponds with the session number and speaker order. In order to receive the full 1.5 Contact Hours, you must attend and evaluate six speakers. If you attend and evaluate five or fewer speakers, your CEUs will be credited proportionally.

Overall Conference Evaluation
Following the AEC, you will receive an electronic survey by e-mail requesting feedback about your overall conference experience. Please take a moment to complete this brief survey as your feedback is integral in planning future NSGC events.

2014 AEC Online Session Recordings
Maximize your AEC experience – listen to the sessions you missed in New Orleans, earn additional CEUs or access the valuable information you gathered on site. Take advantage of the opportunity to purchase the online session recordings – order today! Session recordings can be purchased and added while on-site as well!

Session recording packages featuring all pre-conference symposia* or featuring the AEC plenary and educational breakout sessions* are available for purchase. The online recordings will contain synced audio and PowerPoint® presentations for each session. You will be required to complete and pass a quiz included at the conclusion of each session and submit an evaluation to earn Category 1 CEUs for participating in the online course recordings. Purchase your online recording package in conjunction with your AEC registration for a special discounted rate.** The recordings will be released in early 2015 and will be available for two years after the release date.

If you register for the AEC only:
- AEC recordings – $59
- Pre-conference symposia recordings – $119

If you register for a Pre-conference Symposium only:
- AEC recordings – $119
- Pre-conference symposia recordings – $59

Best Combo Deal!
If you register for the AEC and Pre-conference Symposia:
Receive both the pre-conference symposia and AEC recordings for the low package price of $99.

Registered attendees will be able to order online content during the AEC at these special rates and following the conference at an increased rate. Not attending the AEC? Check the NSGC website in January 2015 for additional information and purchase availability.

* With speaker approval
** Discounted package rates only available when purchased in conjunction with a conference registration.

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* With speaker approval
** Discounted package rates only available when purchased in conjunction with a conference registration.
Registration Hours
Ernest N. Morial Convention Center
Tuesday, September 16 5:00 pm – 8:00 pm
Wednesday, September 17 7:00 am – 8:00 pm
Thursday, September 18 6:30 am – 8:00 pm
Friday, September 19 7:00 am – 7:00 pm
Saturday, September 20 7:00 am – 2:00 pm

Exhibitor Suite Hours
Ernest N. Morial Convention Center, Hall B
Wednesday, September 17 6:30 pm – 8:00 pm
Thursday, September 18 11:00 pm – 8:00 pm
5:00 pm – 7:30 pm
Friday, September 19 11:30 am – 3:00 pm
2:45 pm (Passport to Prizes drawing)

Message Center and Job Boards
Bulletin boards with push-pins are available in the AEConnect section of the Exhibitor Suite for attendees to leave messages for colleagues or to post job opportunities within the genetic counseling field. Advertising is not permitted. Material posted will be monitored and inappropriate information is subject to removal at NSGC’s discretion.

Attendee List Information
Attendee lists were posted on the NSGC website prior to the conference and an updated list will be posted after the conference. Lists are available at the registration desk and are available to copy (at the attendee’s expense) at the FedEx Office Print and Ship Center across the street from the Convention Center. Attendee lists are provided solely for networking and may not be used for solicitation purposes. NSGC is not responsible for errors and/or omissions.

Handouts and Presentations
NSGC offers electronic versions of AEC session handouts if provided by AEC speakers. A copy of the handouts will be available for reproduction (at the attendee’s expense) at the FedEx Office Print and Ship Center across the street from the Convention Center. All session handouts (if provided by the speaker) are posted on the NSGC website and will be available following the conference until March 1, 2015. To download handouts go to http://www.nsgc.org/2014AECHandouts.

If you are also registered for a pre-conference symposium, you will be given a separate link to access your handouts. Handouts will also be available to copy (at the attendee’s expense) at the FedEx Office Print and Ship Center across the street from the Convention Center.

Business Center: Hours of Operation
The FedEx Office Print and Ship Center is located across the street from the Ernest N. Morial Convention Center at 901 Convention Center Blvd. #100 and is open during the following hours:
Monday – Friday 7:30 am – 9:00 pm
Saturday 8:00 am – 6:00 pm
Sunday 12:00 pm – 6:00 pm

The UPS Store/Business Center is located in Lobby F of the Ernest N. Morial Convention Center and is open during the following hours:
Monday – Tuesday 9:00 am – 5:30 pm
Wednesday – Friday 8:00 am – 6:00 pm

Internet Access
NSGC attendees staying at the Hilton New Orleans Riverside will receive complimentary internet access in their guest rooms.
NSGC will also have wireless internet available in all meeting space and common areas at the Ernest N. Morial Convention Center.
NSGC gratefully acknowledges our wireless internet sponsor at the Convention Center:

Sponsored Sessions
Sponsored Meal Sessions are available for pre-registration. If you pre-registered to attend a session, a ticket will be printed with your badge at registration. In order to be admitted to each session, please bring your conference badge and the ticket that pertains to that session. We encourage you to arrive early for each session to allow all attendees time to be seated. If you did not pre-register for a session, but are still interested in attending, you are welcome to join the waiting line outside the room. We cannot guarantee you will be able to attend the session, but if all pre-registered attendees are seated and we still have room, we will be happy to accommodate you.

Please note that not all attendees will receive food and beverage with their admittance. Please check your ticket to see if the sponsor will provide food or if you are encouraged to bring your own.

Executive Office Information
NSGC Executive Office
330 N. Wabash Avenue
Suite 2000
Chicago, IL 60611 USA
Phone: 312.321.6834
Fax: 312.673.6972
Email: nsgc@nsgc.org
Website: www.nsgc.org
Executive Director
Meghan Carey
mcarey@nsgc.org
### Wednesday, September 17

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 AM - 2:00 PM</td>
<td><strong>CEU</strong> Pre-conference Symposia</td>
</tr>
<tr>
<td>2:00 PM - 2:30 PM</td>
<td>New! NSGC SIG Fair (see page 28 for more information) - Room R05</td>
</tr>
<tr>
<td>2:00 PM - 3:15 PM</td>
<td>Welcome to the AEC: How to Make the Most of the Conference and NSGC (see page 28 for more information) - Room R02/R03/R04</td>
</tr>
<tr>
<td>3:30 PM - 3:45 PM</td>
<td>AEC Opening Remarks - The Great Hall AD</td>
</tr>
<tr>
<td>3:45 PM - 5:15 PM</td>
<td><strong>CEU</strong> Janus Series</td>
</tr>
<tr>
<td>5:15 PM - 5:30 PM</td>
<td>107 - Fanconi Anemia: Breaking Apart the Complex Cancer and Genetic Counseling Issues Room 207/210/211</td>
</tr>
<tr>
<td>5:30 PM - 5:45 PM</td>
<td>108 - Eye Can See Clearer Now: Genetic Testing and Genetic Counseling for Retinitis Pigmentosa The Great Hall AD</td>
</tr>
<tr>
<td>5:45 PM - 6:05 PM</td>
<td>109 - Advances in the Field of Bleeding Disorders - The Great Hall AD</td>
</tr>
<tr>
<td>6:05 PM - 6:30 PM</td>
<td>Audrey Heimler Special Project Award - The Great Hall AD</td>
</tr>
<tr>
<td>6:30 PM - 8:00 PM</td>
<td>Welcome Reception in the Exhibitor Suite - Hal B</td>
</tr>
<tr>
<td>7:30 PM - 11:00 PM</td>
<td>Various Program Reunions (See page 8 of the program book for more information)</td>
</tr>
<tr>
<td>8:30 PM</td>
<td>Journal of Genetic Counseling Editorial Board Meeting - Room R02</td>
</tr>
</tbody>
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### Thursday, September 18

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 AM - 7:45 AM</td>
<td><strong>CEU</strong> 201 - Use of Chromosomal SNP Array in Today's Clinical Practice - Sponsored by Integrated Genetics - The Great Hall BC</td>
</tr>
<tr>
<td>7:00 AM - 8:00 AM</td>
<td>AEC Breakfast - Great Hall Prefunction Space</td>
</tr>
<tr>
<td>7:00 AM - 7:45 AM</td>
<td>Various NSGC Ancillary Meetings</td>
</tr>
<tr>
<td>7:00 AM - 7:45 AM</td>
<td>NSGC Leadership Orientation Room R03</td>
</tr>
<tr>
<td>7:45 AM - 8:00 AM</td>
<td>Research SIG Room R02</td>
</tr>
<tr>
<td>8:00 AM - 8:15 AM</td>
<td>NSGC Leadership Development Program (Incoming Committee Vice-Chairs and Incoming Board Members) Room 214</td>
</tr>
<tr>
<td>8:00 AM - 9:30 AM</td>
<td><strong>CEU</strong> Educational Breakout Sessions</td>
</tr>
<tr>
<td>8:00 AM - 9:45 AM</td>
<td>202 - Adoption of Children with Genetic Disorders: Essential Knowledge for Genetic Counselors Room 211/212/213</td>
</tr>
<tr>
<td>8:00 AM - 9:45 AM</td>
<td>203 - Non-Invasive Prenatal Screening: Data, Marketing and Women's Choices Room 208/209/210</td>
</tr>
<tr>
<td>8:00 AM - 9:45 AM</td>
<td>204 - The Evolution of Hereditary Cancer Susceptibility Genetic Testing: The Clinical Utility of Integrating Whole Exome and Genome Sequencing into the Practice of Cancer Genetic Counselors Room 206/207</td>
</tr>
<tr>
<td>8:00 AM - 9:45 AM</td>
<td>205 - Psychiatric Genetic Counseling in the Era of Direct to Consumer Genetic Testing Room 217/218/219</td>
</tr>
<tr>
<td>8:00 AM - 9:45 AM</td>
<td>206 - Lesbian, Gay, Bisexual, Transgender, Queer/Questioning (LGBTQ) Clients in Genetic Counseling: Awkward Questions? Complex Answers? Let's Start the Discussion Room 220/221/222</td>
</tr>
<tr>
<td>9:00 AM - 9:45 AM</td>
<td>AEC Break - Great Hall Prefunction Space</td>
</tr>
<tr>
<td>9:45 AM - 10:45 AM</td>
<td><strong>CEU</strong> 207 - National Efforts Towards Standardizing Variant Interpretation - The Great Hall AD</td>
</tr>
<tr>
<td>10:45 AM - 11:30 AM</td>
<td>NSGC State of the Society Address - The Great Hall AD</td>
</tr>
<tr>
<td>11:30 AM - 2:00 PM</td>
<td>Exhibitor Suite Open - Hal B</td>
</tr>
<tr>
<td>11:30 AM - 12:00 PM</td>
<td>American Board of Genetic Counseling (ABGC) Business Meeting - The Great Hall AD</td>
</tr>
<tr>
<td>12:00PM - 12:30 AM</td>
<td>Accreditation Council for Genetic Counseling (ACGC) Presentation - The Great Hall AD</td>
</tr>
<tr>
<td>12:30 PM - 2:00 PM</td>
<td><strong>CEU</strong> 208 - Next Generation Panel Testing for Genetically Heterogeneous Cancer and Mitochondrial Disorders - Sponsored by Baylor College of Medicine - The Great Hall BC</td>
</tr>
<tr>
<td>12:30 PM - 2:00 PM</td>
<td>Various NSGC Committee Meetings</td>
</tr>
<tr>
<td>2:00 PM - 3:30 PM</td>
<td><strong>CEU</strong> Educational Breakout Sessions</td>
</tr>
<tr>
<td>2:00 PM - 3:30 PM</td>
<td>AEC Break - Great Hall Prefunction Space</td>
</tr>
<tr>
<td>3:30 PM - 3:45 PM</td>
<td><strong>CEU</strong> 209 - Psychiatric Genetics for the Pediatric Counselor Room 217/218/219</td>
</tr>
<tr>
<td>3:45 PM - 4:45 PM</td>
<td>210 - Sex Chromosome Aneuploidies: A Multidisciplinary Perspective on Counseling and Current Treatment Recommendations Room 220/221/222</td>
</tr>
<tr>
<td>4:45 PM - 5:00 PM</td>
<td>211 - Hereditary Cancer Communication with Underserved Patients Room 208/209/210</td>
</tr>
<tr>
<td>5:00 PM - 5:15 PM</td>
<td>212 - How to Review a Manuscript for a Journal: A Practical Workshop Aimed at Professional Development for Genetic Counselors Room 211/212/214</td>
</tr>
<tr>
<td>5:15 PM - 6:00 PM</td>
<td>213 - Myotonic Muscular Dystrophy: Global Impact! Room 206/207</td>
</tr>
<tr>
<td>6:30 PM - 7:30 PM</td>
<td>Various Program Reunions (See page 8 of the program book for more information)</td>
</tr>
<tr>
<td>6:30 PM - 7:30 PM</td>
<td><strong>CEU</strong> 215 - Posters with Authors: Even Numbered Posters - Hal B</td>
</tr>
<tr>
<td>7:45 PM - 9:15 PM</td>
<td><strong>CEU</strong> NIPT: To Expand or Not to Expand? That is the Question - Sponsored by Illumina - The Great Hall BC</td>
</tr>
</tbody>
</table>
## Reunion Information

### Wednesday, September 17

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 pm</td>
<td>University of Cincinnati</td>
<td>Hilton Garden Inn&lt;br&gt;1001 South Peters Street&lt;br&gt;New Orleans, LA</td>
</tr>
<tr>
<td></td>
<td><em>Prior RSVP Required</em></td>
<td></td>
</tr>
<tr>
<td>7:30 pm - 9:30 pm</td>
<td>Canadian Programs (McGill University, University of British Columbia, Université de Montréal, University of Toronto)</td>
<td>Café Soulé&lt;br&gt;720 Saint Louis Street&lt;br&gt;New Orleans, LA 70116</td>
</tr>
<tr>
<td>7:30 pm</td>
<td>University of Arkansas for Medical Science</td>
<td>To Be Determined</td>
</tr>
<tr>
<td>8:30 pm</td>
<td>Wayne State University</td>
<td>The Rusty Nail&lt;br&gt;1100 Constance Street&lt;br&gt;New Orleans, LA 70130</td>
</tr>
<tr>
<td>8:30 pm - 11:00 pm</td>
<td>University of Michigan</td>
<td>The Rusty Nail&lt;br&gt;1100 Constance Street&lt;br&gt;New Orleans, LA 70130</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:00 pm - 8:00 pm</td>
<td>Mount Sinai</td>
<td>The Wine Room at Cafe Adelaide&lt;br&gt;300 Poydras St&lt;br&gt;New Orleans, LA 70130</td>
</tr>
<tr>
<td>TBA</td>
<td>University of Wisconsin - Madison</td>
<td>Barcadia&lt;br&gt;601 Tchoupitoulas Street&lt;br&gt;New Orleans, LA 70130</td>
</tr>
<tr>
<td>7:00 pm - 10:00 pm</td>
<td>University of Maryland</td>
<td>The Rusty Nail&lt;br&gt;1100 Constance Street&lt;br&gt;New Orleans, LA</td>
</tr>
<tr>
<td>7:30 pm - 9:00 pm</td>
<td>Brandeis University</td>
<td>Cafe Soule Paris Room&lt;br&gt;720 Saint Louis Street&lt;br&gt;New Orleans, LA 504.304.4636</td>
</tr>
<tr>
<td>7:45 pm</td>
<td>University of Colorado</td>
<td>Warehouse Grille&lt;br&gt;869 Magazine Street&lt;br&gt;New Orleans, LA 504.322.2188</td>
</tr>
<tr>
<td>7:30 pm</td>
<td>Stanford University</td>
<td>W.I.N.O.&lt;br&gt;610 Tchoupitoulas St.&lt;br&gt;New Orleans, LA 70130</td>
</tr>
<tr>
<td>7:30 pm</td>
<td>University of Texas</td>
<td>ACME Oyster House&lt;br&gt;724 Iberville Street&lt;br&gt;New Orleans, LA 504.522.5973</td>
</tr>
<tr>
<td>7:30 pm - 10:00 pm</td>
<td>University of South Carolina</td>
<td>Barcadia&lt;br&gt;601 Tchoupitoulas Street&lt;br&gt;New Orleans, LA 504.335.1740</td>
</tr>
</tbody>
</table>

### Friday, September 19

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 pm</td>
<td>Sarah Lawrence College</td>
<td>Ernest N. Morial Convention Center&lt;br&gt;Room R07&lt;br&gt;900 Convention Center Blvd, New Orleans, LA 70130</td>
</tr>
<tr>
<td>7:00 pm</td>
<td>University of Alabama at Birmingham</td>
<td>Court of Two Sisters Restaurant&lt;br&gt;613 Royal Street&lt;br&gt;New Orleans, LA</td>
</tr>
<tr>
<td>7:30 pm</td>
<td>Boston University</td>
<td>Domenica&lt;br&gt;123 Baronne Street&lt;br&gt;New Orleans, LA 504.648.6020</td>
</tr>
<tr>
<td>8:00 pm</td>
<td>Arcadia University</td>
<td>To Be Determined</td>
</tr>
<tr>
<td>8:00 pm - 11:00 pm</td>
<td>Northwestern University</td>
<td>The Maison&lt;br&gt;508 Frenchman Street&lt;br&gt;New Orleans, LA 70116</td>
</tr>
<tr>
<td>8:30 pm</td>
<td>California State University-Stanislaus and UC Berkeley alumnæ</td>
<td>To Be Determined</td>
</tr>
<tr>
<td>8:30 pm</td>
<td>University of Minnesota Genetic Counseling Program</td>
<td>The Crazy Lobster&lt;br&gt;500 Port of New Orleans Place&lt;br&gt;Suite 83&lt;br&gt;New Orleans, LA 504.569.3380</td>
</tr>
<tr>
<td>7:00 pm</td>
<td>University of Oklahoma Health Sciences Center</td>
<td>Le Bayou Restaurant&lt;br&gt;208 Bourbon Street&lt;br&gt;New Orleans, LA 504.525.4755</td>
</tr>
</tbody>
</table>

Please visit the AEC Message Center board for additional reunion location and contact information.
Clear ANSWERS to Questions that Matter

Accuracy for All

Harmony is Validated in Women of All Ages

- Harmony Prenatal Test is clinically validated for use in all pregnant women, regardless of age or risk, to assess the risk of trisomy 21, 18, and 13

Harmony is the most broadly studied cell-free DNA-based maternal blood test

In blinded studies of over 22,000 pregnant women age 18 to 50 for trisomy 21:

- False positive rate was less than 0.1%
- Detection was greater than 99%

harmonytest.com

7. Data on file at Ariosa Diagnostics, Inc.
AEC Session Objectives

Wednesday, September 17

Pre-conference Symposia
8:00 am – 2:00 pm

101 Genetic Counseling Training: How to Start, Expand or Revitalize a Program 0.50 CEU
1: Quinn Philip Stein, MS, CGC, Sanford Health; 2: Catherine A. Reiser, MS, CGC, University of Wisconsin; 3: MaryAnn Campion, MS, CGC, Boston University School of Medicine; 4: Robin L. Bennett, MS, CGC, ScD Hon, University of Washington Medical Center; 5: Noelle R. Danylichuk, MS, CGC, University of Arkansas for the Medical Sciences; 6: Dee Quinlin, MS, CGC, University of Arizona - OTH; 7: Ian Wallace, MS, CGC, Pullman Regional Hospital
- Describe the steps required to start a new genetic counseling training program and the essential elements needed to achieve ACGC accreditation.
- Describe the purpose of using an external consultant and/or an AGCPD mentor for program planning.
- Recognize the factors involved with expanding and/or revitalizing an existing training program.

102 Tumor Genomic Testing: Technology, Clinical Implications and the Role of the Genetic Counselor 0.50 CEU
1: Scott Kopetz, MD, PhD, UT MD Anderson Cancer Center; 2: Steven T. Lott, PhD, Thermo Fisher Scientific; 3: Marilyn M. Li, MD, Baylor College of Medicine Medical Genetics Laboratories; 4: Molly S. Daniels, MS, CGC, The UT MD Anderson Cancer Center; 5: Elizabeth Varga, MS, LGI, Nationwide Children’s Hospital; 6: Jessica N. Everett, MS, CGC, University of Michigan - Cancer Genetics Clinic; 7: Megan Prone, MS, CGC, UT Southwestern Medical Center - Simmons Cancer Center; 8: Emily Edelman, MS, CGC, The Jackson Laboratory; 9: Shannon Kerran, MS, CGC, Life Technologies, Inc; 10: Lisa Madensky, PhD, CGC, University of California San Diego; 11: Cecelia Bellcross, PhD, MS, CGC, Emory University School of Medicine
- Compare available tumor genomic testing technologies and approaches and assess their relative strengths and limitations in clinical and research settings.
- Describe roles for the genetic counselor in the tumor genomic testing process including program setup, results reporting, addressing legal and ethical issues, coordinating appropriate follow-up testing and providing education to both patients and providers.
- Investigate challenging genetic counseling issues related to potential germline mutations found during tumor genomic testing via case examples and panel discussion.

Submitted/Sponsored by: Cancer SIG and Personalized Medicine SIG

103 Laboratories and Industry: Depth and Variety of Genetic Counseling Career Opportunities 0.50 CEU
1: Elise Mitchell, MS, CGC, Mayo Medical Laboratories; 2: Jessie Conta, MS, CGC, Seattle Children’s Hospital; 3: Katrina Kotzer, MS, CGC, Mayo Clinic; 4: Gabriel Lazarin, MS, CGC, Counsyl; 5: Amy Swanson, MS, CGC, Illumina; 6: Erin Riggs, MS, CGC, International Collaboration for Clinical Genomics (ICCG)/Gelisinger Health System; 7: Christina Zaleski, MS, CGC, Prevention Genetcs
- Describe emerging areas of practice for genetic counselors employed by laboratories and other non-clinical fields, including roles in pharmacogenomic testing, in hospital laboratories facilitating test utilization and management, as field specialists supporting client education and marketing efforts, and as international collaborators in areas such as data curation and translation to clinical utility.
- Assess how the depth and variety of laboratory genetic counseling roles align with the NSGC Scope of Practice, how counseling skills are applied, and how test utilization and management are optimized through examination of daily activities, inception and development of positions, and ethical issues encountered.
- Identify future directions, career development and growth opportunities for laboratory genetic counselors through the use of alternative service delivery models such as the design of web interfaces, telephone consultations to care for and educate patients regarding test results or appropriate test utilization for unique circumstances and new ways in which laboratories are utilizing genetic counselors.

Submitted by: Industry SIG

104 Saving the Data: A Writer’s Workshop 0.50 CEU
1: Jehannine Austin, PhD, CGC, CCGC, University of British Columbia; 2: Gillian W. Hooker, PhD, ScM, CGC, NextGxDx
- Appreciate the importance of dissemination of genetic counseling research.
- Develop plans for the successful publication of genetic counseling research.
- Compose manuscripts for submission to peer-reviewed journals.

Submitted by: Research SIG and Editorial Board of the Journal of Genetic Counseling

105 Career Trajectories in Genetic Counseling 0.50 CEU
1: Lesley Beinbridge, BSR(PT), Med. PhD, The University of British Columbia; 2: Angela M. Trapanier, MS, CGC, Wayne State University; 3: Lori A.H. Erby, ScM, PhD, CGC, National Human Genome Research Institute/The Johns Hopkins Bloomberg School of Public Health; 4: Catriona Hippman, MSc, CGC, Women’s Health Research Institute; 5: Mary E. Frevogel, MS, CGC, Invision Sally Jobe; 6: Dayna-Lynn Dymianiw, CGC, Xenon Pharmaceuticals Inc.; 7: Claire Davis, MS, CGC, Mount Sinai School of Medicine; 8: Bonnie Jeanne Baby, MS, University of Utah Sciences Center
- Describe a framework for developing career trajectories that has been used in other professions.
- List specific examples of career trajectories in genetic counseling and the factors/critical incidents that led individual genetic counselors down these trajectories.
- Apply the framework and case examples to develop a personal career trajectory and identify novel trajectories for the genetic counseling profession.

Submitted by: Committee on Advanced Training for Certified Genetic Counselors

106 Practicing with Change: Best Practices in Prenatal Screening and Diagnosis 0.50 CEU
1: Raynah M. Lobo, MS, CGC, Quest Diagnostics, Nichols Institute; 2: Joseph R. Biggo, Jr, MD, University of Alabama at Birmingham; 3: Elizabeth A. Kramer-Dugan, MS, CGC, GeneDx; 4: Melanie Mahanti, PhD, CellScape Corporation; 5: Cori Feist, MS, CGC, Oregon Health Sciences University; 6: Megan Alyse, PhD, Duke University; 7: Anthony R. Gregg, MD, FACC, FACMG, University of Florida College of Medicine; 8: Ignatia Van den Veyner, MD, Baylor College of Medicine; 9: Lisa Demers, MS, CGC, Dartmouth-Hitchcock Nashua
- Describe the value and role of maternal serum screen and ultrasound markers for a variety of genetic syndromes and purposes in pregnancy. Understand the strengths and weaknesses of the various screening methods.
- Appreciate both the recommended uses and limitations of cell-free DNA screening (NIPT), Identify future uses for NIPT and the role of NIPT in unusual circumstances.
- Evaluate the risks and benefits of chromosome microarray vs. karyotype for invasive testing. Understand, and become comfortable with, best practices for counseling VOUS, variable penetrance and incidental findings.
- Review society recommendations and best practices for all prenatal testing methods. Using case studies, explore the nuances of new prenatal technologies, and identify the most powerful ways to educate you and your colleagues.

Submitted by: Prenatal Counseling/Ultrasound Anomalies SIG

Janus Series
3:45 pm – 5:15 pm

107 Fanconi Anemia: Breaking Apart the Complex Cancer and Genetic Counseling Issues 0.05 CEU
1: Heather Zierath, PhD, MS, University of Minnesota
- Review the types of Fanconi Anemia (FA) and how they are genetically and medically diverse.
- Assess the current and potential future obstacles of genetic counseling for FA carriers.
- Illustrate the reproductive risks and options for parents of children with FA.
**Wednesday, September 17 (continued)**

### 108 Eye Can See Clearer Now: Genetic Testing and Genetic Counseling for Retinitis Pigmentosa
0.05 CEU

1: Kari Haag Branham, MS, CGC, University of Michigan Kellogg Eye Center
- Describe different aspects of the genetic complexity associated with Retinitis Pigmentosa (RP).
- Effectively interpret pedigrees from families affected with RP.
- Recognize challenges in genetic testing for RP.

### 109 Advances in the Field of Bleeding Disorders
0.05 CEU

1: Elizabeth Varga, MS, LGC, Nationwide Children’s Hospital
- Illustrate the clinical utility of genotyping in the setting of bleeding disorders.
- Discuss the latest research related to treatment and management of bleeding disorders, particularly as related to females.
- Identify roles for the genetic counselor in the setting of the hemostasis and thrombosis.

### Best Abstract Awards

5:15 pm – 5:45 pm
Beth Fine Kaplan Best Student Abstract Award

### 10 Genetic Counselors as Choice Architects: Some Considerations for Presenting Genetic Testing Decisions in a Complex Choice Environment
0.05 CEU

1: Marci Barr, NHGRI/Johns Hopkins University
- Summarize existing knowledge about how the structure of a choice problem may impact judgment and decision making.
- Formulate a framework for structuring genetic testing choice tasks from the perspective of genetic counselors as choice architects.
- Identify areas of research need and methodologies for building an evidence base for how to design genetic testing choices.

### Best Full Member Abstract Award

### 111 Analysis of Billing and Reimbursement of Genetic Counseling Services in a Single Institution in a State Requiring Licensure
0.05 CEU

1: Jennifer Leonhard, MS, Sanford Health
- Describe problems associated with limiting reimbursement of genetic counseling services.
- Recognize factors that can influence reimbursement rates for genetic counseling services.
- Identify future research avenues to better characterize reimbursement rates for genetic counseling services.

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**Thursday, September 18**

### Sponsored Breakfast Session
7:00 am – 7:45 am

### 201 Use of Chromosomal SNP Array in Today’s Clinical Practice
0.05 CEU

1: Stuart Schwartz, PhD, Laboratory Corporation of America; 2: Romela Pasan, MS, CGC, Laboratory Corporation of America
- Explain SNP technology to patients.
- Counsel homozygous (HMZ) regions detected in SNP arrays and its utilization in detection of AR disorders.

*Sponsored by: Integrated Genetics*

### Educational Breakout Sessions
8:00 am – 9:30 am

### 202 Adoption of Children with Genetic Disorders: Essential Knowledge for Genetic Counselors
0.15 CEU

1: Carrie Lynn Blout, MS, CGC, Johns Hopkins McKusick - Nathans Institute of Genetic Medicine; 2: Martha Osborne, RainbowKids Adoption Advocacy; 3: Susan Dibs, MD, Johns Hopkins University; 4: Colleen Gioffreda, BA, Greenberg Center for Skeletal Dysplasias, Johns Hopkins Hospital
- Describe the legal aspects of domestic and international adoption for children with special needs.
- Underline what is included in the medical work-up of internationally and domestically adopted children.
- Recognize available adoption organizations and resources available for children with genetic disorders.

*Submitted by: Public Policy Committee and Pediatric and Clinical Genetics SIG*

### 203 Non-Invasive Prenatal Screening: Data, Marketing and Women’s Choices
0.15 CEU

1: Katie Stoll, MS, CGC, Group Health Cooperative; 2: George Estreich, MFA, Oregon State University; 3: Beth Daley, New England Center for Investigative Reporting
- Identify and analyze persuasive strategies in non-invasive prenatal screening (NIPS) advertising.
- Compare NIPS advertising with the nondirective goals of genetic counseling.
- Give examples of how NIPS advertising has affected individual reproductive decisions.

### 204 The Evolution of Hereditary Cancer Susceptibility Genetic Testing: The Clinical Utility of Integrating Whole Exome and Genome Sequencing into the Practice of Cancer Genetic Counselors
0.15 CEU

1: Laura Amendola, MS, CGC, University of Washington; 2: Sarah Scollon, MS, CGC, Baylor College of Medicine/Texas Children’s Hospital; 3: Elaine Hiller, MS, CGC, Dana-Farber Cancer Institute
- Assess the clinical utility of the current and possible future testing modalities that may be implemented in the clinical hereditary cancer genetics setting.
- Recognize possible next steps when incidental findings are received from whole exome or genome germline sequencing in a research or clinical setting.
- Predict ethical issues that may arise with the implementation of this technology in the clinical care of hereditary cancer patients, as well as patients receiving genetic counseling that incorporates these tests for other indications.

*Submitted/Sponsored by: Cancer SIG*
205 Psychiatric Genetic Counseling in the Era of Direct to Consumer Genetic Testing
0.15 CEU
1: Jehannine Austin, PhD, CGC, CCGBG, University of British Columbia; 2: Catriona Hippman, MSc, CGC, Women's Health Research Institute; 3: Edith Kolozsi, MS, CGC, University of Ottawa Heart Institute; 4: Hannah White, MS, CSU Stanislaus
- Describe some of the practical and psychosocial issues that can emerge in the context of direct to consumer genetic testing for psychiatric disorders.
- Explain the etiology of mental illness in a manner suitable for patients/family members, and how to integrate direct to consumer genetic testing results into this explanation.
- Describe of the psychosocial issues associated with genetic counseling for mental illness, and with receiving direct to consumer genetic testing results.

Submitted by: Psychiatric Disorders SIG

206 Lesbian, Gay, Bisexual, Transgender, Queer/Questioning (LGBTQ) Clients in Genetic Counseling: Awkward Questions? Complex Answers? Let’s Start the Discussion
0.15 CEU
1: Robin L. Bennett, MS, CGC, ScD Hon, University of Washington Medical Center; 2: June A. Peters, MS, CGC, National Cancer Institute/Epidemiology; 3: Luba Djurdjinovic, MS, Ferre Institute-Genetics Programs; 4: Robert Pilarski, MS, CGC, Ohio State University; 5: Bradley Rolf, MS, CGC, Genetic Medicine Clinic, University of Washington Medical Center; 6: Susan Silber, JD, Silber, Perlman, Sigman & Tilev, P.A.
- Produce a consensus pedigree documenting appropriate genetic information, with and without representation of LGBTQ issues.
- List at least three issues that a LGBTQ client or couple may encounter in your genetic counseling practice setting.
- Identify at least one practice change to make to your genetic counseling practice setting that would make it more client-centered to LGBTQ issues.

Plenary Sessions
9:45 am – 10:45 am
207 National Efforts Towards Standardizing Variant Interpretation
0.10 CEU
1: W. Andrew Faucett, MS, LCGC, Geisinger Health System; 2: Kelly E. Ormond, MS, LCGC, Stanford University
- Describe the current NIH efforts to collect genotype and phenotype information from clinical laboratories.
- Utilize the ClinVar resource to gather information about clinically relevant variants.
- List at least three ways that genetic counselors can participate in and improve variant interpretation.

Sponsored Lunch Session
12:30 pm – 2:00 pm
208 Next Generation Panel Testing for Genetically Heterogeneous Cancer and Mitochondrial Disorders
0.10 CEU
1: Eric S. Schmitt, PhD, MS, Baylor Medical Genetics Laboratories; 2: Alicia A. Braxton, MS, Baylor Medical Genetics Laboratories
- List the advantages of next generation sequencing (NGS) panels relative to whole exome sequencing or whole genome sequencing.
- List the advantages of NGS panels vs Sanger sequencing.
- Use clinical and genetic information to guide test selection.

Educational Breakout Sessions
2:00 pm – 3:30 pm
209 Psychiatric Genetics for the Pediatric Counselor
0.15 CEU
1: Brenda Finucane, MS, LGC, Geisinger Health System; 2: Emily Moms, MSc, CCGBG, University of British Columbia; 3: Anne S. Bassett, MD, FRCPc, University of Toronto
- Familiarize the pediatric genetic counselor with the concept of a continuum of developmental brain dysfunction that may give rise to psychiatric features in genetic conditions.
- Learn how to appropriately discuss the risk of psychiatric features with parents in a pediatric genetic counseling setting.
- Outline how psychiatric features of genetic conditions are managed by psychiatrists.

Submitted by: Psychiatric Disorders SIG and Pediatric and Clinical Genetics SIG

210 Sex Chromosome Aneuploidies: A Multidisciplinary Perspective on Counseling and Current Treatment Recommendations
0.15 CEU
1: Nicole Tartaglia, MD, Children's Hospital Colorado, University of Colorado School of Medicine; 2: Pravin Rao, MD, The Johns Hopkins University School of Medicine; 3: Susan Howell, MS, CGC, MBA, The extraordinary Kids Clinic and Fragile X Clinic, Children's Hospital Colorado
- Describe the features associated with sex chromosome aneuploidies (SCAs) from developmental, endocrinological, fertility and psychological perspectives.
- Summarize medical management recommendations across the lifespan.
- Discuss genetic counseling issues and identify strategies and resources to provide effective prenatal and postnatal genetic counseling.

Submitted/Sponsored by: Prenatal Counseling/Ultrasound Anomalies SIG

211 Hereditary Cancer Communication with Underserved Patients
0.15 CEU
1: Galen Joseph, PhD, University of California, San Francisco; 2: Robin Tropp Lee, MS, LCGC, UCSF, Cancer Risk Program
- Appreciate the experience of genetic counseling clients through the research of a medical anthropologist who has done extensive observations, interviews and focus groups aimed at better understanding the strengths and limitations of Hereditary Breast and Ovarian Cancer (HBOC) in the public hospital setting.
- Identify some key factors that present barriers for underserved patients in the HBOC setting.
- Identify strategies aimed at improving communication with clients of color, low income and/or low health literacy.

212 How to Review a Manuscript for a Journal: A Practical Workshop Aimed at Professional Development for Genetic Counselors
0.15 CEU
1: Christina Palmer, PhD, CGC, UCLA; 2: Pat McCarthy-Veach, PhD, MA, University of Minnesota; 3: John M. Quillin, PhD, MPH, MS, CGC, Virginia Commonwealth University; 4: Ian MacFarlane, PhD, Austin College; 5: Jehannine C. Austin, PhD, CGC, CCGBG, University of British Columbia
- Understand the personal and professional benefits of acting as a peer reviewer for manuscripts that have been submitted for potential publication in journals.
- Appreciate how to practically approach the task of reviewing a manuscript, including how to identify issues and how to structure your written review.
- Discuss the ethical considerations associated with reviewing a manuscript for a journal, including how reviewers should/should not use the knowledge they gain from reviewing the work.

Submitted by: Research SIG and Editorial Board of the Journal of Genetic Counseling
Thursday, September 18 (continued)

213 | Myotonic Muscular Dystrophy - Global Impact!
0.15 CEU
1: Carly Siskind, MS, CGC, Stanford Hospital and Clinic; 2: William Groh, MD, MPH, Indiana University School of Medicine; 3: Chad Heatwole, MD, University of Rochester Medical Center
- Summarize the main clinical findings in myotonic dystrophy and the genetic cause and complexities.
- Describe the most common heart phenotype and treatments, and how it could impact the genetic counseling encounter.
- Identify three features of central nervous system dysfunction in myotonic muscular dystrophy.
Submitted by: Cardiovascular Genetics SIG, Neurogenetics SIG and Psychiatric Disorders SIG
Sponsored by: Cardiovascular Genetics SIG and Neurogenetics SIG

Dr. Beverly Rollnick Memorial Lecture
3:45 pm – 4:45 pm
214 | Far From the Tree: Parents, Children and the Search for Identity
0.10 CEU
1: Andrew Solomon, Author, Far From the Tree: Parents, Children and the Search for Identity
- Learn how differences unite us.
- Examine the tension between ideas of illness and identity as used to describe the same conditions.
- Reflect on how people forge meaning out of experiences of difficulty.
Sponsored by: The Dr. Beverly Rollnick Memorial Fund

Sponsored Evening Session
7:45 pm – 9:15 pm
216 | NIPT: To Expand or Not to Expand? That is the Question.
0.10 CEU
1: Patricia Taneja, MS, LCGC, Illumina; 2: Holly Snyder, MS, CGC, Illumina; 3: Patricia Devers, MS, CGC, Illumina
- Cite most recent non-invasive prenatal testing (NIPT) performance data and clinical experience from NIPT CLIA laboratories.
- List clinical considerations (risks and benefits) in NIPT test menu expansion.
- Describe the general process NIPT clinical laboratories may use for test menu expansion.
Sponsored by: Illumina

Friday, September 19

Sponsored Breakfast Session
7:00 am – 7:45 am
301 | Application of an Enhanced Exome in Diagnosis of Rare Genetic Diseases
0.05 CEU
1: Sarah Garcia, PhD, MS, CGC, Personalis; 2: Gemma Chandratillake, MPhil, PhD, MS, LCGC, Personalis
- Describe the makeup and features of an augmented exome with genome-wide structural variant (SV) detection.
- Show examples where an augmented exome with genome-wide (SV) detection enabled diagnoses that would have been missed with a standard exome.
- Outline the decision making process of using panels vs. an augmented exome with genome-wide SV detection for suspected genetic syndromes.
Sponsored by: Personalis, Inc.

Plenary Session
9:45 am – 10:45 am
306 | Informed Consent for Genomic Sequencing: Experience and Recommendations for Clinical and Research Settings
0.10 CEU
1: Barbara Bernhardt, MS, Hospital of the University of Pennsylvania; 2: Sarah Scollon, MS, CGC, Baylor College of Medicine/Texas Children’s Hospital; 3: Denise Lautenbach, MS, CGC, Brigham and Women’s Hospital
- Compare the similarities and differences between obtaining informed consent for genomic sequencing vs. traditional targeted genetic tests and genomic sequencing in the clinical vs. research settings.
- Discuss strategies for addressing common concerns, questions and misconceptions from patients and families considering genomic sequencing.
- Describe recommendations for obtaining informed consent for genomic sequencing in clinical and research contexts.

Sponsored Lunch Session
12:30 pm – 2:00 pm
308 | Unmasking the Genetic Diagnosis: Updates to Whole Exome Sequencing and Inherited Cancer Testing
0.10 CEU
1: Kristen Vogel Postula, MS, CGC, GeneDx; 2: Jackie Tahiliani, MS, CGC, GeneDx; 3: Erica Vaccari, MS, GeneDx
- Describe the inherited cancer genetic testing offerings and whole exome sequencing (WES) provided by GeneDx and discuss testing strategies.
- Review variant classification methods and variant testing program.
- Examine the clinical utility and genetic counseling considerations of inherited cancer next generation sequencing (NGS) gene panels, WES and XomeDxSlice.
Sponsored by: GeneDx

Educational Breakout Sessions
3:15 pm – 4:45 pm
310 | The Clinical and Psychosocial Complexities of Obtaining a Diagnosis for Rare Genetic Disorders: Navigating the Diagnostic Odyssey
0.15 CEU
1: Elizabeth Chao, MD, FACMG, University of California, Irvine; 2: Stephanie Gandomi, MS, CGC, LGC, Ambry Genetics; 3: Kelly Gonzalez, MS, CGC, LGC, Ambry Genetics; 4: Amy Clugston, Syndromes Without A Name (SWAN USA); 5: Jonathon Rodis, BS, MBA, Massachusetts Chapter of the Marfan Foundation; 6: Nicole Boice, Global Genes/RARE Project
- Evaluate and assess the benefits and limitations of new technologies and their impact on patient care as it applies to the genetic counseling practice.
- Appreciate, from the patient and family perspective, the journey to find a diagnosis and the subtle and obvious life changes that emerge after receiving a long-awaited diagnosis.
- Describe the complexities of obtaining a clinical diagnosis in the context of a rare disease and the implications of these complexities for the genetic counseling process.
311 ART Matters: Clinical Considerations for the Non-ART Genetic Counselor
0.15 CEU
1: Lauren Isley, LCGC, California Cryobank; 2: Elizabeth Herr Cameron, MS, CGC, Genesis Genetics; 3: Andrea G. Bessey, BED, MS, CGC, Bonei Olam
- Define general concepts and clinical applications of assisted reproductive technology (ART), including recent advancements in the field.
- Illustrate the application of ART knowledge across all areas of clinical care and its importance to genetic counselors practicing in prenatal, pediatric and cancer settings, as well as specialty clinics.
- Examine the psychosocial issues faced by ART patients and associated ethical considerations.
Submitted/Sponsored by: Cancer SIG

312 Inside the Pediatric Cancer Genetics Clinic
0.15 CEU
1: Kami Wolfe Schneider, MS, CGC, University of Colorado Denver; 2: Joyce Tannenbaum Turner, MS, CGC, Children’s National Medical Center; 3: Katrina Thomas, MS, CGC, Martha Jefferson Hospital; 4: Sarah Scollon, MS, CGC, Baylor College of Medicine/Texas Children’s Hospital; 5: Amanda Knox, MS, CGC, Myriad Genetic Laboratories
- Recognize the features of a medical and family history that are suggestive of pediatric cancer predisposition syndromes.
- Identify the health professionals who are essential players in the care of individuals with pediatric cancer predisposition syndromes.
- Gain an appreciation for the avenues genetic counselors have taken in the establishment of a pediatric cancer genetics clinic.
Submitted/Sponsored by: Cancer SIG

313 Institutional Genetic Test Utilization: Developing Programs that Benefit the Healthcare System and our Profession
0.15 CEU
1: Ashely Supik, MS, CGC, Riverside Health System; 2: Darci Sternen, MS, CGC, Seattle Children’s Hospital; 3: Jacquelyn Riley, MS, CGC, Cleveland Clinic; 4: Julie Kaylor, MS, CGC, Arkansas Children’s Hospital; 5: Fallon Brewer, MS, CGC, University of Alabama at Birmingham; 6: Lee Zeilmer, MS, CGC, Children’s Mercy Hospital
- Describe the development and implementation of test utilization review at various institutions, including the growing evidence of the value of the genetic counselor in this role.
- Review the inner workings of different test utilization programs, from how a test is flagged through tracking data on test alterations, considering how institutional differences may dictate which methods will be most successful.
- Discuss the cost savings and improvements in patient care that result from the test utilization review and the benefits of test utilization programs to institutions and the overall health care system.
Submitted by: Access and Service Delivery Committee and Industry SIG

314 A Next Generation Approach to Hypertrophic Cardiomyopathy
0.15 CEU
1: Carolyn Ho, MD, Harvard Medical School and Brigham and Women’s Hospital; 2: Stephanie Ware, MD, PhD, FACMG, Indiana University School of Medicine; 3: Samantha Baxter, MS, CGC, GenesInsight and Partners Healthcare
- Review our current understanding of the natural history, genetic etiology and current management of hypertrophic cardiomyopathy (HCM).
- Outline recent advancements in genetic testing, diagnosis and treatment of HCM.
- Summarize cardiomyopathy gene panel technologies and discuss strategies for interpretation of results.
Submitted/Sponsored by: Cardiovascular Genetics SIG

Plenary Session
5:00 pm – 6:00 pm
315 Shared Decision Making in Genetic Counseling
0.10 CEU
1: Barbara Biesecker, PhD, MS, NHGRI/NIH; 2: Sarah Kobrin, PhD, MPH, National Cancer Institute, NIH; 3: Amy Turnit, ScM, NE/NIH; 4: Julie Sapp, ScM, NHGRI/NIH
- Familiarize genetic counselors with shared decision making and evidence of its effectiveness.
- Describe the critical components of shared decision making and relate them to the process of facilitating informed decisions in genetic counseling.
- Illustrate how a shared decision making model may be used in genetic counseling, highlighting use of new skills.
- Propose key research questions to assess the value of a shared decision making model in genetic counseling.
Submitted by: Research SIG

316 Jane Engelberg Memorial Fellowship Presentation
6:00 pm – 7:00 pm
0.10 CEU
1: Kelly Ormond, MS, CGC, JEMF Chair; 2: 2014 JEMF Awardee - Flavia Malheiro Facio, MS, CGC; 3: 2013 JEMF Awardee - Blythe Crissman, MS, CGC, Duke University; 4: 2013 JEMF Awardee - Kathryn Berrier Sheets, MS, CGC, Duke University Medical Division of Medical Genetics
- Describe the purpose and mission of the Jane Engelberg Memorial Fellowship.
- Provide an overview of the newly awarded 2014 research project.
- Share preliminary results of the Duke Down Syndrome (DS) Prenatal Diagnosis study and the role of the genetic counselor in the prenatal diagnosis experience.
- Describe patients’ experience participating in research following a prenatal diagnosis of DS.

Sponsored Evening Session
7:15 pm – 8:45 pm
317 Termination of Pregnancy for Indications of Genetic Disorder in Advanced Gestations
0.10 CEU
1: Warren M. Hern, MD, MPH, PhD, Boulder Abortion Clinic
- Describe the relevance of these services to genetic counseling.
- Identify the purpose, basic principles, and components of clinical practice including grief support.
- Outline the basic operative procedures and clinical results of this care.
Sponsored by: Boulder Abortion Clinic

Saturday, September 20

Sponsored Breakfast Session
7:00 am – 7:45 am
401 Noninvasive Prenatal Testing for Microdeletions: One Year Later
0.05 CEU
1: Nicole Teed, MS, CGC, Sequenom Laboratories; 2: Heather Marin, MS, LCGC, Center for Prenatal Diagnosis; 3: Lauren Korty, MS LCGC, University of California San Diego Health System
- Describe the performance of non-invasive prenatal testing (NIPT) for microdeletions in clinical laboratory experience.
- Explain the benefits and limitations of prenatal screening for microdeletions.
- Illustrate the application of NIPT for microdeletions in clinical prenatal practice.
Sponsored by: Sequenom Laboratories

Educational Breakout Sessions
AEC Session Objectives (continued)

Saturday, September 20 (continued)

8:00 am – 9:30 am  
402 | Congenital Disorders of Glycosylation: Clinical and Genetic Variability  
0.15 CEU  
1: Eva Morava-Kozicz, MD, PhD, Tulane University Hayward Genetics Center; 2: Claire Teigen, CGC, GeneDx  
- Describe the clinical variability observed in patients with congenital disorders of glycosylation (CDGs).  
- Evaluate tests and diagnostic strategies for identifying CDGs based upon clinical presentations.  
- Counsel patients and family members regarding treatment options, recurrence risks and recommendations for testing of additional family members based upon test results.

403 | The Down Syndrome Consensus Statement Five Years Later: Making Progress and Evaluating the Impact of Non-Invasive Prenatal Screening/Testing on a Fragile Compromise between the Disability and Genetics Communities  
0.15 CEU  
1: Stephanie Meredith, MA, University of Kentucky; 2: Angela M. Trepanier, MS, CGC, Wayne State University; 3: Campbell K. Brasington, MS, CGC, Carolinas Medical Center; 4: Kathryn Bernier Sheets, MS, CGC, Duke University Medical Center Division of Medical Genetics; 5: Richard Ferrante, PhD, Center for Disability Resources, USC Columbia; 6: David Hoppe, Bipartisan Policy Center; 7: Janice G. Edwards, MS, CGC, University of South Carolina; 8: Judith Berkendof, MS, CGC, American College of Medical Genetics and Genomics; 9: Nancy Rose, MD, University of Utah Health Sciences  
- Understand the historical misperceptions between the medical/genetics and Down Syndrome (DS) communities and the unprecedented work at the DS Consensus Group meeting to bridge the gaps and establish common ground.  
- Identify how the proposed areas of collaboration have been addressed through the development and dissemination of patient education materials, professional guidelines and research, and how those outcomes might be replicated for other conditions.  
- Identify challenges and stressors that persist beyond the DS Consensus Group conversations, such as non-invasive prenatal testing (NIPT), community fractures and funding disparities, and how a working group of experts can tackle those issues.

404 | The Non-Cancerous Female Breast  
0.15 CEU  
1: Adam Cohen, MD, MS, Huntsman Cancer Institute, University of Utah  
- Describe the stages of development of the breast and label the parts using correct nomenclature.  
- Recognize normal breast variants and those associated with an increased risk for breast cancer.  
- Incorporate DCIS into genetic risk analysis using currently available data.

405 | Crossing the Generation Gap: Engaging Millenial Learners  
0.15 CEU  
1: Caroline Lieber, MS, CGC, Sarah Lawrence College; 2: Anne Elizabeth Greb, MS, CGC, The Joan H. Marks Graduate Program in Human Genetics, Sarah Lawrence College; 2: Bernard R. Robin, PhD, University of Houston; 4: Paula Gregory; PhD, LSU Health Science Center-New Orleans; 5: Lori Dean, MS, CGC, University of Arkansas for the Medical Sciences  
- Explore and evaluate learning characteristics of the millennial generation.  
- Define and examine new technologies that can be employed in the education of millennial learners that can enhance the teaching experience.  
- Demonstrate the incorporation of these technologies in genetic counselor and medical student training.

11:30 am – 12:30 pm  
406 | Double-Edged Sword: The Impact of Mass Media on Genetic Counseling  
0.15 CEU  
1: Jill M. Fischer, MS, CGC, Reprogenetics LLC; 2: Laura Hercher, MA, MS, CGC, Sarah Lawrence College; 3: Christine Colón, MS, LCGB, MotherToBaby Studies, Conducted by OTIS; 4: Rebecca Nagy, MS, CGC, The Ohio State University Wexner Medical Center - James Cancer Center; 5: Sara Riordan, MS, LCGB, Life Technologies  
- Examine experiences and current information available about impact the media has on the public’s perception of genetics and genomics.  
- Discuss how the media affects the uptake and delivery of genetic counseling services.  
- Outline possible strategies for working with patients and other providers in these situations.

Plenary Sessions  
9:45 am – 11:00 am  
407 | Bringing ELSI Issues to Life: The Drama of DNA  
0.125 CEU  
1: Lynn Bush, PhD, MS, MA, Columbia University Medical Center; 2: Karen H. Rothenberg, JD, MPA, NHHRI, NIH, University of Maryland School of Law; 3: Wendy Uihlmann MS, CGC, University of Michigan; 4: Barbara Biesecker, PhD, MS, NHHRI/NIH; 5: W. Andrew Faucett, MS, CGC, Geisinger Health System; 6: Steve Keales, MS, CGC, Ambry Genetics; 7: Rebecca Nagy, MS, CGC, The Ohio State University Wexner Medical Center – James Cancer Center; 8: Cate Walsh Vockley, MS, CGC, Children’s Hospital of Pittsburgh  
- Develop a deeper understanding of the ethical, psychosocial and policy implications of genomic research and medicine through this creative educational approach for the genetic professional and students who are attendees.  
- Provide a creative pedagogical approach for the genetic counselor and other healthcare professionals to use themselves in their own teaching of genetic counseling students, medical students, residents and fellows.  
- Enhance discourse and synthesize some key “teachable moments” for further analysis to be shared with colleagues and students well beyond the conference.

Sponsored Lunch Session  
12:30 pm – 2:00 pm  
408 | Cell-Free Nucleic Acids: To Prenatal Screening and Beyond  
0.10 CEU  
1: Megan Hall, PhD, ISMPP CMPP, Jazz Pharmaceuticals  
- Explore utilization of cell free nucleic acids in settings other than prenatal.  
- Discuss potential of tumor cell free DNA evaluation in cancer setting.  
- Discuss potential for cell free DNA as marker for infectious agents, transplant rejection, and neurologic injury/disease.

Sponsored by: Invitae Corporation

409 | Genetic Testing Beyond the Individual: Finding Answers for Families  
0.10 CEU  
1: Linda Robinson, MS, CGC, University of Texas, Southwestern Medical Center, Simmons Cancer Center; 2: Colleen Caleshu, MSc, CGC, LGC, Stanford University School of Medicine; 3: Randy Scott, PhD, Invitae Corporation  
- Develop strategies for identifying and counseling patients regarding multi-gene hereditary cancers and cardiology panels.  
- Describe the unique counseling issues associated with communication of multi-gene panel results to family members.  
- Demonstrate the value and utility of genetic testing and counseling to ensure patient understanding and facilitate communication of risk to relatives.  
- Describe Invitae’s clinical offering and commitment to family.  
Sponsored by: Invitae Corporation
Boulder Abortion Clinic
Specializing in Late Abortion for Fetal Disorders
Quality Care for Women Since 1973

Warren M. Hern, MD, MPH, PhD
Director
American Board of Preventive Medicine
Fellow, American College of Preventive Medicine
Associate Clinical Professor, Department of Obstetrics & Gynecology
University of Colorado Health Sciences Center

Author
Abortion Practice
Boulder: Alpenglo Graphics, 1990
(soft cover edition)

- Outpatient abortion over 30 menstrual weeks for selected patients with documented fetal anomaly, fetal demise, or medical indications
- Routine preoperative ultrasound evaluation for all patients
- Routine preoperative use of laminaria for maximum safety
- Individual counseling and support
- Highly experienced and dedicated professional staff
- Tradition of research and teaching in abortion services
- Founding institutional member, National Abortion Federation
- Bilingual staff and physician: fluent in Spanish, Portuguese, and Italian
- Recent research publications on request
- Consultations on request

1130 Alpine Avenue, Boulder, CO 80304
Tel: (303) 447-1361 • (800) 505-1287 • Fax: (303) 447-0020
www.drhern.com
### Concurrent Papers

**Friday, September 19**

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<th>Room 220/221/222</th>
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<tbody>
<tr>
<td><strong>302 - Cancer</strong></td>
<td><strong>303 – GC Professional Roles</strong></td>
<td><strong>304 – Genetic Testing I: New Technology</strong></td>
<td><strong>305 – Prenatal</strong></td>
</tr>
<tr>
<td>1. Identify the latest developments in evaluation and testing for inherited cancer predispositions. 2. Discuss issues that are specific and unique to individuals with an inherited cancer predisposition.</td>
<td>1. Discuss the professional and personal experiences of genetic counselors. 2. Identify potential future opportunities for the field of genetic counseling.</td>
<td>1. Discuss latest developments in the field of diagnostic testing and test interpretation. 2. Describe the impact of Next-Gen Sequencing on patient diagnosis and counseling.</td>
<td>1. Discuss the latest developments in prenatal testing and prenatal genetic counseling. 2. Describe the attitudes and experiences of patients and providers in the prenatal clinic.</td>
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<th>Time</th>
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<th>Authors</th>
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<tbody>
<tr>
<td>8:00 am – 8:15 am</td>
<td>Reasons Patients Do Not Pursue BRCA Genetic Testing following Genetic Counseling</td>
<td>V. Raymond</td>
<td>8:15 am – 8:30 am</td>
<td>Large Scale Changes in Cancer Genetic Testing with Variable Integration of Expanded Gene Panels</td>
<td>G. Hooker</td>
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<tr>
<td></td>
<td>Genetic Counseling Licensure: An Oral History</td>
<td>K. Valverde</td>
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<td>The Use of Diagnostic Exome Sequencing in the Identification of a Molecular Diagnosis in Cases Presenting with Cancer Phenotypes</td>
<td>C. Espenschied</td>
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<td></td>
<td>Maximizing the Effectiveness of Exome Testing: A Retrospective Comparison of Diagnostic Yield in Singleton versus Multiple Family Members in Over 1500 Cases Submitted for Whole Exome Sequencing</td>
<td>H. Hanson Pierce</td>
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<td>Revised Diagnosis Through Exome Sequencing of an Infant with Congenital Cataracts Expands Phenotypic Spectrum of COL4A1-Associated Disorders</td>
<td>G. Chandratillake</td>
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<td>Continuing a Pregnancy Following Prenatal Diagnosis of a Lethal Fetal Defect is Associated with Improved Psychological Outcome</td>
<td>E. Moe</td>
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<td>Complexities of Genetic Counseling for Variants of Unknown Significance on Whole Exome Sequencing</td>
<td>M. Harr</td>
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<td>Cancer Genetic Testing with Variable Integration of Expanded Gene Panels</td>
<td>G. Hooker</td>
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<td></td>
<td>The Genetic Counseling Assistant: Is Our Profession Ready for Multiple Career Levels?</td>
<td>L. Robinson</td>
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<td>Career Advancement in Genetic Counseling: Perceived Opportunities and Barriers among Practicing Genetic Counselors</td>
<td>N. Pouillard</td>
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<tr>
<td>8:30 am – 8:45 am</td>
<td>Cancers Associated with BRCA1 and BRCA2 Mutations Other than Breast and Ovarian</td>
<td>J. Mersch</td>
<td>8:45 am – 9:00 am</td>
<td>Development, Experience and Expression of Meaning in Genetic Counselors’ Lives: An Exploratory Analysis</td>
<td>P. McCarthy-Veach</td>
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<td>Other than Breast and Ovarian</td>
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<td>Patient Perceptions of Whole Genome Sequencing Results and Non-Actionable Findings</td>
<td>L. Jamal</td>
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<td>“I Kind of Just Went Along With It.” An Exploration of the Experiences and Needs of Partners of Women Receiving Uncertain Prenatal Microarray Results</td>
<td>K. Morris</td>
<td></td>
<td>Complexities of Genetic Counseling for Variants of Unknown Significance on Whole Exome Sequencing</td>
<td>M. Harr</td>
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<tr>
<td>9:00 am – 9:15 am</td>
<td>Germline BRCA Mutations in an Unselected Cohort of Patients with Pancreatic Adenocarcinoma</td>
<td>S. Holter</td>
<td>9:15 am – 9:30 am</td>
<td>The Expanding Role of Genetic Counselors in Industry-Based Employment and Emerging Professional Issues: The Intersection of Innovation and Conflicts of Interest</td>
<td>S. Gandoni</td>
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<td></td>
<td>Expansion of Genetic Counselors Toward Return of Incidental Results from Exome and Whole Genome Sequencing</td>
<td>M. J. Bamshad</td>
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<td>Attitudes of Genetic Counselors Toward Return of Incidental Results from Exome and Whole Genome Sequencing</td>
<td>M. J. Bamshad</td>
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<td>Evaluation of the Quality and Literacy of Commercial Non-Invasive Prenatal Test Websites</td>
<td>M. Bell</td>
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<td>Consumers Report Lowered Confidence in their Genetics Knowledge following Personal Genomic Testing: Findings from the PGen Study</td>
<td>D. A. Carere</td>
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<tr>
<td>9:15 am – 9:30 am</td>
<td>Physician Experiences and Understanding of a Genomic Sequencing Project for Oncology Patients</td>
<td>C. Weiert</td>
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<td>Clinical Experience of Trisomy 16 and 22, and Microdeletion Detection by Noninvasive Prenatal Testing</td>
<td>N. Dharajiyaa</td>
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<td></td>
<td>Emerging Genetic Counselor Roles within the Biotechnology and Pharmaceutical Industries: As Industry Interest Grows in Rare Genetic Disorders, How Are Genetic Counselors Joining the Discussion?</td>
<td>T. Field</td>
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### Saturday, September 20

#### 410 – Access and Service Delivery
1. Recognize novel approaches in the delivery of genetic counseling services.
2. Describe issues in billing and reimbursement for genetic counseling services.

#### 411 – Education/ELSI
1. Describe approaches and issues of genetic counseling education.
2. Discuss ELSI implications of providing genetic services.

#### 412 – Genetic Testing II: Implementation
1. Explore emerging data on genetic test detection rates and issues in results interpretation.
2. Identify potential testing opportunities in the genetics clinic.

#### 413 – Pediatrics
1. Discuss the latest developments in genetic counseling for pediatric patients and their families.
2. Describe the attitudes and experiences of patients and providers in pediatric clinics.

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<tr>
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<tbody>
<tr>
<td>2:00 pm – 2:15 pm</td>
<td>Development of a Preauthorization and Predetermination Process to Improve Access to Hereditary Cancer Risk Assessment Services and Subsequent Review of Reimbursement of CPT 96040 for Services Rendered J. Polk</td>
<td>Moving Beyond Likert Scales: Competency-Based Milestones and Implications for Genetic Counseling Education C. Guy</td>
<td>Diagnostic Yield of Genetic Evaluation and Testing at the Children’s Hospital Colorado Autism Specialty Genetics Clinic B. Miller</td>
</tr>
<tr>
<td>2:15 pm – 2:30 pm</td>
<td>Perinatal Palliative Care and Bereavement: Establishing A Compassionate, Multidisciplinary Program for Families Facing a Life-Limiting Prenatal Diagnosis S. Chadwick</td>
<td>Assessment of the Readability of Genetic Counseling Patient Letters E. Brown</td>
<td>The Challenge of Comprehensive and Consistent Sequence Variant Interpretation across Clinical Laboratories M. Pepin</td>
</tr>
<tr>
<td>2:30 pm – 2:45 pm</td>
<td>A Comparison of Telephone and In Person Genetic Counseling from the Genetic Counselor’s Perspective K. Burgess</td>
<td>Video Patient Encounter for Genetic Counselor Skill Development J. Scott</td>
<td>Yield of Pathogenic/Expected Pathogenic Variants in Young Women with Breast Cancer Undergoing Hereditary Cancer Panel Testing L. Andolina</td>
</tr>
<tr>
<td>2:45 pm – 3:00 pm</td>
<td>Show Me the Money: Half A Million Downstream Billing Generated From Three Genetic Counselors’ Visits over Nine Months M. Dudek</td>
<td>Genetic Counseling Student Experiences of Mental Health Concerns A. Cantor</td>
<td>Comparison of Mutation Detection in Cancer Specific versus Pan-Cancer Approaches to an At-Risk Population P. Kaushik</td>
</tr>
</tbody>
</table>
Join us for a Product Theater

“Myriad myRisk™ Hereditary Cancer Panel: Clinical Data Supporting a Pan-Cancer Panel Approach to Hereditary Cancer Testing”

with Jennifer Saam, MS, CGC, PhD

Thursday, September 18th
12:15 - 12:45 PM
Exhibitor Suite, Hall B

The Advancement of Hereditary Cancer Testing

Emerging Data Demonstrates the Benefits of a Pan-Cancer Panel Over Disease-Specific Testing
**Posters with Authors**

**Objective:**
Describe the most recent research, techniques and approaches in the field of genetic counseling.

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<tr>
<th>Posters</th>
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<tr>
<td>Even Numbered Posters</td>
<td>215</td>
<td>Thursday, September 18</td>
<td>6:30 pm – 7:30 pm</td>
<td>0.10 CEU</td>
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<tr>
<td>Odd Numbered Posters</td>
<td>309</td>
<td>Friday, September 19</td>
<td>2:00 pm – 3:00 pm</td>
<td>0.10 CEU</td>
</tr>
</tbody>
</table>

**Access and Service Delivery**

1. Access to Genetic Counseling and BRCA Testing among a Population-Based Sample of Black Women with Early-Onset Breast Cancer  
   **D. Bonner**
2. Clinical Practices of Neurologists Related to Predictive Testing of Presymptomatic Patients At Risk for Huntington’s Disease  
   **I. Bradley**
3. A Survey of Genetic Counselors regarding the Impact of Recent State Legislation Restricting Access to Abortion on Patients and Practice  
   **C. Cooney**
4. The Impact of Association for Molecular Pathology v. Myriad Genetics, Inc. on Cancer Genetic Counseling Practice  
   **V. Costello**
5. A Descriptive Study of Current Hereditary Breast Cancer Knowledge and Clinical Practices among Florida Providers  
   **D. Cragun**
6. The Misdiagnosis of a Rare Disease: The Journey to a Hermansky-Pudlak Syndrome Diagnosis  
   **L. Giannetti**
7. Genetic Testing without Genetic Counselors: Exploring the BRCA Testing Experiences of Patients with Breast Cancer  
   **M. Hayes**
8. One Family, One Counselor: Continuity of Genetics Care in a Fetal Health Center  
   **J. Kussmann**
   **M. Leach**
10. The Implementation of a Multidisciplinary Care Clinic for Von Hippel-Lindau Disease at the University of Alabama at Birmingham  
    **A. Marinno**
11. Cost Should Not Be a Barrier to Genetic Testing in Patients with Paragangliomas and Pheochromocytomas  
    **S. Merrill**
12. Developing a Specialty Clinic for Patients with PTEN Hamartoma Tumor Syndrome: Benefits and Barriers  
    **J. Mester**
13. Impact of Genetic Counseling in the Cardiac Intensive Care Unit for Infants with Isolated Congenital Heart Defects  
    **R. Palmquist**
14. Service Delivery Model and Experiences in a Genetics Clinic for an Underserved Population  
    **J. Profato**

**Adult**

15. Centering Pregnancy: An Untapped Delivery Care Model for Genetic Counseling  
    **P. Robbins Furman**
16. Population Screening for Hereditary Cancer: Does It Really Work for Everyone?  
    **L. Robinson**
17. Jewish Genetic Disease Carrier Screening in Atlanta: Success of Marketing and Outreach Campaigns  
    **Y. Shao**
18. High Frequency of Genetic Services for Patients with Inborn Errors of Metabolism  
    **Q. Stein**
    **S. Werthman**
20. Receipt of Cancer Genetics Services among Young Breast Cancer Survivors in Georgia  
    **R. Webster**
21. Assessment of the Clinical Presentation of Females Heterozygous for Fabry Disease: A Comparison of Classic and Later-Onset Forms  
    **A. Conner**
22. De Novo Mutation Rate in the RYR2 Gene: Implications for Genetic Counseling  
    **K. Davis**
23. The Use of Social Media and the Impact of Support on the Well-Being of Adult Cystic Fibrosis Patients  
    **M. Faust**
24. A Role for Preventative Genetics?: The Impact of FTO Results on Intention to Lose Weight  
    **E. Gordon**
25. Examining Differences in Symptoms in Individuals with Hypermobile Ehlers-Danlos Syndrome in Relation to Puberty  
    **K. Heraty**
26. A Novel Homozygous Variant in RR602B in Two Siblings with Mitochondrial DNA Depletion Syndrome  
    **W. Mu**
27. The Complexity Continues: Identification of Pathogenic Sarcomeric Mutations in Families with a Clinical Diagnosis of Arrhythmogenic Right Ventricular Cardiomyopathy  
    **B. Murray**
    **S. Talcott Baughman**

**Cancer**

29. How Do We Counsel on Somatic Tumor Testing Reports?: Red Herring or the Real Deal?  
    **M. Dreon**
    **M. Gabree**
31. Risk Stratification of Women at Intermediate or High Risk of Breast Cancer: Developing a Consensus Framework for Screening and Prevention  
    **J. Gagnon**
32. Atypical Phenotypes of Familial Adenomatous Polyposis and MYH-Association Polyposis Patients Ascertained through Multi-Gene Hereditary Cancer Panels  
    **J. Guilman**
33. Identification of Lynch Syndrome Families with Female Reproductive Tract Cancers in the Era of Next Generation Sequencing  
    **C. Iward**
34. I Wish I Had Known This! Impact of Age on Life Choices and Testing Satisfaction for BRCA1/2 Mutation Carriers Who Underwent Genetic Testing by Age 25  
    **S. King**
35. Returning Hereditary Cancer Panel Results to Patients is Clinically Feasible and Appreciated by the Patients  
    **K. Kingham**
36. APC Mutations in Children with Hepatoblastoma: Evidence for Genetic Evaluation for Familial Adenomatous Polyposis as Standard of Care  
    **S. Knapke**
    **H. LaDuca**
38. The Angelina Jolie Effect: Assessing the Impact of a Celebrity’s Story on Cancer Genetic Counseling  
    **M. MacCuaig**
39. Hereditary Breast and Ovarian Cancer: Implementation of Genetic Counseling within the High Risk Program of the Breast Center at Clinica Alemana de Santiago, Chile  
    **S. Margaret**
    **D. McKenna**
41. A Year of Unexpected Results: How the New Panels and a Non-Geneticist Diagnosed Three Patients with Hereditary Cancer Syndromes that a Genetic Counselor Would Have Missed  
    **S. Morrill-Cornelius**
42. Cancer Genetics Knowledge in Orthodox Jewish Women with and without a Family History of Cancer in the Greater Detroit Area  
    **T. Paling**
43. Do Personal or Family History of Renal Cell Carcinoma Predict the Likelihood of an Inherited Cancer Syndrome? Preliminary Results from a Multi Gene Hereditary Renal Cancer Test  
    **L. Panos**
1. Posters

2. Education/ELSI

3. Counseling

4. Before It's Too Late: Broad Hereditary Cancer Panel Testing at the End of Life
   M. Rabideau

5. Detection of Pathogenic Mutations in Moderate Penetrance Breast Cancer Genes Significantly Increases the Number of Patients Identified as Candidates for Increased Screening
   E. Rosenthal

6. Multiple Lessons Learned from a Single Cancer Genetics Referral: Unusual Presentation of Monolacit Mismatch Repair Deficiency
   K. Schneider

   L. Serval

   S. Solomon

9. Examining Gastrointestinal Stromal Tumor Patients' Understanding of Tumor Mutation Analysis and Personalized Medicine
   S. Stiekewies

10. Unexpected RAD51C and RAD51D Findings in Breast Cancer Only Families
    A. Stuenkel

11. Patients with Multiple Pathogenic Mutations Detected by Multi-Gene Panel Testing in a Lynch Syndrome Cohort
    P. Summerour

12. NFI Mutations Detected on Multi-Gene Cancer Panel Testing in Probands with Atypical Phenotypes
    P. Summerour

13. Usability of a Breast Cancer Risk Assessment Tool in a General Mammographic Screening Population: Utilization and Implications for Future Practice
    M. Truelson

14. Predictors of Therapeutic and Prophylactic Mastectomy in Breast Cancer Patients
    F. Tubito

15. Low Risk of TP53 and CDH1 Secondary Findings on Inherited Cancer Panels
    K. J. Vogel

Counseling

16. "All in the Family:" Barriers and Motivators to the Use of Family History Questionnaires
    S. Amel

17. Parents' Dreams for Their Young Adults with Down Syndrome: What Resources are Needed to Achieve Them?
    J. Baker

    L. Belay

19. Genetic Counseling Clients' Views on Religious and Spiritual Assessment in Genetic Counseling
    A. Bartenebaker

20. The Psychosocial Implications of Hereditary Diffuse Gastric Cancer
    M. Beaton-Casey

21. An Investigation into the Factors that Influence Parental Decision to Disclose Carrier Status to Daughters in Families with Hemophilia
    K. Bisordi

22. SCNSA: A Complex Channelopathy Gene with Counseling Challenges
    D. Clemons

23. Exploring Communication about Type 2 Diabetes and Perceptions of Risk Reduction Methods in Unaffected First Degree Relatives of an Affected Individual
    S. Fernandes

    J. Frank

25. Parental Gender Differences: Perception of a Child Diagnosed with a Craniofacial Difference and Effects on Child Adjustment
    J. Harris

26. Communication of Psychiatric Risk in 22q11.2 Deletion Syndrome
    S. Hart

27. Factors Influencing Decisions to Undergo Preimplantation Genetic Diagnosis for Fanconi Anemia and Long-Term Interpersonal Outcomes of Those Decisions: A Qualitative Investigation of Parents' Experiences
    K. Haude

28. Confirmed Versus Suspected: The Social Significance of a Genetic or Non-Genetic Diagnosis of Mitochondrial Disease
    E. Kieh

29. Who Should I Bring? A Qualitative Investigation of Genetic Counselors' Perspectives on the Role of the Support Person in Cancer Genetic Counseling Sessions
    B. LeRoy

30. An Evaluation of Genetic Counseling Effectiveness as Perceived by Parents with Surviving Children of Trisomy 13, Trisomy 18, and Mosaic Trisomy 16
    T. Lewis

31. The Role of Uncertainty in Coping Efficacy: The Experience of Parents of Children with Undiagnosed Medical Conditions
    E. Macnamara

32. Duchenne Muscular Dystrophy: A Survey of Families' Perspectives on Carrier Testing and Communication within the Family
    B. Mellicker

33. The Impact of Culture and Ethnicity on the Counseling Process: Perspectives of Genetic Counselors from Minority Ethnic Groups
    B. Morris

34. How Does Family Communication about Cancer Work? Exploration of a Meditational Model
    J. Quillin

35. Support Desired by Women following Termination of Pregnancy for a Fetal Anomaly
    A. Ramdasney

36. Parent Reflections on the Diagnostic Odyssey
    A. Richardson

37. Teens with Glycogen Storage Disease Types I and III: Planning to Take Responsibility
    H. Roche

38. “Who is the Deciding Factor?” Analysis of Parental Perspectives Regarding the Discontinuation of Elaprase in Children with MPS II
    E. Schindewolf

39. Adaptation to Living with a BRCA1/2 Mutation in Carriers and Their Partners
    R. Shapira

40. Perceptions ofLatinas on the Traditional Prenatal Genetic Counseling Model
    S. Thompson

41. Exploring Fathers' Roles and Experiences with Dissemination of Sexual Health Information to Their Children with Down Syndrome
    L. Torrey

42. Predictive Testing for Huntington's Disease: An Exploration of the Partner's Role in Decision-Making
    S. Towner

43. Genetic Counselors’ Knowledge and Perspectives of Cord Blood Banking and Stem Cell Therapies
    S. Brummitt

44. An Analysis of Online Education Methods for an At Home Genetic Carrier Screening Service
    J. Denton

45. The Impact of Increased Education on Career Interest in the Genetic Counseling Field among High School Students
    J. Dix

46. Topics of Discussion in Families with Youth with Special Health Care Needs during Health Care Transition
    C. Grabants

47. The Student Voice: Learner-Centered Changes in a Molecular Genetics Laboratory Rotation to Increase Student Satisfaction and Knowledge Integration
    C. Guy

48. The Conceptual and Practical Evolution of Education to Obtain Clinical Readiness in Genetic Counseling
    S. Hassed

49. MedGen: A Portal for Medical Genetics Information
    B. Kattman

50. Mapping and Evaluation of a Genetic Counseling Training Program Curriculum
    T. Lepard Tassin

51. Twitter Activity Before and After Association for Molecular Pathology v. Myriad Genetics, Inc. Supreme Court Decision Using NodeXL
    A. Lewis

52. The Impact of Rosa’s Law on Describing Persons with Intellectual Disability
    A. Lutter
Professional, Ethical and Legal Issues of Genetic Testing and Personal Insurance
I. Nguyen Feze

Implementation of Crisis Intervention Training in Genetic Counseling Training Programs
R. Reese

Disability Experiences and Perspectives regarding Reproductive Decisions, Parenting and the Utility of Genetic Services: A Qualitative Study
C. Roadhouse

Knowledge of Sickle Cell Disease in Ghana
D. Schlegel

Genetic Counseling Setting
E. Warren

Patient and Family Outreach for Marfan Syndrome and Related Disorders: Findings from a Multidisciplinary Education Day
A. Shikany

Group Prenatal Genetic Counseling Facilitates Patient Decision-Making
E. Sturm

“It Really Permeates Your Consciousness:” Exchanging the Impact of Genetic Counseling Training on Students’ Prenatal Risk Perception and Reproductive Decision Making
I. Thompson

Parental Satisfaction and Teacher Perspectives on Inclusive Education of Students with Asperger Syndrome: An Educational Tool
H. Warren

Form Follows Function: Development of a Model for Clinical Supervision Practice in Genetic Counseling
C. Wherley

Traditional Textbook Photographs Negatively Impact Student Perception of Individuals with Visible Genetic Conditions
N. Wood

GC Professional Roles

The Importance of Suicide Screening in the Genetic Counseling Setting
C. Anderson

Current Practices and Perceptions of Ophthalmic Genetic Counselors
S. Chen

Clinical Exome Sequencing Test Development: Roles for Laboratory Genetic Counselors
E. H. Denenberg

U.S. Preventive Task Force and Genetic Counseling for BRCA Mutations: Tools to Help your Primary Care Colleagues
M. Doerr

Incorporating Computer-Aided Facial Analysis Software into Genetic Counseling Practice
D. Gelman

The Relationship between Burnout and Occupational Stress in Genetic Counselors
B. Johnstone

Behind Laboratory Doors: Lab Genetic Counselors’ Experiences, Professional Identity and Unique Ethical and Professional Challenges
C. Koelner

Genetics Laboratory Directors’ Perspectives on the Role of Genetic Counselors in Acquired Mutation Testing: Current and Expanded Opportunities
C. Lewis

Assessing the Practices of Genetic Counselors regarding Head Circumference Measurement in Hereditary Cancer Assessment
A. Matchette

A Review of the Current State of Clinical Pharmacogenomic Testing: An Examination of Existing and Potential Roles for Genetic Counselors and Pharmacists
A. McKittrick

Role of a Genetic Counselor in the Next Generation of Oncology Clinical Trials
A. Varma

Meanings Parents Attribute to an Answer from Whole Exome Sequencing Research
B. Blosser

Disomic Placentas, Trisomic Babies: Reverse Mosaicism and Implications for Noninvasive Prenatal Testing
T. Boomber

Multigene Panel Testing vs. Whole Exome Sequencing: What is the Best Testing Approach for Patients with Epilepsy and Neurodevelopmental Disorders?
M. Bradbury

Genomes, Exomes and Targeted Disease Panels: Understanding their Relative Strengths and Weakness When Providing Genetic Counseling
C. Campbell

A Negative Result on Exome Sequencing: What a Genetic Counselor Should Know
G. Chandratillake

Exploring Parental Perspectives on the Return of Genomic Results for Children Enrolled in a Pediatric Genetic Biorepository
P. Connors

The Importance of Clinical Indications in the Analysis and Interpretation of Next Generation Sequencing Gene Panel Data
G. Douglas

Identification of Recurrent De Novo Alterations in the Clinically Novel PURA Gene through Diagnostic Exome Sequencing
D. El-Khechen

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Kara Anstett, BSc and Sharon Chen, BA

Genetic Counseling Assistants: An Integral Piece of the Evolving Genetic Counseling Service Delivery Model
Beth Crawford, MS, CGC, Linda Robinson, MS, CGC and Sara Pirzadeh-Miller, MS, CGC

The Jane Engelberg Memorial Fellowship
How Does Family History Influence Psychosocial Adaptation in Individuals with Inherited Cardiomyopathies and Their At-Risk Family Members?
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Best Abstract Awards
Best Full Member Abstract Award
Analysis of Billing and Reimbursement of Genetic Counseling Services in a Single Institution in a State Requiring Licensure
Jennifer Leonhard, MS

Beth Fine Kaplan Student Abstract Award
Genetic Counselors as Choice Architects: Some Considerations for Presenting Genetic Testing Decisions in a Complex Choice Environment
Marci Barr

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Networking Activities and Business Meetings

**New! - NSGC SIG Fair**

**Wednesday, September 17**
2:00 pm – 2:30 pm • Room R05

NSGC Members: Attend the new SIG Fair to meet with SIG leaders and learn more about current projects and how you can become involved.

**First-Time Attendees**

**Welcome to the AEC: How to Make the Most of the Conference and NSGC**

**Wednesday, September 17**
2:00 pm – 2:45 pm • Room R02/R03/R04

Are you a first-time AEC attendee? Make your way to this event to network with other new attendees and learn about the different types of educational sessions available at the AEC.

**Welcome to the AEC SIG Fair**

**Wednesday, September 17**
2:45 pm – 3:15 pm • Room R05

First-time AEC attendees and new NSGC members: Meet with SIG leaders at this event devoted specifically to fostering relationships between SIGs and new NSGC members.

**Welcome Reception**

**Wednesday, September 17**
6:30 pm – 8:00 pm • Exhibit Hall B

Make new contacts and greet your friends as you preview the vendors and their services in the Exhibitor Suite. Join your colleagues for this special kickoff to the AEC. Light hors d’oeuvres and cash bar will be available.

**State of the Society Address**

**Thursday, September 18**
10:45 am – 11:30 am • The Great Hall AD

Join President Jennifer Malone Hoskovec, MS, CGC, as she provides an overview of NSGC activities and accomplishments over the past year; reviews NSGC’s advocacy efforts and strategic initiatives; and provides highlights from 2014.

**ACGC Presentation**

**Thursday, September 18**
12:00 pm – 12:30 pm • The Great Hall AD

**NSGC Annual Business Meeting**

**Friday, September 19**
11:30 am – 12:30 pm • The Great Hall AD

**Incoming Presidential Address**

**Saturday, September 20**
11:00 am – 11:30 am • The Great Hall AD

Hear NSGC President Elect Joy Larsen Haidle, MS, CGC, as she introduces herself to NSGC members and outlines her vision for NSGC in 2015.

**Meals and Breaks**

**Breakfast and Breaks**

Continental breakfast will be served Thursday through Saturday outside of The Great Hall from 7:00 am - 8:00 am.

Concessions will be located in the Exhibitor Suite on Thursday and Friday. Concessions will also be available in the convention center main foyer on Wednesday and Saturday. Refreshment breaks will be located in the AEConnect area (Exhibitor Suite, Hall B) on Thursday from 9:30 am – 9:45 am and on Friday from 3:30 pm – 3:45 pm.

All refreshment breaks are sponsored by

**Friday, September 19**
3:00 pm – 3:15 pm

**Saturday, September 20**
9:30 am – 9:45 am

**ABGC Annual Business Meeting**

**Thursday, September 18**
11:30 am – 12:00 pm • The Great Hall AD

**AEConnect**

Located in the Exhibitor Suite
Open Wednesday - Friday During Exhibit Hours

AEConnect will be the premier place at the Annual Education Conference to network with your professional community. While in the Exhibitor Suite, stop by to check out available job postings, learn more about our social media efforts, connect with exhibiting companies one-on-one, and meet up with old colleagues or friends. We invite you to visit AEConnect during Exhibitor Suite hours Wednesday through Friday.
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www.aphl.org/aphlprograms
APHL represents state, county and city government laboratories that analyze disease agents and other health threats, delivering answers for effective public health response. These laboratories perform 97% of the newborn screening and genetics testing in the US.

Asuragen, Inc.
Booth # 425
Phone: 512.681.5200  |  Fax: 512.681.5201
www.asuragen.com
Asuragen offers innovative PCR-based approaches for fragile X testing, including AmpliChip®-PCR and microPCR assays to determine CGG size and methylation status, and Xpander® interpretive reporter, to determine AGG interruption status and refine the risk of expansion from mother to child.

Basser Research Center for BRCA
Booth # 429
Phone: 215.662.2748  |  Fax: 215.349.5314
basserinfo@uphs.upenn.edu
www.basser.org
The Basser Research Center for BRCA of the University of Pennsylvania aims to deliver cutting edge research in basic and clinical sciences to advance the care of individuals who carry BRCa mutations.

Baylor College of Medicine Medical Genetics Laboratory
Booth # 403
Phone: 713.798.6555  |  Fax: 713.798.2787
GeneticTest@bcm.edu
www.bcmgenetclabs.org
Baylor College of Medicine’s Medical Genetics Laboratories offer a broad range of diagnostic genetic tests including DNA diagnostics, sequencing, cyto- genetics, FISH diagnostics, cancer cytogenetics, chromosomal microarray analysis, whole exome sequencing, biochemical genetics, and Mitochondrial DNA analysis. Additionally we have a full range of testing for Autism Spectrum Disorders. Please visit our booth for more information.

BIOBASE
Booth # 303
Phone: 978.922.1643
info@biobase-international.com
www.biobase-international.com
BIOBASE is a leading provider of manually-curated databases for molecular diagnostics that offer well-structured data, assembled by qualified experts and organized in an easily searchable manner that enables clinical interpretation of data arising from NGS efforts.

BioMarin Pharmaceutical Inc.
Booth # 339
Phone: 415. 506.6700
IR@BMRN.com
www.BMRN.com
BioMarin develops and commercializes innovative biopharmaceuticals for serious diseases and medical conditions. Approved products include the first and only medications for PKU and LEMS, and the first and only enzyme replacement therapies for MPS I, MPS VI and Morquio A syndrome. Visit www.BMRN.com to learn more.

Boulder Abortion Clinic
Booth # 338
Phone: 303.447.1361  |  Fax: 303.447.0020
MonaW@CedarRiverClinics.org
www.CedarRiverClinics.org
Boulder Abortion Clinic, for 26 weeks elective, with personal sedation plans. Our Fetal Indications Service include a dedicated clinical care advocate and private waiting rooms. We can assist clients with lodging, transportation, and funding resources.

Center for Jewish Genetics
Booth # 439
Phone: 312.357.4718
jewishgeneticsctr@juf.org
www.jewishgenetics.org
The Center for Jewish Genetics is an educational resource for hereditary cancers and Jewish genetic disorders. Working closely with community members and support organizations, the Center aims to inform and empower individuals so they can plan for a healthy future.

City of Hope - Clinical Molecular Diagnostic Laboratory
Booth # 216
Phone: 888.826.4362  |  Fax: 626.301.8142
cmd@coh.org
www.cityofhope.org
The City of Hope Molecular Diagnostic Laboratory (CMDL) specializes in clinical genetic testing services for cancer predisposition, coagulopathies, connective tissue disorders, muscular dystrophies, neuropsychiatric disorders and pharmacogenetics. For more up-to-date information please visit http://cmdl.cityofhope.org

Claritas Genomics
Booth # 329
clingen@claritasgenomics.com
www.claritasgenomics.com
Claritas Genomics is a pediatric genetic testing company that combines the power of DNA sequencing technology with the clinical expertise of the world’s best pediatric specialists to inform and improve patient care.

Clinical Genome Resource (ClinGen)
www.clinicalgenome.org
www.clinicalgenome.org
The Clinical Genome Resource (ClinGen) is an NIH-funded program dedicated to harnessing genetic and genomic data from research and clinical settings for the purpose of identifying clinically relevant variants.
CombiMatrix
**Booth # 224**
Phone: 949.753.0624 | Fax: 949.753.1504
info@combimatrix.com
www.combimatrix.com

CombiMatrix provides valuable molecular diagnostic solutions and comprehensive clinical support to promote the highest quality of care - specializing in cytogenomic miscarriage analysis, prenatal and pediatric healthcare.

**Connective Tissue Gene Tests**
**Booth # 424**
Phone: 484.244.2900 | Fax: 484.244.2904
inquiries@ctgt.net
www.ctgt.net

CTGT is committed to providing the broadest range of molecular diagnostics for inherited connective tissue disorders – over 500 tests and growing rapidly. CTGT has high test sensitivity, fast service, expert advice and superior customer service.

**Cord Blood Registry**
**Booth # 325**
Phone: 888.932.6568
providersupport@cordbloodregistry.com
www.cordbloodregistry.com

At Cord Blood Registry, our mission is to enable breakthrough medical treatments for more families by significantly advancing the real-life clinical applications of newborn stem cells. For more, visit cordblood.com or call 888-CORDBLD.

**Counsyl Inc.**
**Booth # 434**
Phone: 888.258.6795
support@counsyl.com
www.counsyl.com

Counsyl strives to give men and women access to vital information. We offer affordable high-quality screening, automated results delivery and genetic counseling so you can focus on patient care.

**Courtagen Diagnostics Laboratory**
**Booth # 125**
Phone: 877.395.7600 | Fax: 617.892.7192
genomics@courtagen.com
www.courtagen.com

Courtagen is a diagnostic sequencing and molecular information company that converts NGS sequencing data into actionable clinical information for neurological and metabolic disorders such as mitochondrial disease, epilepsy, and intellectual disability, including autism spectrum disorders.

**Denver Genetic Laboratories at Children’s Hospital Colorado**
**Booth # 106**
Phone: 720.777.0500 | Fax: 720.777.7886
Elaine.Spector@childrenscolorado.org
www.denvengers genetics.org

Denver Genetic Laboratories aims to provide Complete Genetic SolutionsTM for genetic disorders and some cancers, to contribute to a better tomorrow for patients, families and healthcare providers.

**Edimer Pharmaceuticals**
**Booth # 337**
Phone: 617.758.4300 | Fax: 866.334.4240
info@edimerpharma.com
www.edimerpharma.com

Edimer Pharmaceuticals is a biopharmaceutical company dedicated to improving the lives of future generations living with XLHED. Edimer is developing ED200, a potential treatment for future generations living with XLHED.

Emory Genetics Laboratory
**Booth # 419**
Phone: 404.778.8499 | Fax: 404.778.8559
egl.marketing@emory.edu
www.genetalslab.emory.edu

Emory Genetics Laboratory (EGL) is a worldwide leader in rare disease clinical genetic testing. EGL's biochemical, cytogenetic, and molecular laboratories perform integrated and comprehensive testing including whole exome sequencing, prenatal microarrays and metabolic disorder testing.

**FORCE: Facing Our Risk of Cancer Empowered**
**Booth # 426**
Phone: 866.288.7475 | Fax: 954.827.2200
info@facingourrisk.org
www.facingourrisk.org

FORCE is a national nonprofit dedicated to fighting hereditary breast and ovarian cancer (HBOC). With over 50 outreach groups throughout the U.S., FORCE provides support, education, awareness, advocacy and research on behalf of anyone affected by HBOC.

**Fulgent Diagnostics**
**Booth # 220**
Phone: 626.350.0537 | Fax: 626.454.1667
info@fulgentdiagnostics.com
www.fulgentdiagnostics.com

Fulgent Diagnostic Lab, a cancer-focused CLIA lab, currently offers various clinical molecular genetic testing services. These tests are primarily used for cancer risk assessment, early detection of cancer regression, monitoring of disease progression, patient stratification, targeted therapy, treatment monitoring, and companion diagnostics.

**Geisinger Health System**
**Booth # 534**
Phone: 570.214.6117 | Fax: 570.271.6988
jheid1@geisinger.edu

Geisinger serves nearly 3 million people and is nationally recognized for research, innovative practices, quality and integrated healthcare delivery. We have an institutional commitment to research and a focus on personalized medicine.

**Gene By Gene**
**Booth # 328**
Phone: 713.474.2401 | Fax: 713.230.8999
sales@genebygene.com
www.genebygene.com

Gene By Gene is a leader in genetic testing. With a state-of-the-art laboratory and industry leading bioinformatics, we offer cutting-edge solutions in genetic testing across a variety of industry applications, including pre-conception carrier screening.

**GeneDx**
**Booth # 219**
Phone: 301.519.2100 | Fax: 301.519.2892
GenDx@GeneDx.com
www.GeneDx.com

GeneDx tests for rare disorders using DNA-sequencing and deletion/duplication analysis of associated gene(s), and offers oligonucleotide microarray-based testing and next generation sequencing-based panels for inherited cancers and disorders, and inherited cardiac, mitochondrial and neurodevelopmental disorders.

**GeneTests**
**Booth # 121**
Phone: 888.729.1204 | Fax: 201.212.6457
GeneTests@GeneTests.org


**Genetic Alliance**
**Booth # 203**
Phone: 202.966.5557 | Fax: 202.966.8553
info@geneticalliance.org
www.genesinlife.org

Genetic Alliance, a nonprofit founded in 1986, engages individuals, families, and communities to transform health. Explore our extensive suite of technology platforms, educational resources, and advocacy tools and help educate and empower your patients.

**Genome Magazine**
**Booth # 112**
Phone: 972.905.2920
director@genomemag.com
www.genomemag.com

Genome magazine explores the world of personalized medicine and the genomic revolution that makes it possible, empowering readers to make informed health decisions that will help them live longer, better.

**Genomic Healthcare Innovations**
**Booth # 129**
Phone: 414.955.2550
Fax: 414.955.6156
noruthp@mcv.edu
www.genomici.com

Genomic Healthcare Innovations is a genomic diagnostics company that uses results from clinical genome and exome sequencing to guide the care of patients through the CLIA-certified clinical sequencing laboratory at the Medical College of Wisconsin.

**GenPath Women’s Health**
**Booth # 228**
Phone: 800.633.4522 | Fax: 201.791.3046
Info@GenPath.com
www.GenPath.com

GenPath Women’s Health, a division of BioReference Laboratories, Inc., and a sister division of GeneDx, offers an extensive prenatal genetic portfolio from preconception to post-menopause, including prenatal/maternal risk assessment, carrier testing, prenatal diagnosis, pregnancy thrombophilia and infectious diseases which will improve the quality of care through better detection and diagnosis of gynecological and obstetric conditions.

**Genzyme, a Sanofi Company**
**Booth # 535**
Phone: 617.252.7500 | Fax: 617.252.7600
www.genzyme.com

Genzyme discovers and delivers transformative therapies for patients with rare and special unmet medical needs, providing hope where there was none before. Visit www.genzyme.com.

**Greenwood Genetic Center**
**Booth # 201**
Phone: 800.473.9411
www.GGC.org

The Greenwood Genetic Center is a nonprofit institute organized to provide clinical genetic services, diagnostic laboratory testing, educational resources, and research in the field of medical genetics. Our laboratory offers biochemical, cytogenetic, and molecular testing.

**Heart Institute Diagnostic Laboratory**
**Booth # 110**
Phone: 513.803.1751 | Fax: 513.803.1748
heartdx@cczmc.org
www.cincinnatichildrens.org/heartdx

The Heart Institute Diagnostic Lab at Cincinnati Children’s Hospital Medical Center specializes in sequencing of genes associated with cardiovascular disease and molecular analysis of viruses known to cause myocarditis. The lab draws upon the expert analysis and consultation services of the Heart Institute’s cardiologists, cardiac-focused geneticists and dedicated genetic counselors.
Human Genetics Laboratory UNMC
Booth # 120
Phone: 402.559.5070  |  Fax: 402.559.7248
humanegenetics@unmc.edu
www.unmc.edu/geneticslab

Human Genetics Laboratory (UNMC) is a full-service clinical cytogenetic and molecular genetic laboratory specializing in both constitutional (prenatal and postnatal) and cancer diagnostics for over 40 years. Our comprehensive test menu includes conventional cytogenetics, FISH, microarray, next generation sequencing (autism/ID/MA, Rett/Angelman syndromes, cardiomyopathy, connective tissue disorders, craniosynostosis, Noonan syndrome/RASopathy disorders, and osteogenesis imperfecta), and intragenic deletion/ duplication analysis.

Hyperion Therapeutics
Booth # 113
Phone: 650.745.7802
www.hyperiontx.com

Hyperion Therapeutics, Inc. is a commercial-stage biopharmaceutical company committed to advancing science and developing treatments for orphan and hepatic diseases.

Illuma, Inc.
Booth # 400
Phone: 858.202.4500  |  Fax: 858.202.4766
info@veritest.com
www.veritest.com

Illuma is a leading developer, manufacturer, and marketer of life science tools and integrated systems for the analysis of genetic variation and function.

Improve Labs
Booth # 117
Phone: 617.819.4727
info@improve labs.com
www.improve labs.com

Improve Labs offers a modular clinical data platform that seamlessly integrates with EMRs and streamlines existing workflows to give you more time with patients. A reliable, comprehensive, and intuitive interface unites pedigree drawing, questionnaires, risk assessment, requisitioning and clinical decision support. www.powerlineage.com.

Integrated Genetics
Booth # 528
Phone: 800.848.4436
www.integratedgenetics.com

Integrated Genetics is a leading provider of reproductive genetic testing services with an expansive menu of complex tests in prenatal and postnatal genetic testing and the largest commercial genetic counseling network in the laboratory industry.

Invitae Corporation
Booth # 419
Phone: 415.574.7782  |  Fax: 415.520.9486
clinical@invitae.com
www.invitae.com

Invitae, a genetic information company, is aggregating the world’s genetic tests into a single service with better quality, faster turnaround time and a lower price than most single-genie diagnostic tests today. Please visit www.invitae.com.

Kaiser Permanente - Northern California
Booth # 519
www.genetics.kp.org

PRACTICE WHAT YOU BELIEVE, PRACTICE AT KAISER PERMANENTE! Kaiser Genetics is the employer of choice for over 70 genetic counselors in Northern California. Stop by our booth to learn about our unique brand of care and our rewarding positions!

Laboratory for Molecular Medicine, Partners Personalized Medicine
Booth # 327
Phone: 617.768.8500
Fax: 617.768.8513
lmm@partners.org
www.partners.org/personalizedmedicine/lmm

The Laboratory for Molecular Medicine, a CLIA-Certified molecular diagnostic laboratory within Partners HealthCare Personalized Medicine, translates genetic discoveries into clinical tests. Testing areas include disease-targeted panels, clinical genome and exome sequencing with interpretation services provided by experts.

Mauli Ola Foundation
Booth # 539
Phone: 949.900.5583  |  Fax: 949.900.5501
www.mauliolaola.org

The Mauli Ola Foundation began as a group of surfers who banded together to introduce surfing as a natural treatment to people with cystic fibrosis. Since 2007, Mauli Ola has taken nearly 1,300 CF patients surfing at nearly 100 Surf Experience Days and has now expanded it’s reach with hospital visits and other activities that touch the lives of kids with cancer and a variety of other health challenges. In 2010, MCF was awarded The Agent of Change Award by SURFER Magazine for its positive contributions and example to the surfing community.

Mayo Medical Laboratories
Booth # 235
Phone: 800.533.1710  |  Fax: 507.284.0947
mml@mayo.edu
mayomedical laboratories.com

Mayo Medical Laboratories provides comprehensive testing and unparalleled expertise in laboratory genetics. Over 35 board certified geneticists and genetic counselors at Mayo Clinic assist in appropriate test selection and interpretation of results.

MotherToBaby Pregnancy Studies conducted by the Organization of Teratology Information Specialists
Booth # 127
Phone: 877.311.8972  |  Fax: 858.246.1710
terisresearch@ucsd.edu
pregnancystudies.org

MotherToBaby, a non-profit service of the Organization of Teratology Information Specialists (OTIS), provides information about environmental exposures during pregnancy and lactation. MotherToBaby conducts research studies evaluating the safety of medications and vaccinations used during pregnancy.

Mount Sinai Genetic Testing Laboratory
Booth # 335
Phone: 212.241.7518  |  Fax: 212.241.0139
www.icahn.mssm.edu/genetictesting

MGTL offers comprehensive molecular, cytogenetic and biochemical testing in our CLIA-certified, NY1-state approved and CAP-accredited facility. Our laboratory directors, genetic counselors, account managers, and client service representatives provide superior service and state-of-the-art testing.

Myriad Genetic Laboratories, Inc.
Booth # 524
Phone: 800.469.7423
cscomments@myriad.com
www.myriad.com

Myriad Genetics is a leading molecular diagnostic company specializing in hereditary cancers, pharmacogenomics and lifestyle genomics. We accept both saliva and blood samples. All our tests have a TAT of 3 weeks or less.

Natera, Inc.
Booth # 209, 229
Phone: 650.249.9090
ccruz@natera.com
www.natera.com

Natera is a genetic testing company that specializes in analyzing microscopic quantities of DNA for reproductive health to help families conceive and deliver. Natera provides a host of preconception and prenatal genetic testing services, including the Panorama™ non-invasive prenatal test, genetic carrier screening, preimplantation genetic diagnosis (PGD), miscarriage testing and paternity testing.

National Society of Genetic Counselors (NSGC)
Booth # 317
Phone: 312.321.6834  |  Fax: 312.673.6972
nsgc@nsgc.org
www.nsgc.org

The National Society of Genetic Counselors advances the roles of genetic counselors in healthcare by fostering education, research, and public policy to ensure the availability of quality genetic services. Visit the booth for membership services, product information and more.

NextGxDx, Inc.
Booth # 225
Phone: 615.861.2634  |  Fax: 615.422.0857
info@nextgxdx.com
www.nextgxdx.com

NextGxDx is dedicated to improving the genetic test ordering process for the genetic counselor community. GeneSource, NextGxDx’s genetic testing database, is the most comprehensive, current and easy-to-use tool available to search and compare genetic tests.

NSGC Cancer SIG
Booth # 319
Phone: 312.321.6834
nsgc@nsgc.org

Members of the NSGC Cancer SIG will be available during breaks to answer your questions about SIG projects and how you can get involved. Please stop by to view and receive samples of materials that have developed by the SIG recently.

NSGC Prenatal SIG
Booth # 108
Phone: 312.321.6834
nsgc@nsgc.org
www.nsgc.org/PrenatalSIG

The mission of the Prenatal Special Interest Group is to advocate for genetic counseling as an integral part of preconception and prenatal care by serving as an expert resource for NSGC and the board of directors, providing resources for prenatal genetic counselors, and promoting research and education within reproductive genetics.

Omicia
Booth # 438
Phone: 510.595.0800  |  Fax: 510.588.4523
info@omicia.com
www.omicia.com

Omicia is advancing genomics-based personalized medicine. We are developing a comprehensive platform of genome interpretation software, methodologies, and clinical services to find the medical significance of genetic variations found in individuals’ DNA sequences.

Pathway Genomics
Booth # 336
Phone: 877.505.7374  |  Fax: 858.450.6604
clientservices@pathway.com
www.pathway.com

Pathway Genomics is a clinical diagnostics company that specializes in hereditary cancers, pharmacogenomics and lifestyle genomics. We accept both saliva and blood samples. All our tests have a TAT of 3 weeks or less.
PerkinElmer Labs  
**Booth # 324**  
Phone: 800.762.4000  
www.perkinelmer.com  
PerkinElmer Labs, along with our partner lab Good Start Genetics, offers a variety of prenatal and carrier screening test options to suit every patient case. We provide one source to support your genetic testing needs.

**Personalis, Inc.**  
**Booth # 205**  
Phone: 650.752.1300 | Fax: 650.752.1301  
info@personalis.com  
www.personalis.com  
Personalis® is a clinical testing laboratory that gives clinicians the most accurate and comprehensive sequencing and interpretation solutions available. Designed to enhance diagnostic yield, the ACE Clinical Exome™ Test combines gene finishing and structural variant analysis to find answers for your patients.

**Pfizer, Inc.**  
**Booth # 116**  
Phone: 212.733.2323  
www.pfizer.com  
At Pfizer, we apply science and our global resources to bring therapies to people that extend and significantly improve their lives.

**Prevention Genetics**  
**Booth # 208**  
Phone: 715.387.0484 | Fax: 715.207.6602  
clinicaldatatesting@preventiongenetics.com  
www.preventiongenetics.com  
Prevention Genetics is a leader in providing comprehensive clinical DNA testing offering NextGen Sequencing, Sanger sequencing and deletion/duplication testing via array CGH for over 1000 genes.

**Proband by The Children’s Hospital of Philadelphia**  
**Booth # 226**  
Phone: 267.426.7522 | Fax: 215.590.5245  
millerjm1@email.chop.edu  
www.probandapp.com  
Proband is an iPad application designed to replace paper for drawing pedigrees during family history interviews. Built from the ground up for the iPad, Proband uses intuitive gestures to make creating pedigrees fast and efficient.

**Progeny Software, LLC**  
**Booth # 435**  
Phone: 800.776.4369 | Fax: 888.584.1210  
info@progenygenetics.com  
www.progenygenetics.com  
Progeny offers family history and genetic pedigree software for family-based clinical data management. Capture family history electronically before the clinic visit and identify at-risk patients via our customizable online questionnaire.

**Quest Diagnostics**  
**Booth # 300**  
Phone: 866.897.8378  
www.questdiagnostics.com  
Quest Diagnostics, the world's leading provider of diagnostic testing, information and services, offers a comprehensive Genetics Testing menu including Prenatal and Neonatal, Oncology, Neurology, and Endocrinology. We empower health with diagnostic insights. Visit QuestDiagnostics.com/Genetics.

**Recombine**  
**Booth # 219**  
Phone: 855.887.4368 | Fax: 212.214.0377  
info@recombine.com  
www.recombine.com  
Recombine was founded by experts in fertility and reproductive genetics. We offer CarrierMap, a Comprehensive Carrier Screen for > 200 genetic conditions, and FertilityMap, a Complete Fertility Genetic Assessment for infertility. From sample collection to genetic counseling, we manage the entire genetic testing process. It is Genetic Testing. Simplified.

**Recordati Rare Diseases**  
**Booth # 103**  
Phone: 908.236.0888  
dutch.co@recordati.com  
www.recordatararediseases.com  
Recordati Rare Diseases (RFD) Inc is a member of the Recordati Group, which consists of Recordati S.p.A and Orphan Europe. RFD’s mission is to partner with patients, healthcare providers, advocacy and industry to make products available to treat rare and severe diseases.

**Reproductive Genetic Innovations (RGI)**  
**Booth # 227**  
Phone: 847.400.1515 | Fax: 847.400.1516  
info@rpgid.com  
www.rpgid.com  
Reproductive Genetic Innovations (RGI) is a world-renowned provider of Preimplantation Genetic Diagnosis (PGD). With experience spanning three decades, RGI is a leader in PGD technology and offers testing for nearly any single gene disorder, as well as for chromosomal rearrangements and aneuploidy by PCR, FISH, and 24-chromosome aCGH.

**Reprogenetics**  
**Booth # 431**  
Phone: 973.436.5003 | Fax: 973.710.4238  
www.reprogenetics.com  
Reprogenetics is a full-service preimplantation genetic diagnosis (PGD) laboratory offering 24 chromosome aCGH for aneuploidy, translocations and inversions, PGD for single gene disorders and HLA matching via standard methods or karyomapping, aCGH for POC testing and FISH on sperm.

**Seattle Children’s Hospital**  
**Booth # 202**  
Phone: 206.987.3361 | Fax: 206.987.3840  
plugins@seattlechildrens.org  
www.seattlechildrens.org  
PLUGS is a Utilization Management service that helps hospital laboratories and practitioners decrease costs and errors associated with unnecessary laboratory testing, which will ultimately save you money! Visit our booth at NGSC.

**Sequenom Laboratories**  
**Booth # 513**  
Phone: 877.821.7266 | Fax: 858.202.9205  
info@sequenom.com  
www.laboratories.sequenom.com  
Sequenom Laboratories, a molecular diagnostics laboratory dedicated to improving patient care, commercialized the first noninvasive prenatal test for pregnant women at increased risk. Through a routine blood draw, MaterniT21™ PLUS laboratory-developed test analyzes and reports clinically relevant fetal chromosomal abnormalities—including the core trisomies 21, 18, and 13, as well as trisomies 16 and 22; fetal sex aneuploidies; and select microdeletions.

**Sharsheret**  
**Booth # 122**  
Phone: 888.664.2774  
info@sharsheret.org  
www.sharsheret.org  
Sharsheret is a national not-for-profit organization supporting young Jewish women and families facing breast cancer and ovarian cancer—those who are at high risk, those who are diagnosed, and survivors.

**SiNai Surgical Center**  
**Booth # 428**  
Phone: 310.247.0553  
Fax: 310.289.1694  
Sinaisurgical@aol.com  
www.ProChoiceMedical.com  

**Southwestern Women’s Options**  
**Booth # 517**  
Phone: 505.242.7512  
Fax: 505.242.0540  
boyd02@covad.net  
www.southwesternwomens.com  
Curtis Boyd, MD owned clinics provide a full range of abortion services. The Albuquerque office specializes in third trimester abortion care offering a unique Fetal Indications Program geared to the special needs of the patient.

**St. Louis Fetal Care Institute**  
**Booth # 237**  
Phone: 314.268.4037  
Fax: 314.678.4499  
katie_francis@ssmhc.com  
www.stlouisfetalcare.com  
The St. Louis Fetal Care Institute is a comprehensive diagnostic and therapeutic program that specializes in treating congenital problems and structural abnormalities in babies, both in the womb and after birth.

**Transgenomic, Inc.**  
**Booth # 334**  
Phone: 877.274.9432 | Fax: 203.907.2615  
info@transgenomic.com  
labs.transgenomic.com  
Transgenomic provides proprietary technology and molecular genetics expertise for fully integrated molecular diagnostic solution through our three integrated divisions – Biomarker Identification, Genetic Assays and Platforms, and Patient Testing.

**UAB Medical Genomics Laboratory**  
**Booth # 427**  
Phone: 205.934.5562  
Fax: 205.996.2929  
info@uabmc.edu  
www.genetics.uab.edu/medgenomics  
The Medical Genomics Laboratory (MGL) is a CAP-certified not-for-profit clinical laboratory at the University of Alabama at Birmingham, offering comprehensive testing for common and rare genetic disorders. The MGL specializes in testing for all forms of the neurofibromatosis, including NF1, Legius syndrome, NF2, segmental NF and schwannomatosis.
UCLA Clinical Genomics Center

**Booth # 536**

Phone: 310.825.7099
Fax: 310.267.2685
scwebb@mednet.ucla.edu
www.pathology.ucla.edu/genomics

The UCLA Clinical Genomics Center offers testing for hereditary disorders and cancer diagnosis/management, and genetic counseling. Our own CLIA-certified CAP-accredited labs provide exome sequencing with expert interpretation by our Genomic Data Board, custom Sanger sequencing, chromosomal microarray and more.

University of Chicago Genetic Services

**Booth # 430**

Phone: 773.834.0555
Fax: 773.702.9130
ucgslabs@genetics.uchicago.edu

www.dnatesting.uchicago.edu

Our laboratory is committed to high quality genetic diagnostics and translational research toward the development of tests for neurodevelopmental disorders. Some of our services include genetic testing for brain malformation syndromes, microcephaly, epilepsy, ataxia, congenital muscle diseases and Cornelia de Lange syndrome.

University of Washington Reference Lab Services

**Booth # 200**

Phone: 1.800.713.5198
commserv@uw.edu

BROCA Testing is performed with next-generation sequencing technology, which detects all classes of disease-causing mutations. The Department’s clinical test is based on the research of Drs. Tom Walsh and Mary-Claire King, who first developed this technology to study hereditary risk of breast and ovarian cancer and reported it in 2010. UW-OncoPlex™ is a multiplexed gene sequencing panel that detects mutations in tumor tissue in 194 cancer-related genes for cancer treatment, prognosis, and diagnosis.

Vendor-Sponsored Presentations

**Thursday, September 18, 2014**

11:30am - 12:00pm

**Personalis, Inc.**

The ACE Clinical Exome™ Test: An Advanced Diagnostic Test for Genetic Disease

Sarah Garcia, Ph.D., M.S., C.G.C.

In this workshop, we will discuss the highly accurate exome sequencing and interpretation that underlie Personalis’ diagnostic services for Mendelian disorders. Topics include, our approach to finishing the medical exome using ACE Technology, improving the sensitivity and specificity of structural variant calling, correcting the human reference sequence to enable better alignment and variant calling, and our biomedically-driven approach to variant filtration. Clinical examples demonstrating the impact of Personalis’ accuracy improvements on the sensitivity to detect causative variation in Mendelian disorders will be presented.

12:15pm - 12:45pm

**Myriad Genetic Laboratories**

myRisk™ Hereditary Cancer Panel: Clinical Data Supporting a Pan-Cancer Panel Approach to Hereditary Cancer Testing

Jennifer Saam, PhD, MS, CGC, Job Title TBD, Company TBD

Myriad’s myRisk Hereditary Cancer panel evaluates 25 cancer susceptibility genes associated with 8 cancers. This product theater will summarize recent data which demonstrate the clinical overlap of hereditary cancer genes and supports the utilization of a pan-cancer panel over targeted or disease-specific panels to identify clinically actionable mutations.

1:15pm - 1:45pm

**Edimer Pharmaceuticals**

EDI200: Potential Treatment for X-linked hypohidrotic ectodermal dysplasia (XLHED)

Neil Kirby, Ph.D., President and CEO of Edimer Pharmaceuticals

X-linked hypohidrotic ectodermal dysplasia (XLHED) is a disorder of ectodermal development causing hypohidrosis, hypodontia, and hypotrichosis. EDI200, a novel protein therapeutic under clinical investigation, initiates the development of the ectoderm potentially providing lifelong benefit with a single course of therapy—an approach that may have clinical implications for other disorders.

**Friday, September 19, 2014**

12:45pm - 1:15pm

**Ambry Genetics**


Laura Panos, MS, CGC, Product Manager, Company TBD

Many questions exist about counseling following next-gen cancer panel results, particularly when unexpected mutations do not fit the patient’s phenotype and with mutations in less well-described genes. In this session, Ambry genetic counselors will interview clinicians regarding such cases from their practice and the post-test counseling and recommendations given.

1:45pm - 2:15pm

**BioMarin Pharmaceutical Inc.**

Diagnostic Challenges in the Lab and in the Clinic: Morquio A and MPS VI

Laura Pollard, PhD, FACMG, Assistant Director, Biochemical Genetics Laboratory, Greenwood Genetic Center

Brooke Smith, MS, CGC, Certified Genetic Counselor, Greenwood Genetic Center

Rare genetic diseases such as Mucopolysaccharidosis VI (Maroteaux-Lamy Syndrome) and IVA (Morquio A Syndrome) are under recognized and challenging to diagnose. This presentation will include an overview of diagnostic strategies and recommendations and a clinical case study as an example of the challenges in diagnosis.
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