SOCIETY FOR PEDIATRIC PATHOLOGY 2018 SPRING MEETING

March 16-18, 2018
Pinnacle Hotel Harbourfront
1133 W Hastings St
Vancouver, BC V6E 3T3, Canada
SPP Board of Directors

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Fellowship                 Raja Rabah
Finance                    Jon Rowland
Perinatal                  Debra Heller
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CME Course Advisor        Lili Miles
Informatics & Communications Chandra Krishnan

2018 Spring Meeting Program Chairs

Education                  M Cristina Pacheco
CME Course Advisor        Lili Miles
Abstracts                 Jefferson Terry
Workshops                 Florette K. Hazard
Symposium                 Alison Huppmann

Society for Pediatric Pathology
355 Lexington Avenue, 15th Floor
New York, NY 10017
Telephone: 212-297-2196
Fax: 212-297-2158
Email: spp@kellencompany.com
Website: http://www.spponline.org/
MEETING NEEDS ASSESSMENT

The practice of pediatric pathology requires up-to-date knowledge of the diseases affecting children, including their scientific basis, clinical spectrum, pathologic classification, and current research activities. The Society for Pediatric Pathology Annual Meeting is intended as an ongoing resource to meet the educational needs of pediatric pathologists, general pathologists whose practice includes pediatric pathology, pediatric pathology fellows, and pathology residents.

MEETING OBJECTIVES

Upon completion of this meeting, learners should be able to:

- Acknowledge recent advancements in research and practice related to the biology, characterization and/or diagnosis of pediatric disease.
- Identify areas with recent significant advancement in the practice of pediatric pathology.
- Implement diagnostic and consultative management updates in pediatric pathology into practice.
- Summarize clinicopathologic differential diagnoses and pathologic processes of perinatal and pediatric disorders and their complications, as well as their treatments and possible outcomes.

Disclosure of Conflicts of Interest

Disclosure Policy

The Society for Pediatric Pathology requires faculty and members of the planning committee to disclose whether or not they have any relevant commercial relationships or if they will be discussing unlabeled and/or investigational uses of any products, pharmaceuticals, or medical devices. This must be made known in advance to the audience in accordance with the ACCME Standards of Commercial Support guidelines.

Program Committee Disclosures

Every person who is involved in the planning of this CME program has been asked to provide information regarding any financial relationships with a commercial interest as defined by the ACCME. The following program committee members have indicated that they have financial relationships to disclose. They have agreed to disclose this to participants. Any other committee member disclosures not yet received will be included in a program addendum.

<table>
<thead>
<tr>
<th>First</th>
<th>Last</th>
<th>Financial Disclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benjamin</td>
<td>Wilkins</td>
<td>Spouse, employee, Merck and Co. Genmab Inc, employee and shareholder (spouse)</td>
</tr>
</tbody>
</table>
2018 Spring Meeting Faculty Disclosures
All faculty members are required to disclose any financial relationships with a commercial interest as defined by the ACCME. The following faculty indicated that they have financial relationships to disclose. They have agreed to disclose this to participants. Any other faculty disclosures not yet received will be included in a program addendum.

<table>
<thead>
<tr>
<th>First</th>
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<th>Financial Disclosure</th>
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<tbody>
<tr>
<td>Sarah</td>
<td>Kerr</td>
<td>Abbott Molecular, Inc. Grant/Research support</td>
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<td>Abbott Molecular, Inc. Speaker</td>
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Unlabeled/Investigation Uses of Products or Devices
No faculty indicated that they plan to discuss unlabeled or investigational uses of products or devices.

CONTINUING MEDICAL EDUCATION ACCREDITATION

Accreditation Statement
The Society for Pediatric Pathology is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

AMA Credit Designation Statement – SPP Spring Meeting
The Society for Pediatric Pathology designates this live activity for a maximum of 13.75 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

International Physicians
The American Medical Association has determined that physicians not licensed in the US who participate in this CME activity are eligible for AMA PRA Category 1 Credit(s)™.

Health Professionals
Health Professional participants (including residents and fellows-in-training) may claim hours to receive a Certificate of Participation for an activity designated for AMA PRA Category 1 Credit(s)™.

CME Credits
Certificates of continuing medical education AMA PRA Category 1 Credits™ will be issued through the Society for Pediatric Pathology. CME credits will only be awarded after completion of an online evaluation form.

AMA PRA Category 1 Credits™ offered Spring 2018:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Scientific Sessions</td>
<td>5.75</td>
</tr>
<tr>
<td>Symposium</td>
<td>3.0</td>
</tr>
<tr>
<td>Farber-Landing Lecture</td>
<td>1.0</td>
</tr>
</tbody>
</table>
Workshops 2.0 credits each
An evaluation must be completed prior to claiming CME credit for the various offerings. The evaluation forms, CME claim forms and SAMs post-tests can be accessed through the SPP website: www.sponline.org

SELF-ASSESSMENT MODULE CREDITS

The SPP is accredited by the American Board of Pathology to offer Self-Assessment Module (SAMs) credits for the purpose of meeting the American Board of Pathology requirements for Maintenance of Certification. Registrants must take and pass the post-test in order to claim SAMs credit(s). SAMs credits are being offered only for the elective workshops and symposium.
PROGRAM SUMMARY
SOCIETY FOR PEDIATRIC PATHOLOGY
SPRING MEETING 2018
March 16-18, 2018
Pinnacle Hotel Harbourfront
Vancouver, BC Canada

*Unless otherwise noted all meetings will be held on the Mezzanine Level

### Committee Meetings

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00am -10:00am</td>
<td>Executive Committee and Strategic Planning Meeting (closed)</td>
<td>Salon F</td>
</tr>
<tr>
<td>10:00am -11:30am</td>
<td>Finance Committee Meeting (open)</td>
<td>Salon F</td>
</tr>
<tr>
<td>11:30am-1:00pm</td>
<td>PDP Editorial Board Meeting with Lunch (by invitation)</td>
<td>Salon E</td>
</tr>
<tr>
<td>12:00pm-5:00pm</td>
<td>Poster Presenters Set Up</td>
<td>Port of Vancouver</td>
</tr>
<tr>
<td>12:00pm-5:00pm</td>
<td>Exhibitors Set Up</td>
<td>Harbourfront Foyer</td>
</tr>
<tr>
<td>1:00pm-3:00pm</td>
<td>Publications Committee (open)</td>
<td>Salon D</td>
</tr>
<tr>
<td>1:00pm-3:00pm</td>
<td>Research &amp; Awards Committee (closed)</td>
<td>Salon C</td>
</tr>
<tr>
<td>1:00pm-4:00pm</td>
<td>Education Committee (closed)</td>
<td>Salon F</td>
</tr>
<tr>
<td>2:00pm-6:00pm</td>
<td>Registration Open</td>
<td>Harbourfront Foyer</td>
</tr>
<tr>
<td>2:00pm-6:00pm</td>
<td>Speaker Preview Area Open</td>
<td>Harbourfront Foyer</td>
</tr>
<tr>
<td>3:00pm-4:00pm</td>
<td>Fellowship/Professional Development Committee (open)</td>
<td>Salon B</td>
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<tr>
<td>3:00pm-4:00pm</td>
<td>Perinatal Committee (open)</td>
<td>Salon D</td>
</tr>
<tr>
<td>4:00pm-6:30pm</td>
<td>Slide Survey Subcommittee Working Meeting (closed)</td>
<td>Salon F</td>
</tr>
<tr>
<td>4:00pm-6:30pm</td>
<td>Board of Directors Meeting (closed)</td>
<td>Salon E</td>
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**Friday, March 16, 2018**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
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<tbody>
<tr>
<td>7:00am-5:00pm</td>
<td>Exhibits Open</td>
<td>Harbourfront Foyer</td>
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<tr>
<td>7:00am-6:00pm</td>
<td>Speaker Preview Area Open</td>
<td>Harbourfront Foyer</td>
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<tr>
<td>7:00am-6:00pm</td>
<td>Poster Viewing</td>
<td>Port of Vancouver</td>
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<tr>
<td>7:00am-6:00pm</td>
<td>Registration Open</td>
<td>Harbourfront Foyer</td>
</tr>
<tr>
<td>7:00am-8:00am</td>
<td>Continental Breakfast for All Attendees</td>
<td>Harbourfront Foyer</td>
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<tr>
<td>7:00am-8:00am</td>
<td>Trainee/New Member Breakfast (Invitation only)</td>
<td>Port of Singapore</td>
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<tr>
<td>8:05am-10:20am</td>
<td>Platform Presentation Neoplasia</td>
<td>Harbourfront 1</td>
</tr>
<tr>
<td>8:00am-10:20am</td>
<td>Platform Presentation Tumor Genetics</td>
<td>Harbourfront 2/3</td>
</tr>
<tr>
<td>10:20am-10:45am</td>
<td>Refreshment Break &amp; Poster Viewing</td>
<td>Harbourfront Foyer</td>
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<tr>
<td>11:05am-12:05pm</td>
<td>Farber-Landing Lecture</td>
<td>Harbourfront 1</td>
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<tr>
<td>12:15pm-1:15pm</td>
<td>Perinatal Section General Business Meeting (All SPP members welcome)</td>
<td>Harbourfront 2/3</td>
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<tr>
<td>1:30pm-5:00pm</td>
<td>Symposium</td>
<td>Harbourfront 1</td>
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<tr>
<td>3:00pm-3:30pm</td>
<td>Refreshment Break &amp; Poster Viewing</td>
<td>Harbourfront 1</td>
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<tr>
<td>5:00pm-6:00pm</td>
<td>SPP Business Meeting</td>
<td>Harbourfront 1</td>
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<tr>
<td>6:30pm-11:00pm</td>
<td>Banquet- President’s Inaugural address</td>
<td>Vistas 360</td>
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(No CME credit)
(Ticket is required)

**Sunday March 18, 2018**

<table>
<thead>
<tr>
<th>Time</th>
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<tr>
<td>7:00am-2:00pm</td>
<td>Registration Open</td>
<td>Harbourfront Foyer</td>
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<tr>
<td>7:00am-2:00pm</td>
<td>Speaker Preview Area Open</td>
<td>Harbourfront Foyer</td>
</tr>
<tr>
<td>7:00am-12:30pm</td>
<td>Exhibits Open</td>
<td>Harbourfront Foyer</td>
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<tr>
<td>7:00am-12:00am</td>
<td>Posters Open</td>
<td>Port of Vancouver</td>
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<tr>
<td>7:00am-8:00am</td>
<td>Continental Breakfast for All Attendees</td>
<td>Harbourfront Foyer</td>
</tr>
<tr>
<td>8:00am-9:30am</td>
<td>Platform Presentation – Pediatric</td>
<td>Harbourfront 1</td>
</tr>
<tr>
<td>8:00am-9:30am</td>
<td>Platform Presentation – Perinatal</td>
<td>Harbourfront 2/3</td>
</tr>
<tr>
<td>9:30am-10:30am</td>
<td>Poster Presentation 1</td>
<td>Harbourfront 1</td>
</tr>
<tr>
<td>10:30am-11:00am</td>
<td>Refreshment Break &amp; Poster Viewing</td>
<td>Harbourfront Foyer &amp; Port of Vancouver</td>
</tr>
<tr>
<td>11:00am-12:00am</td>
<td>Poster Presentation II</td>
<td>Harbourfront 1</td>
</tr>
<tr>
<td>12:10pm-12:30pm</td>
<td>Awards Presentation</td>
<td>Harbourfront 1</td>
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<tr>
<td>12:30</td>
<td>Poster Dismantle</td>
<td>Port of Vancouver</td>
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<tr>
<td>1:30pm-3:30pm</td>
<td><strong>Workshop Session I</strong></td>
<td>Harbourfront 1/2/3</td>
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<td>(Ticket is required)</td>
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<tr>
<td>4:00pm – 6:00pm</td>
<td><strong>Workshop Session II</strong></td>
<td>Harbourfront 1/2/3</td>
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<td>(Ticket is required)</td>
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</table>
8:00 - 10:20am
Platform Session 1 – Tumor Genetics

**Moderators:** Charles Timmons, MD & M Cristina Pacheco, MD

**Room:** Harbourfront 2/3

1. **Novel FGFR2 Fusions Identified in a Series of Dysembryoplastic Neuroepithelial Tumors Result in Proliferation and MAPK and PI3K/mTOR Pathway Activation**
   - L Surrey, P Jain, J Straka, M Luo, A Resnick, P Storm, M Li, A Waanders, M Santi; Children's Hospital of Philadelphia, Philadelphia, Pennsylvania

2. **Genomic Analysis Identifies Novel Kinase Alterations in Solitary Juvenile Xanthogranuloma, Including NTRK1 Fusions, with Morphologic Correlation**
   - J Picarsic¹, R Alaggio¹, R Jaffe², E Diamond³, O Abdel-Wahab⁴, B Durham⁵; ¹Children's Hospital of Pittsburgh of UPMC, Department of Pathology, UPSOM, Pittsburgh, Pennsylvania; ²Magee Womens Hospital of UPMC, Department of Pathology, UPSOM, Pittsburgh, Pennsylvania; ³Memorial Sloan Kettering Cancer Center (MSKCC), Department of Neurology, New York, New York; ⁴MSKCC, Human Oncology and Pathogenesis Program, New York, New York; ⁵MSKCC, Human Oncology and Pathogenesis Program and Department of Pathology, New York, New York

3. **Expanding the Molecular Landscape of Severe Congenital Neutropenia Beyond ELANE: A Place for FANC Family and HAX1 Gene Mutations.**
   - R Mariani, S Gong; Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, Illinois

4. **BRAF Exon 15 Mutations in the Evaluation of Well-Differentiated Epithelial Nephroblastic Neoplasms in Children**
   - J Goldstein¹, L Jennings¹, Y Chi², E Mullen³, J Geller³, K Vallance⁵, C Fernandez⁶, J Dome⁷, E Perlman¹, M Cajaiba¹; ¹Ann & Robert H. Lurie Children’s Hospital of Chicago, Chicago, Illinois; ²University of Florida, Gainesville, Florida; ³Dana-Farber/Harvard Cancer Center, Boston, Massachusetts; ⁴Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio; ⁵Cook Children's Medical Center, Fort Worth, Texas; ⁶Tufts Medical Center, Boston, Massachusetts; ⁷Children's National Medical Center, Washington, District of Columbia

5. **Reassessing the Need for Bilateral Staging Bone Marrow Biopsies in Pediatric Cancers**
   - J Goldstein, S Gong; Lurie Children's Hospital, Chicago, Illinois
9:20 - 9:35am 6  Pilot Study of Check Point Therapy Markers and Mutation Load Along Tumor Progression in Synovial Sarcoma
T Chen, J Pfeifer, M He; Washington University School of Medicine, Saint Louis, Missouri

9:35 - 9:50am 7  Concordance Between FISH and SNParray for Detecting MYCN Amplification and 1p Deletion in Neuroblastoma.
C D’Arcy, A Arnoldo, M Shago, P Thorner, G Somers; The Hospital for Sick Children Department of Paediatric Laboratory Medicine, Toronto, Ontario, Canada

9:50 - 10:05am 8  Recurrent and Novel USP6 Fusions Identified in Cranial Fasciitis by Anchored Multiplex Polymerase Chain Reaction
V Paulson1, J Stojanov2, T Restrepo1, S Cano1, J Plunkitt1, S Duraisamy1, M Memmendarachchi1, M Calicchio1, J Wasman2, M Harris1, D Chute3, A Yancoskie4, A Church4; 1Boston Children's Hospital, Boston, Massachusetts; 2CWRU School of Medicine, Dept of Pathology, Cleveland, Ohio; 3Cleveland Clinic, Cleveland, Ohio; 4Touro College of Dental Medicine at New York Medical College, Hawthorne, New York

10:05 - 10:20am 9  Integrated Genomic Analysis of High-Risk Hepatoblastoma
S Zhou, L Mascarenhas, D Ostrow, L Wang, T Triche, M Hiemenz; Children's Hospital Los Angeles, Keck School of Medicine, USC, Los Angeles, California

8:05 - 10:20am
Platform Session 2 – Neoplasia
Room: Harbourfront 1
Moderators: Robyn Reed, MD & Brad Siegle, MD

8:05 - 8:20am 10  PHOX2B is a Reliable Immunomarker for Distinguishing Peripheral Neuroblastic Tumors from CNS Embryonal Tumors
S Alexandrescu, V Paulson, H Lidov; Boston Children’s Hospital, Boston, Massachusetts

8:20 - 8:35am 11  Pediatric Large B-Cell Lymphoma in Light of 2016 Revised WHO Criteria: Considerations
H Wang, F Debra, A Kovach; Children’s Hospital at Vanderbilt University Medical Center, Nashville, Tennessee

8:35 - 8:50am 12  Multiplex Targeted RNA Sequencing from FFPE Tissue Successfully Identifies BCOR Internal Tandem Duplications in Clear Cell Sarcoma of the Kidney
S Duraisamy, T Restrepo, S Cano, J Plunkitt, R Pinches, M Memmerandachchi, M Calicchio, V Paulson, A Al-Ibraheemi, M Harris, A Church; Boston Children's Hospital, Boston, Massachusetts

8:50 - 9:05am 13  Assessing the prognostic significance of good histologic response of high grade osteosarcoma in AOST0331 protocol
A Calleroz, K Patel, N Quintanilla, D Lopez-Terrada, N Rainusso, R Venkataramani, H Wu; Texas Children’s Hospital, Houston, Texas

9:05 - 9:20am 14  Programmed Death Ligand 1 Expression and Related Markers in Pediatric Malignant Rhabdoid Tumors
B Abro, L Dehner, J Pfeifer, M He; Washington University in St Louis, St Louis, Missouri
**Outcome Analysis of Stage 1 Epithelial Favorable Histology Wilms Tumors**

L Parsons¹, E Mullen², J Geller³, Y Chi⁴, G Khanna⁵, R Glick⁶, K Vallance⁷, Y Kim⁸, M Cajaiba⁹, C Fernandez⁹, J Dome¹⁰, E Perlman⁸;
¹Children's Hospital of Wisconsin, Milwaukee, Wisconsin; ²Dana-Farber/Harvard Cancer Center, Boston, Massachusetts; ³Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio; ⁴Children's Oncology Group Data Center, Gainesville, Florida; ⁵Washington University School of Medicine, St. Louis, Missouri; ⁶The Steven and Alexandra Cohen Children's Medical Center of New York, New Hyde Park, New York; ⁷Cook Children's Medical Center, Fort Worth, Texas; ⁸Ann and Robert H Lurie Children's Hospital of Chicago, Chicago, Illinois; ⁹Dalhousie University and the IWK Health Centre, Halifax; ¹⁰Children's National Medical Center, Washington, District of Columbia

**CaM kinase-like vesicle-associated (CAMKV), a potential therapeutic target, is overexpressed in patients with high-risk neuroblastoma**

L Wang¹, Y Hu¹, K Zhu¹, F Yang¹, Y yu², J Yang²;
¹Children Hospital Los Angeles, University of Southern California, Los Angeles, California; ²Baylor College of Medicine, Houston, Texas

**Pediatric NTRK-rearranged mesenchymal tumors: A multi-institutional retrospective review - Expanding the spectrum/family of “infantile fibrosarcoma?”**

J Davis¹, C Boecking¹, C Lockwood², B Stohr³, J Black³, A Al-Ibraheemi³, S DuBois³, S Vargas³, B Tupin³, S Szabo³, D Parham³, T Laetsch³, D Hawkins³, E Rudzinski³;
¹University of California San Francisco (UCSF), San Francisco, California; ²University of Washington, Seattle, Washington; ³The Children’s Hospital of Colorado, Aurora, Colorado; ⁴Boston Children's Hospital, Boston, Massachusetts; ⁵Dan-Farber Cancer Institute, Boston, Massachusetts; ⁶Cincinnati Children’s Hospital Medical Center, Cincinnati, Ohio; ⁷Children’s Hospital Los Angeles, Los Angeles, California; ⁸UT Southwestern, Dept. of Pediatrics, Dallas, Texas; ⁹Seattle Children’s Hospital, Seattle, Washington

**Infantile Fibrosarcoma: towards a morphologic redefinition after its molecular characterization?**

C Salgado¹, P Dall’Igna², M Reyes-Mugica¹, R Alaggio¹, A Zin¹;
¹University of Pittsburgh UPMC, Pittsburgh, Pennsylvania; ²University of Padova, Padova; ³Istituto di Ricerca Pediatrica Città della Speranza, 35127 Padova

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**Farber-Landing Lecture**

"The Spectrum of Neurodevelopmental and Neurodegenerative Disorders. Lessons from Down Syndrome and Gaucher Disease"

Eliezer Maslia, MD, Director of the National Institute on Aging, Division of Neuroscience, National Institutes of Health

At the end of this presentation, participants should be able to:
- Describe the contribution of studies of metabolic and chromosomal aberration disorders of childhood, such as Gaucher disease, Niemann-Pick Disease and Down syndrome, to the understanding of the pathogenesis of neurodegenerative disorders of the aging population such as Alzheimer and Parkinson disease.
Differentiate the primary neurodegenerative pathologic processes of Alzheimer and Parkinson disease and potential therapeutics in the context of the National Alzheimer’s Project Act.

Enumerate recent experimental therapeutic approaches and biomarkers for Alzheimer and Parkinson disease and the impact to treating neurological alterations in Gaucher Disease, Niemann-Pick disease and Down syndrome.

1:30 - 5:00pm

Room: Harbourfront 1

Symposium: “Pediatric Liver Tumors: New Advances in Pathologic Classification, Molecular Diagnostics and International Cooperative Trials”
Organizers: Florette K. Hazard, MD, Alanna Church, MD

At the end of this presentation, participants should be able to:

- Identify the histologic features of the prognostically significant subtypes of hepatoblastoma (well-differentiated pure fetal and small cell undifferentiated).
- Identify the histologic features of transitional liver cell tumors.
- Identify and understand the molecular alterations of hepatocellular adenoma and carcinoma.
- Understand the molecular assays available to support a specific diagnosis and to guide targeted therapy, including the detection of relevant single nucleotide variants, copy number profiles and structural variations.
- Establish the role of the Pediatric Pathologist in this new era of genomics and personalized medicine and our contributions to the Molecular Tumor Board.
- Understand new advances in risk stratification and oncologic treatment of patients with hepatoblastoma and hepatocellular carcinoma.

“Recent Advancements in the Molecular Classification of Hepatocellular Adenoma and Carcinoma” – Florette K. Hazard, MD; Stanford University School of Medicine

At the end of this presentation, participants should be able to:

- Identify the molecular alterations that characterize subtypes of hepatocellular adenoma.
- Differentiate subtypes of hepatocellular adenoma based on their immunophenotype.
- Report the association of each hepatocellular adenoma subtype with hepatocellular carcinoma.
- Diagnose the fibrolamellar subtype of hepatocellular carcinoma with knowledge of its characteristic fusion transcript.

“Histologic Features of Prognostically Significant Subtypes of Hepatoblastoma” – Milton J. Finegold, MD; Texas Children's Hospital

At the end of this presentation, participants should be able to:

- Appreciate the special requirements for tissue collection and processing of pediatric liver tumors, given the many advances in diagnostic tools.
- Identify and distinguish the histologic features of the prognostically significant subtypes of hepatoblastoma, reflecting current treatment protocols.
- Utilize illustrative cases to grasp the challenges from exceptional cases and limited local experience to communicate effectively with surgeons and oncologists.
“Histologic Features of Transitional Cell Liver Tumors (hepatoblastoma with hepatocellular features)” – Antonio Perez-Atayde, MD, PhD; Boston Children’s Hospital

**At the end of this presentation, participants should be able to:**
- Draw a distinguishing line between hepatoblastoma, transitional liver cell carcinoma and hepatocellular carcinoma.
- Explain the concept of “hepatoblastoma with hepatocellular carcinoma features”.
- Appreciate the current controversial status of transitional liver cell carcinoma.

“A Proposed Biological Annotation of Hepatocellular Tumors” – Dolores Lopez-Terrada, MD; Texas Children’s Hospital

**At the end of this presentation, participants should be able to:**
- Describe the most common, clinically relevant molecular genetic abnormalities found in pediatric hepatocellular tumors.
- Be aware of recently described diagnostic and prognostic biomarkers available for pediatric liver tumor patients.
- Determine the value and indications of biomarker testing for the diagnosis and risk stratification of pediatric patients with liver tumors.

“Molecular Pathology of Liver Tumors in Practice” – Alanna Church, MD; Boston Children’s Hospital

**At the end of this presentation, participants should be able to:**
- Select appropriate molecular tests to support the diagnosis of hepatocellular tumors.
- Explain molecular alterations that may be relevant to the treatment of hepatocellular tumors.
- Describe selected germline genetic alterations that may be relevant to patients with hepatocellular tumors.

“Paediatric Hepatic International Tumour Trial (PHITT)” – Allison O’Neill, MD; Dana-Farber Cancer Institute

**At the end of this presentation, participants should be able to:**
- Describe the historical approaches towards the treatment of pediatric patients with hepatoblastoma and hepatocellular carcinoma.
- Identify key clinical, surgical, radiologic, and genomic objectives to the upcoming international liver tumor clinical trial.
- Appreciate the complexities of an international clinical trial marrying divergent approaches to care and prospective unified therapeutic and exploratory goals.

“New Risk Stratification from the Children’s Hepatic Tumors International Collaboration (CHIC) – Clinical Update” – Arun A. Rangaswami, MD; Stanford University School of Medicine

**At the end of this presentation, participants should be able to:**
- Apply the contributions of the international collaborative groups SIOPEL, COG, GPOH and JPLT to our historical knowledge of hepatoblastoma.
Describe the prognostic significance of age at diagnosis in hepatoblastoma.

Summarize the statistically significant prognostic variables identified through the CHIC analysis.

Sunday, March 18

8:00 - 9:30am
Platform Session 3 – Pediatric

Moderators: Jeff Goldstein, MD & Lauren Parsons, MD

8:00 - 8:15am
19  Deamidated gliadin peptide sensitivity and specificity in the face of a moderately elevated tissue transglutaminase
M Pacheco, J Dickerson; Seattle Children's, Seattle, Washington

8:15 - 8:30am
20  Prominent vascular abnormalities in Pediatric End Stage Cystic Fibrosis Liver Disease
H Wu¹, M Vu², R Ackah³, K Eldin¹, J Goss¹, A Rana³, K Patel¹, D Leung¹; ¹Texas Children's Hospital and Baylor College of Medicine, Houston; ²Baylor College of Medicine, Houston, Texas

8:30 - 8:45am
21  Mucinous cell clusters in type I congenital pulmonary airway malformations: a comprehensive histologic analysis
N Nelson¹, L Litzky¹, J Pogoriler³; ¹Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania; ³Children's Hospital of Philadelphia, Philadelphia, Pennsylvania

8:45 - 9:00am
22  A Histopathological, Immunohistochemical and Ultrastructural Study of Total Parenteral Nutrition in an Ambulatory Neonatal Animal Model
M Guzman, N Korremla, A Price, C Manithody, K Blomenkamp, M Westrich, N Heafner, G Villalona, J Greenspon, J Teckman, A Jain; Saint Louis University, Saint Louis, Missouri

9:00 - 9:15am
23  Entrapped myocardium in pediatric cardiac fibromas: A plausible anatomic substrate for ventricular tachycardia and cardiac arrest
C Carreon, E Walsh, P del Nido, A Perez-Atayde, T Geva, S Sanders, M Alexander; Boston Children's Hospital/ Harvard Medical School, Boston, Massachusetts

9:15 - 9:30am
24  Clinical and Histopathologic Predictors of Disaccharidase Deficiency in Duodenal Biopsies
M Pacheco¹, R Reed²; ¹Seattle Children's Hospital, Seattle, Washington; ²Children's Hospitals and Clinics of Minnesota, Minneapolis, Minnesota
Platform Session 4 – Perinatal

Moderators: Terry Morgan, MD & Virginia Duncan, MD

8:00 - 8:15am  25  Non-invasive Prenatal Screening Shows Higher Concordance with Chorionic Villus Sampling than with Amniocentesis
                *J Govindavari, M Gupta, J Williams, R Schreck*; Cedars Sinai Medical Center, Los Angeles, California

8:15 - 8:30am  26  Villitis of Unknown Etiology Demonstrates an Inflammatory Signature Similar to Graft Versus Host Disease and Allograft Rejection
                *E Enninga, A Leontovich, S Markovic, S Kerr*; Mayo Clinic, Rochester, Minnesota

8:30 - 8:45am  27  Maternal Decidual Vasculopathy: Correlation Between Histological Grade and Maternal Clinical Parameters
                *W Banks, N Patil, E Popek, E Castro*; Texas Children's Hospital, Houston, Texas

8:45 - 9:00am  28  Surgical Site Infection following Cesarean Section Delivery: Histologic Chorioamnionitis is a Specific Risk Factor
                *J Bonadio*; University of Pittsburgh, Pittsburgh, Pennsylvania

9:00 - 9:15am  29  Benefits and limitations of the minimally invasive perinatal autopsy: A review of the first 5 years of an innovative service development
                *R Rummery¹, J DiGiovanni¹, A Raghavan¹, E Whitby¹, M Cohen²;¹Sheffield Children’s Hospital, Sheffield; ²Sheffield Children’s NHS Foundation Trust, Sheffield

9:15 - 9:30am  30  Shallow Placental Implantation Is Shared by Both Early-Onset and Late-Onset Preeclampsia
                *J Stanek*; Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio

9:30 - 10:30am

Poster Session I – Perinatal and Pediatric

Moderators: Csaba Galambos, MD & Raja Rabah, MD

9:30 - 9:35am  31  Reproducibility of Grading in Chronic Histiocytic Intervillositis of Unknown Etiology
                *D Ongaro¹, J Terry²; ¹University of British Columbia, Vancouver; ²BC Children's Hospital, Vancouver

9:35 - 9:40am  32  An Updated Reference Range for Neonatal IgG When Assayed By Current Automated Methodology
                *J Govindavari, S Pepkowitz, K Sobhani, E Klapper, C Hobel*; Cedars-Sinai Medical Center, Los Angeles, California

9:40 - 9:45am  33  Term and Near Term Unexpected Fetal Death
                *S Lou, S Keating, P Shannon*; Mount Sinai Hospital, University of Toronto, Toronto
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
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<th>Affiliations</th>
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<tbody>
<tr>
<td>9:45 - 9:50am</td>
<td>34</td>
<td>Hofbauer Cell Counts in the 2nd Trimester Placenta-What Is increased? What is Normal?</td>
<td>A Heerema-McKennon, L Rabinowitz;</td>
<td>Cleveland Clinic, Cleveland, Ohio</td>
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<td>9:50 - 9:55am</td>
<td>35</td>
<td>Identification of Quality Improvement Parameters in the Reporting of Pediatric Medical Liver Biopsies; A Single Institution Review.</td>
<td>C Maedler, F Bu, D Parham, S Zhou, M Warren, L Wang, N Shillingford;</td>
<td>Children's Hospital Los Angeles, Los Angeles, California</td>
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<td>9:55 - 10:00am</td>
<td>36</td>
<td>Diagnostic Utility of Glutamine Synthetase in the Diagnosis of Congenital Hepatic Fibrosis</td>
<td>W Banks¹, A Calleroz¹, H Wu¹, K Patel¹, N Quintanilla¹, S Dhingra²;</td>
<td>¹Texas Children's Hospital, Houston, Texas; ²Baylor College of Medicine, Houston, Texas</td>
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<td>10:00 - 10:05am</td>
<td>37</td>
<td>Does Bile Ductular Reactivity Correlate with Fibrosis in Pediatric Non-Alcoholic Fatty Liver Disease?</td>
<td>J Smith¹, J Picarsic², C Salgado¹, S Ranganathan²;</td>
<td>¹UPMC, Pittsburgh, Pennsylvania; ²Children's Hospital of Pittsburgh, Pittsburgh, Pennsylvania</td>
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<td>10:05 - 10:10am</td>
<td>38</td>
<td>Liver Pathology, Including MOC31 Immunohistochemistry, in Congenital Tufting Enteropathy</td>
<td>S Chen¹, A Al-Ibraheemi², A Perez-Atayde², R Fawaz², J Goldsmith², S Vargas²;</td>
<td>¹Rhode Island Hospital/Brown University, Providence, Rhode Island; ²Boston Children's Hospital, Boston, Massachusetts</td>
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<td>10:10 - 10:15am</td>
<td>39</td>
<td>Pathological Spectrum of Liver Disease in Dyskeratosis Congenita</td>
<td>J Putra, S Agarwal, A Alomari, A Perez-Atayde;</td>
<td>Boston Children's Hospital, Boston, Massachusetts</td>
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<td>10:15 - 10:20am</td>
<td>40</td>
<td>Malignant hepatocellular neoplasm, NOS – is it a significant diagnosis?</td>
<td>S Ranganathan, R Alaggio;</td>
<td>Children's Hospital of UPMC, Pittsburgh, Pennsylvania</td>
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<td>10:20 - 10:25am</td>
<td>41</td>
<td>Review and Standardization of Rectal Suction Biopsy (RSB) Morphologic / Immunohistochemical (IHC) Criteria and Conclusive Reporting for Confirmation or Exclusion of Hirschsprung Disease (HD) with Conventional and Whole Slide Imaging (WSI) Microscopy.</td>
<td>H Monforte, I Gonzalez-Gomez;</td>
<td>Johns Hopkins All Children's Hospital, Saint Petersburg, Florida</td>
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<td>10:25 - 10:30am</td>
<td>42</td>
<td>Granulomatous appendicitis in the pediatric population: a Multi-Institutional study</td>
<td>H Wu¹, J Pogoriler²;</td>
<td>¹Texas Children's Hospital and Baylor College of Medicine, Houston, Texas; ²Children's Hospital of Philadelphia, Philadelphia, Pennsylvania</td>
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<td>11:00 - 11:05am</td>
<td>Collaboration between Microbiology Laboratory and Nursing Council Improves Submission of Blood Cultures with Adequate Blood Volumes from Children</td>
<td>\textit{R Selvarangan, M Gripka, L Shriver, M Hamilton}; Childrens Mercy Hospital, Kansas City, Missouri</td>
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<td>11:05 - 11:10am</td>
<td>Risk of Malignancy for Atypia of Undetermined Significance Thyroid Fine Needle Aspiration Result in Pediatric Patients; Tertiary Care Referral Center Experience.</td>
<td>\textit{S Arnold, R Rabah, X Jing, J Pang, M Lew, R Daenport, A Heider}; University of Michigan, Ann Arbor, Michigan</td>
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<td>11:10 - 11:15am</td>
<td>P16-Ki67-HMB45 immunohistochemical profiling may help discriminate between Spitzoid melanoma and atypical Spitz nevi</td>
<td>\textit{R Garola, V Singh}; Children's Mercy Hospital, Kansas City, Missouri</td>
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<td>11:15 - 11:20am</td>
<td>Evaluation of clinicopathologic and meningothelial and neuroglial marker expression in rudimentary meningocele</td>
<td>\textit{J Davis, A Horvai}; University of California San Francisco (UCSF), San Francisco, California</td>
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<td>11:20 - 11:25am</td>
<td>Comparison of PAX7 and NKX2.2 Immunohistochemical Expression in Ewing Sarcomas Versus CIC-Rearranged Sarcomas</td>
<td>\textit{K Lombardo\textsuperscript{1}, S Lu\textsuperscript{1}, G Somers\textsuperscript{2}, M Shago\textsuperscript{2}, E Yakirevich\textsuperscript{1}, A Matoso\textsuperscript{1}, S Chen\textsuperscript{1}, S Mangray\textsuperscript{1}, N Shillingford\textsuperscript{4}}; 1Rhode Island Hospital &amp; Brown University, Providence, Rhode Island; 2The Hospital for Sick Children, Toronto; 3Johns Hopkins Hospital &amp; Medical School, Baltimore, Maryland; 4Children's Hospital of Los Angeles &amp; University of Southern California, Los Angeles, California</td>
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<td>11:25 - 11:30am</td>
<td>PD-L1/PD-1 Expression in Wilms Tumor: A Pilot Study</td>
<td>\textit{A Mattis, J Pfeifer, M He}; Washington University, St Louis, Missouri</td>
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<td>11:30 - 11:35am</td>
<td>Maspin Expression in Pediatric Rhabdomyosarcoma Differs by Subtype, Stage, and Treatment</td>
<td>\textit{A Hopp\textsuperscript{1}, A Mackinnon\textsuperscript{1}, P VanTuinen\textsuperscript{1}, J Jarzembowski\textsuperscript{2}, L Parsons\textsuperscript{2}}; 1Medical College of Wisconsin, Milwaukee, Wisconsin; 2Children's Hospital of Wisconsin, Milwaukee, Wisconsin</td>
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<td>11:35 - 11:40am</td>
<td>Adult Neuroblastoma: Characterization of Eight Cases.</td>
<td>\textit{K Duan\textsuperscript{1}, P Thorner\textsuperscript{2}, B Dickson\textsuperscript{1}, C Chung\textsuperscript{2}}; 1University of Toronto, Toronto; 2The Hospital for Sick Children, Toronto; 3Mount Sinai Hospital, Toronto, Ontario, Canada</td>
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<td>11:40 - 11:45am</td>
<td>Composite Pheochromocytoma/Paraganglioma in Children and Young Adults</td>
<td>\textit{A Kawano\textsuperscript{1}, A Tsubosaka\textsuperscript{2}, M Warren\textsuperscript{1}, B Pawel\textsuperscript{1}, H Shimada\textsuperscript{1}}; 1Children’s Hospital Los Angeles/USC Keck School of Medicine, Los Angeles, California; 2Chiba University School of Medicine, Chiba; 3Children’s Hospital of Philadelphia, Philadelphia, Pennsylvania</td>
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ULTRASTRUCTURAL IDENTIFICATION OF TUBULAR AGGREGATE MYOPATHY

J Hicks; Texas Children’s Hospital and Baylor College of Medicine, Houston, Texas

Storage product accumulation in the Purkinje system is a plausible explanation for the arrhythmias of Danon Disease (LAMP2 cardiomyopathy)

J Kasten, S Sanders, A Perez Atayde; Boston Children’s Hospital, Boston, Massachusetts

Histologic features of valved venous homografts used as right ventricle-to-pulmonary artery (RV-PA) conduits in congenital heart disease surgery

C Carreon¹, A Benini¹, C Baird¹, S Emani¹, M Borisuc¹, S Hofferberth¹, R Padera², S Sanders¹; ¹Boston Children’s Hospital/ Harvard Medical School, Boston, Massachusetts; ²Brigham and Women’s Hospital/ Harvard Medical School, Boston, Massachusetts

Awards Presentation

Room: Harbourfront 1

Please Note: Entry into workshops will require an admission ticket which will be collected by SPP Staff at the door. Tickets may be available at the SPP registration desk. The Education Committee requests that registrants respect this policy and not attempt to enter without an admission ticket.

Workshop Session I:

A. Year 1/3: What every pediatric pathologist needs to know: WHO Classification of Tumors of the Central Nervous System (2016) Pediatric Tumors – Alexander Judkins, MD, Children’s Hospital Los Angeles and Cynthia Hawkins, MD, Hospital for Sick Children, Toronto and Mariarita Santi, MD, Children’s Hospital of Philadelphia

Room: Harbourfront 1

At the end of this presentation, participants should be able to:

Cynthia Hawkins:
- Apply the 2016 WHO Classification of Tumors of the Central Nervous System to the diagnosis of medulloblastoma
- Integrate morphologic and molecular results into a comprehensive pathology report for the diagnosis of medulloblastoma
- Apply immunohistochemical and molecular techniques to determine medulloblastoma molecular subgroup
- Appreciate the clinical relevance of molecular subgrouping and TP53 mutation status in medulloblastoma

Alexander Judkins:
- Apply the 2016 WHO Classification of tumors of the Central Nervous System to the diagnosis of pediatric embryonal CNS tumors (non-medulloblastoma)
- Integrate morphologic and molecular results into a comprehensive pathology report for the diagnosis of pediatric embryonal CNS tumors (non-medulloblastoma).
- Distinguish AT/RT lacking histological features of rhabdoid differentiation from other pediatric CNS embryonal tumors on the basis of immunohistochemistry and/or molecular analysis of SMARCB1/INI1 and/or SMARCA4/BRG1.
- Using their molecular profile, distinguish C19MC-altered embryonal tumors from other pediatric embryonal CNS tumors.
Mariarita Santi-
- Apply the 2016 WHO Classification of tumors of the Central Nervous System to the diagnosis of pediatric glial tumors
- Approach the diagnosis of pediatric glial brain tumors using a combination of morphology and molecular diagnostic techniques
- Distinguish the BRAF mutated glial tumors from the Histone-3 mutated tumors and extrapolate the prognostic implications.
- Separate the molecular profile of supratentorial ependymomas from the infratentorial
- Integrate morphologic and molecular results into a comprehensive pathology report.

B. Year 3/3: Adding Relevance to the Pediatric Autopsy with Defined Pre-autopsy Goals and Practical Techniques - Michael Caplan, MD, Suffolk County Office of the Medical Examiner, Hauppauge, NY and Amy Sheil, MD, Waukesha County Medical Examiner, Waukesha, WI

Room: Harbourfront 3

At the end of this presentation, participants should be able to:
- List the applications of a technically proficient, conceptually accurate, and effectively communicated pediatric autopsy.
- Explain the importance of the principles of direction, design, and systematic approach in a pediatric postmortem examination.
- Describe the purpose of the autopsy in the evaluation of pediatric cardiac conditions, therapeutic interventions, and their complications.
- Highlight the added benefits of an autopsy when accompanied by ancillary studies in the evaluation of infants and children with undiagnosed metabolic or genetic disorders.
- Identify mimics of child maltreatment (abuse and neglect) revealed by postmortem examination.
- Describe and guide an approach to a pediatric autopsy in a death during or following – and potentially related to – a therapeutic procedure.
- Effectively communicate the value of the negative findings in a pediatric autopsy (“negative autopsy”) to clinicians and families.
- Improve their own institution’s autopsy practices through learning points gleaned by exposure to case-based examples.
- Gain experience and proficiency with particular techniques relevant to the pediatric autopsy through use of a supplementary tutorial of specialized autopsy procedures and dissections.

C. Year 2/3: Pediatric Gastrointestinal Biopsy: An Update on the Diagnosis and Pathogenesis of Pediatric Upper Gastrointestinal Disease - Amy Lowichik, MD, PhD, University of Utah School of Medicine, Salt Lake City, UT and Raul S. Gonzalez, MD, University of Rochester Medical Center, Rochester, NY

Room: Harbourfront 2

At the end of this presentation, participants should be able to:
- Recognize the inflammatory findings characteristic of allergic and autoimmune diseases of the pediatric upper gastrointestinal tract.
- Describe the histologic criteria for pre-malignant and malignant lesions of the pediatric upper gastrointestinal tract.
- Order and recommend appropriate ancillary testing for common and rare developmental, allergic, autoimmune, pre-malignant and malignant lesions of the pediatric upper gastrointestinal tract.
4:00pm – 6:00pm Workshop Session II:

D. Year 1/3: Bone dysplasias: A systematic diagnostic approach - Linda Ernst, MD, Northshore University Healthsystem, Evanston Hospital and Peter Nikkels, MD, University Medical Center Utrecht, Netherlands

At the end of this presentation, participants should be able to:

- Describe the diagnostic histological aspects of some common skeletal dysplasia’s recognizable at birth.
- Describe the diagnostic features of the X-rays of several common skeletal dysplasia’s recognizable at birth.
- Recognize the limitations of histology to diagnose a skeletal dysplasia.
- Use a diagnostic scheme to diagnose the more common skeletal dysplasia’s recognizable at birth.

E. Year 3/3: Pediatric Kidney Biopsy Interpretation: Essentials for the Pathologist-on-Call - Robyn Reed MD, PhD, University of Minnesota Medical Center, Minneapolis, MN and Aliya Husain MD, University of Chicago Medicine, Chicago, IL

At the end of this presentation, participants should be able to:

- Enumerate important clinical and laboratory factors to consider in kidney biopsy interpretation.
- Identify the normal elements of renal cortex and medulla in a kidney needle biopsy, using H&E, PAS, Jones silver, and trichrome stains.
- Recognize and communicate to clinicians urgent and treatable conditions in native kidney biopsies, including the following:
  - Crescentic and/or necrotizing glomerulonephritis
  - Vasculitis
  - Thrombotic microangiopathy
  - Ischemia, infarction, and acute tubular injury
  - Acute pyelonephritis
  - Acute interstitial nephritis
- Recognize and communicate to clinicians urgent and treatable conditions in transplant kidney biopsies, including the following:
  - Acute cellular rejection
  - Acute antibody-mediated rejection
  - BK virus nephropathy and other infections
  - Calcineurin inhibitor toxicity
  - Ischemia, infarction, and acute tubular injury
  - Post-transplant lymphoproliferative disorder

Evaluate other changes in transplant kidney biopsies that may prompt urgent biopsy, including calcineurin inhibitor toxicity, interstitial nephritis, and changes of chronic rejection.

F. Year 2/3: Challenges in Pediatric Soft Tissue Pathology: A Case-Based Approach to Selected Difficult Cases- Jennifer Black, MD, University of Colorado Anschutz School of Medicine, Children’s Hospital Colorado, Aurora, Colorado and Erin R. Rudzinski, MD; Seattle Children’s Hospital, Seattle, Washington

At the end of this presentation, participants should be able to:

- Describe the distinguishing features and the differential diagnosis for frequently encountered pediatric soft tissue lesions and their histologic mimics.
• Select appropriate ancillary tests to confirm diagnosis, including a strategic panel of immunohistochemical stains, electron microscopy, conventional cytogenetics analysis and molecular genetic testing.
• Create a pathology report including all essential information for the diagnosis of an intermediate or malignant soft tissue lesion to facilitate further patient management.