### Tuesday, July 14, 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>11:30 – 12:30</td>
<td>Registration and Lunch&lt;br&gt;Sign-up for Day 1 Tour of ECRI Institute Medical Device Testing Labs&lt;br&gt;Sign-up for Day 2 “ECRI Institute Experience” Breakfast (Overview of ECRI Institute’s Initiatives)</td>
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<td>12:30 – 1:00</td>
<td>Welcome and Recap from Evidence Boot Camp I: Understanding Health Technology Assessment Methodologies&lt;br&gt;Vivian Coates, MBA, Vice President, Health Technology Assessment, ECRI Institute</td>
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<td>1:00 – 2:00</td>
<td>Evidence Frameworks to Guide Analysis of Diagnostic Tests&lt;br&gt;Karen Schoelles, MD, SM, FACP, Director, Evidence-based Practice Center and Health Technology Assessment Consulting, ECRI Institute&lt;br&gt;<strong>Learning Objectives:</strong>&lt;br&gt;► Identify challenges in applying evidence to diagnosis in clinical practice&lt;br&gt;► Review history of diagnostic test evaluation&lt;br&gt;► Describe current approaches to determining appropriate use of diagnostic tests</td>
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<td>2:00 – 2:45</td>
<td>Optimizing Searches for Evidence on Diagnostic Tests&lt;br&gt;Eileen Erinoff, MS, Director, Health Technology Assessment and Evidence-based Practice Information Center, ECRI Institute&lt;br&gt;<strong>Learning Objectives:</strong>&lt;br&gt;► Review principles of searching for systematic reviews&lt;br&gt;► Describe how a search for a diagnostic topic differs from other searches and how to evaluate these searches&lt;br&gt;► Explain challenges associated with searching for genetic testing topics</td>
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<td>2:45 – 3:15</td>
<td>Break</td>
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<td>3:15 – 3:55</td>
<td>Risk of Bias of Diagnostic Test Evidence&lt;br&gt;Amy Tsou, MD, MSc, Senior Research Analyst, Health Technology Assessment and Evidence-based Practice Center, ECRI Institute&lt;br&gt;<strong>Learning Objectives:</strong>&lt;br&gt;► Discuss the impact of study design on risk of bias for diagnostic studies&lt;br&gt;► List other common sources of bias and provide examples&lt;br&gt;► Describe examples of rating instruments for assessing risk of bias</td>
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<td>3:55 – 4:35</td>
<td>Meta-analysis of Diagnostic Tests&lt;br&gt;Kristen D’Anci, PhD, Senior Research Analyst, Health Technology Assessment and Evidence-based Practice Center, ECRI Institute&lt;br&gt;<strong>Learning Objectives:</strong>&lt;br&gt;► Interpret the statistics commonly used to summarize data on diagnostic tests (sensitivity, specificity, positive and negative predictive values)&lt;br&gt;► Use graphical tools to interpret diagnostic evidence (e.g., receiver operating characteristic curves, Fagan nomogram)&lt;br&gt;► Describe the bivariate approach of combining data from several diagnostic studies</td>
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### 4:35 – 5:15
**Grading the Evidence on Diagnostic Tests**

**James Reston, PhD, MPH,** Associate Director, Health Technology Assessment and Evidence-based Practice Center, ECRI Institute

**Learning Objectives:**
- Discuss the importance of grading the strength of evidence for diagnostic tests
- Review the domains that must be considered when assessing strength of evidence for diagnostic tests
- Describe the unique issues associated with grading the strength of evidence for diagnostic test performance

### 5:15 – 6:00
**Wine and Appetizers; Tours of ECRI Institute Medical Device Testing Labs**

### 6:00 – 8:00
**Barbeque and Picnic**

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**Wednesday, July 15, 2015**

### 7:45 – 8:30
**Breakfast and Networking (Fishbowl)**  
Optional “ECRI Experience” Breakfast (Video Conference Room 1-O)

**Tony Montagnolo, MS,** Executive Vice President, Chief Operating Officer, ECRI Institute

### 8:30 – 9:10
**A Hospital Perspective: The Role of Technology Assessment in Evaluating Diagnostic Technologies to Achieve Value-based Care**

**Joe Cummings, PhD,** Manager, Technology Assessment Group, University HealthSystem Consortium

**Learning Objectives:**
- Assess disruptive changes in healthcare affecting hospital decision making about new diagnostic technologies
- Review a hospital value-based evaluation paradigm that uses technology assessment on diagnostics to link technology to outcomes
- Analyze new diagnostic technologies and their potential use in hospitals through case studies

### 9:10 – 9:50
**Decision Trees for Diagnostic Tests**

**David Samson, MS, PhD Candidate,** Senior Associate Director, Health Technology Assessment Group and Evidence-based Practice Center, ECRI Institute

**Learning Objectives:**
- Describe how analytic frameworks and estimates of diagnostic performance contribute to construction of decision trees
- Distinguish between different uses of tests (e.g., replacement, add-on, triage) and how these uses affect the structure of decision trees
- Discuss how to apply an algorithm to decide whether modeling should be part of the evaluation of a test

(Continued on next page)
Wednesday, July 15, 2015 (Continued)

9:50 – 10:30  Special Considerations for Molecular/Genetic Tests
Fang Sun, MD, PhD, Medical Director, Health Technology Assessment, ECRI Institute

Learning Objectives:
- Describe various genetic testing scenarios (e.g., diagnosis, screening, prognosis assessment, risk/predisposition assessment, guiding treatment decisions), common genetic testing technologies (e.g., PCR, FISH, array CGH, sequencing, single-gene vs. multi-gene panels), and unique challenges in assessing the evidence for genetic tests
- Choose appropriate types of evidence (e.g., RCTs, diagnostic cohort studies, case-controlled studies) and outcome measures (e.g., sensitivity, specificity, positive and negative predictive values) for addressing the analytic validity, clinical validity, and clinical utility of genetic tests
- Describe an appropriate approach to building an indirect chain of evidence to address clinical utility issues

10:30 – 11:00  Break

11:00 – 12:20  Assessing Evidence on Genetic Tests
Jonathan Treadwell, PhD, Associate Director, Health Technology Assessment and Evidence-based Practice Center, ECRI Institute
Jeff Oristaglio, PhD, Research Analyst, Health Technology Assessment and Evidence-based Practice Center, ECRI Institute

Learning Objectives:
- Understand the various types of screening, diagnostic, and prognostic questions that evidence may address
- List the unique risk-of-bias concerns related to screening, diagnostic, and prognostic studies
- Discuss how reclassification tables can help clarify the clinical impact of a screening, diagnostic, and prognostic test

12:20 – 12:30  Summary
Vivian Coates, MBA, Vice President, Health Technology Assessment, ECRI Institute

12:30  Adjourn; Box Lunch Provided