Genomic Testing in Breast Cancer Management: Personalized Medicine

Hannah Brooks, MD, FACS
Orange Regional Medical Center
## Genetics vs Genomics

<table>
<thead>
<tr>
<th>Genetic</th>
<th>Genomic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inherited traits</td>
<td>Interactions of genes</td>
</tr>
<tr>
<td>Risks passed on</td>
<td>How genes influence tumor behavior</td>
</tr>
<tr>
<td>Predicts risk</td>
<td>Predicts recurrence</td>
</tr>
<tr>
<td>Allows action</td>
<td>Helps decide treatments</td>
</tr>
</tbody>
</table>

**Genetics vs Genomics**
- Age
- Tumor size
- Grade
- LNs
- Hormone receptor status
- Pathologic features
What genomic testing tells us

- Breast Cancer Recurrence scores
- Subtyping/ function
- ER/PR/HER2 gene expression status
subtypes

Luminal A
Luminal B
Basal (usu TNBC)
HER2 (errbb2)
• Low or high risk of recurrence
• Helps reduce chemo
• Targets therapy based on molecular subtyping
Oncotype report sample
• http://www.slideshare.net/DanaFarber/whats-hot-in-breast-cancer-treatment

• http://www.pathophys.org/breast-cancer/