Optimizing biologic therapies in IBD

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Outline

• Medical therapy treatment endpoints
• Biologic Therapy in IBD
• Mechanisms for Loss of Response to Biologics
• Strategies for optimizing use of anti-TNF therapy
Why do we care about drug optimization?
Biologic Therapy in IBD

Moss 2015; Mandel et al 2014; Gisbert 2009; Rubin 2015
Current Biologics Available

<table>
<thead>
<tr>
<th>Name</th>
<th>Primary target</th>
<th>FDA-approved indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infliximab (Remicade®)</td>
<td>TNF</td>
<td>CD, UC</td>
</tr>
<tr>
<td>Adalimumab (Humira®)</td>
<td>TNF</td>
<td>CD, UC</td>
</tr>
<tr>
<td>Certolizumab (Cimzia®)</td>
<td>TNF</td>
<td>CD</td>
</tr>
<tr>
<td>Golimumab (Simponi®)</td>
<td>TNF</td>
<td>UC</td>
</tr>
<tr>
<td>Natalizumab (Tysabri®)</td>
<td>alpha-4 integrin</td>
<td>CD</td>
</tr>
<tr>
<td>Vedolizumab (Entyvio®)</td>
<td>alpha-4-beta-7 integrin</td>
<td>CD, UC</td>
</tr>
<tr>
<td>Ustekinumab (Stelara®)</td>
<td>IL-12/23</td>
<td>CD</td>
</tr>
</tbody>
</table>

Moss 2015
Loss of Response to Biologics
Strategies for optimizing use of biologics
Treat Early in Disease

Schreiber et al 2013; Rubin 2016; Gisbert 2015
Immunogenicity

Vaughn et al. 2015
Enhanced Drug Clearance & Accelerated Dosing

Brandse et al 2015; Vaughn 2015
Accelerated Infliximab
Algorithm for drug monitoring
Therapeutic Drug Monitoring – Be Proactive

Vaughn et al 2015; Vande Casteele et al, 2015
Thank You