Table 1. Billing of infliximab biosimilars administered by a healthcare provider

<table>
<thead>
<tr>
<th>Biologic/ Product</th>
<th>Reference biological</th>
<th>Billing code(s)</th>
<th>In 2015 to 2016</th>
<th>In 2017 to Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infliximab</td>
<td>Remicade</td>
<td>Q1012 with Modifier ZB</td>
<td>91.35%</td>
<td>89.5%</td>
</tr>
<tr>
<td>Remicade</td>
<td>Remicade</td>
<td>Q1012 with Modifier ZC</td>
<td>91.7%</td>
<td>89.7%</td>
</tr>
</tbody>
</table>

- **51,903 / 323,398**: Biosimilars of the same reference biological assigned the same HCPCS code with a modifier assigned to identify the manufacturer
- **45,112 / 256,493**: Remicade Unique HCPCS assigned to individual biosimilar

In recent years, for optimal product identification, the Center for Medicare and Medicaid Services and other insurers have recommended or required the submission of national drug code (NDC) on medical claims – This novel data field may improve the identification of the biosimilars from medical claims

- There are limited data on the use of HCPCS and NDC modifiers in medical claims

**RESULTS**

- **32,370: Dr. 26,382 filgrastim biosimilar (Zanosse) dispensings with Q code from medical claims, 51% had a modifier with (or without NDC) on the same line, and an additional 12% had an NDC (Table 2)**
- **32,144 infliximab biosimilar dispensings with a Q code from medical claims (Figure 2b): DR: 26,382 filgrastim biosimilar dispensed with modifier and additional 3% using NDC**
- **Remicade: 11 dispensings (July 2017 launch)**

**Figure 1. Proportion of medical claims with at least one NDC code over time, by place of service**

**Figure 2a. Filgrastim Biosimilar Dispensations from pharmacy and medical claims, by source of claim and code type**

**Figure 2b. Infliximab Biosimilar Dispensations from pharmacy and medical claims, by source of claim and code type**

**CONCLUSIONS**

- **NDC increasingly used in medical claims**
- **NDC in medical claims helps to identify recently approved infliximab biologics not yet assigned a specific HCPCS code**
- **Early dispensings are important for timely pharmacoepidemiology research and for characterization of adherence persistence**
- **NDC in medical claims helps to identify biologics that do not have a product-specific HCPCS code**
- **Accounts for nearly all Epogen dispensed**
- **Optimal biosimilar dispensing**
  - Use HCPCS modifier and medical claim NDC if available
  - Use Q1044 dispensings of infliximab biosimilars identified using Q code, 60% did not have an NDC for the biosimilar
  - Launch of Remicade may complicate the ascertainment of infliximab biosimilars
  - Future studies are warranted to assess impact of incorporating medical claim NDC
- **Study period ended on 9/30/2017, remicade use not assessed (n=1)**
- **Patient-level analysis**

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