Variable Efficacy of Rheumatoid Arthritis Treatments

There is wide variance in the response rates of RA patients to current treatments. For some patients, they are effective, but most show limited or no response.

- In a study comparing adalimumab, etanercept, and infliximab, only 19% of patients achieved an ACR70 response.
- In a comparison of patient responses to biologic drugs, 46% of patients achieved an ACR50 response.
- 54% of RA patients do NOT achieve at least an ACR50 response from biologic drugs.
- 33% of RA patients are non-responders to current treatments.
- The likelihood of response to treatment with TNF-α inhibitors decreases with each subsequent therapy.

Resources:

Comparing methods of reporting responses in RA clinical trials:

The current reporting method for patient response in clinical trials consists of an overlapping scale, where patients who have the highest response (ACR70) are also included with the lowest response rates. Results can be graphically displayed as concentric circles with each larger circle also containing the smaller ones. Non-responders are not designated.

However, the non-overlapping model for describing response levels can be represented by a traditional pie chart, as seen in the tofacitinib example here, with non-overlapping divisions, each representing the proper percentage of the whole group. By categorizing responders into mutually exclusive groups, results are easier to comprehend and provide a more complete picture.

<table>
<thead>
<tr>
<th>10mg dose of Pfizer tofacitinib</th>
<th>% of people</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>34.3</td>
<td>Non-response</td>
<td></td>
</tr>
<tr>
<td>28.9</td>
<td>ACR20, not ACR50</td>
<td></td>
</tr>
<tr>
<td>16.5</td>
<td>ACR50, not ACR70</td>
<td></td>
</tr>
<tr>
<td>20.3</td>
<td>ACR70</td>
<td></td>
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</tbody>
</table>