<table>
<thead>
<tr>
<th></th>
<th>Selection</th>
<th>Comparability</th>
<th>Exposure</th>
<th>Total</th>
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<tbody>
<tr>
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<td>Independent</td>
<td>Controls</td>
<td>Case and</td>
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<td></td>
<td>validation</td>
<td>selection</td>
<td>control</td>
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<td></td>
<td>Case</td>
<td>definition</td>
<td>design/analysis</td>
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<tr>
<td></td>
<td>representation</td>
<td></td>
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<tr>
<td>Seth (2010)(1)</td>
<td>*</td>
<td></td>
<td></td>
<td>6 *</td>
</tr>
<tr>
<td>Tian (2010)(2)</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>6 *</td>
</tr>
<tr>
<td>Trepo (2011)(3)</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>7 *</td>
</tr>
<tr>
<td>Nischalke (2011)(4)</td>
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<td>*</td>
<td>*</td>
<td>7 *</td>
</tr>
<tr>
<td>Stickel (2011)(5)</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>8 *</td>
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<tr>
<td>Falleti (2011) (6)</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>8 *</td>
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<tr>
<td>Trepo (2012)(8)</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>5 *</td>
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<td>Guyot (2012)(9)</td>
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<td>*</td>
<td>6 *</td>
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<tr>
<td>Rosendahl (2012)(7)</td>
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<td>*</td>
<td>*</td>
<td>7 *</td>
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<tr>
<td>Burza (2013)(10)</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>7 *</td>
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</table>

*Table 1* Newcastle Ottawa quality Assessment Score. A study can be awarded a maximum of one star for each numbered item within the Selection and Exposure categories. A maximum of two stars can be given for Comparability.
**Supplementary Table 2** Sensitivity analyses of only good quality studies.

<table>
<thead>
<tr>
<th>Comparison</th>
<th>OR [95% CI]</th>
<th>No. of studies</th>
<th>I², P</th>
<th>Egger’s Test P</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG vs. CC</td>
<td>AFL</td>
<td>0.74 (0.54-1.03)</td>
<td>2</td>
<td>0, 0.69</td>
</tr>
<tr>
<td>GG vs. CC</td>
<td>AFL</td>
<td>0.62 (0.13-2.93)</td>
<td>2</td>
<td>46, 0.17</td>
</tr>
<tr>
<td>CG vs. CC</td>
<td>ALI</td>
<td>1.45 [1.17-1.78]</td>
<td>3</td>
<td>0, 0.97</td>
</tr>
<tr>
<td>GG vs. CC</td>
<td>ALI</td>
<td>2.22 [1.50-2.38]</td>
<td>3</td>
<td>0, 0.52</td>
</tr>
<tr>
<td>CG vs. CC</td>
<td>AC</td>
<td>2.06 [1.60-2.63]</td>
<td>3</td>
<td>0, 0.99</td>
</tr>
<tr>
<td>GG vs. CC</td>
<td>AC</td>
<td>3.16 [2.24-4.44]</td>
<td>3</td>
<td>29, 0.24</td>
</tr>
<tr>
<td>CG vs. CC</td>
<td>HCC</td>
<td>2.12 [1.09-4.13]</td>
<td>1</td>
<td>NA</td>
</tr>
<tr>
<td>GG vs. CC</td>
<td>HCC</td>
<td>10.24 [4.92-21.31]</td>
<td>1</td>
<td>NA</td>
</tr>
</tbody>
</table>

**Association of PNPLA3 polymorphisms with the severity of alcoholic liver disease**

<table>
<thead>
<tr>
<th>Comparison</th>
<th>OR [95% CI]</th>
<th>No. of studies</th>
<th>I², P</th>
<th>Egger’s Test P</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG vs. CC</td>
<td>AC vs. ALI</td>
<td>2.59 [1.69-3.98]</td>
<td>2</td>
<td>0, 0.66</td>
</tr>
<tr>
<td>GG vs. CC</td>
<td>AC vs. ALI</td>
<td>3.86 [1.18-12.60]</td>
<td>2</td>
<td>76, 0.039</td>
</tr>
<tr>
<td>CG vs. CC</td>
<td>HCC vs. no HCC</td>
<td>1.03 [0.49-2.03]</td>
<td>1</td>
<td>NA</td>
</tr>
<tr>
<td>GG vs. CC</td>
<td>HCC vs. no HCC</td>
<td>2.11 [0.92-4.83]</td>
<td>1</td>
<td>NA</td>
</tr>
<tr>
<td>GG vs. CG</td>
<td>HCC vs. no HCC</td>
<td>2.05 [1.02-4.13]</td>
<td>1</td>
<td>NA</td>
</tr>
</tbody>
</table>

OR: Odds ratio; CI: Confidence interval; I²: test of heterogeneity reported in %, NA: Not applicable; AFL: Alcoholic fatty liver; ALI: Alcoholic liver injury; AC: Alcoholic cirrhosis; HCC: Hepatocellular carcinoma