NGS Panel Genomic
THE SMART SOLUTION
Key benefits of NGS Panel Genomic

HIGHEST DIAGNOSTIC ACCURACY & UTILITY
› Flexible panel composition
› Revisit genes as new information becomes available
› Unparalleled information content
› Increased coverage of genic regions
› Reduced PCR bias to minimize artefacts
› High accuracy detection of CNVs and complex gene rearrangements

FASTEST TIME TO RESULTS
› No time lost with step-wise analysis
› Powered by whole genome sequencing, all information related to the phenotype available in < 25 business days
› We keep you updated on all emerging information regarding novel genes implicated in the phenotype or reclassification of variants that may have an impact on the patient diagnosis

ADAPTIVE PRICING STRUCTURE
› Cost effective for both out of pocket payment and for healthcare structures

MORE INFORMATION IN LESS TIME
Feel confident from the first step

Next generation sequencing (NGS) panels are a useful diagnostic tool when a patient’s clinical story suggests a clear genetic etiology. However, even when the right genes are selected, there remains a 30-35% risk of a negative result*.

In order to reduce the chances of a ‘non-conclusive’ result, NGS panel testing can be combined with additional genetic tests. This increases the cost and time of diagnosis, and can still miss the relevant genomic region.

NGS Panel Genomic – The smart solution

CENTOGENE, a pioneer in clinical whole genome sequencing (WGS) data interpretation offers you a new solution: a panel at the price of NGS, but with the diagnostic accuracy of WGS.

› Validated by highly experienced medical experts
› Detailed assessment of clinical data
› Rapid turnaround time < 25 business days

* Based on CENTOGENE internal data

NGS Panel Genomic avoids the additional costs of step wise analysis related to add-on deletion/duplication, follow up exome or genome sequencing, mitochondrial analysis, or analysis of new genes associated with the phenotype when new information surfaces.
# NGS Panel Genomic: unparalleled added value

<table>
<thead>
<tr>
<th>NGS PANEL GENOMIC</th>
<th>NGS PANEL PLUS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FOR</strong></td>
<td></td>
</tr>
<tr>
<td>Open-minded customers who want the best solution fast</td>
<td>Conservative customers who still want a complete solution</td>
</tr>
<tr>
<td><strong>GENES</strong></td>
<td></td>
</tr>
<tr>
<td>Composition of panel is <strong>flexible</strong></td>
<td>Composition of panel is <strong>fixed</strong></td>
</tr>
<tr>
<td>Includes research genes upon request</td>
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<tr>
<td><strong>COVERAGE</strong></td>
<td></td>
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<tr>
<td>Average coverage &gt;30x, 100% coverage &gt;10x</td>
<td>Average coverage 150-250x, 98-99% coverage &gt;20x for targeted region</td>
</tr>
<tr>
<td>No missing or poor quality regions</td>
<td>Missing or poor quality regions are patched with additional sequencing</td>
</tr>
<tr>
<td>Entire gene is covered including exons, splice sites, introns and regulatory regions</td>
<td>±10 intronic bases flanking exon-intron boundaries to cover canonical splice sites</td>
</tr>
<tr>
<td>ALL described disease-related mutations (i.e. deep intronic, splicing, regulatory mutations) are covered</td>
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</tr>
<tr>
<td><strong>COST IMPACT</strong></td>
<td></td>
</tr>
<tr>
<td>One cost – complete analysis</td>
<td>Del/dup costs in addition to panel sequencing</td>
</tr>
<tr>
<td>Panel can be followed up with WGS, and reanalysis done at a minor cost</td>
<td>Panel can be followed up with WES/WGS as a new test</td>
</tr>
<tr>
<td><strong>INFORMATION</strong></td>
<td></td>
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<tr>
<td>Genes outside the original panel can be revisited without re-doing the analysis</td>
<td>When new genes related to the phenotype are identified, a fresh analysis is required either as a single gene test or new panel</td>
</tr>
<tr>
<td>SNVs, CNVs, inversions, rearrangements, loss of heterozygosity, pharmacogenomics: all performed in one step</td>
<td>Additional testing required to detect CNVs</td>
</tr>
<tr>
<td><strong>TAT</strong></td>
<td></td>
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<tr>
<td>&lt; 25 business days</td>
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<tr>
<td><strong>NGS PANEL</strong></td>
<td><strong>COMPETITORS</strong></td>
</tr>
<tr>
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<tr>
<td>Customers who are looking for a cost-effective solution</td>
<td>Customers willing to compromise</td>
</tr>
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<td>Composition of panel is fixed</td>
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<tr>
<td>Average coverage 150-250x, 98-99% coverage &gt;20x for targeted region</td>
<td>NOT ALL coding regions covered, despite claims of “100% coverage of targeted regions” or “100% coverage by target design”</td>
</tr>
<tr>
<td>No Patchup</td>
<td>Missing or poor quality regions NOT patched to reduce costs</td>
</tr>
<tr>
<td>±10 intronic bases flanking exon-intron boundaries may NOT be fully covered</td>
<td>Coverage often restricted to coding regions only, and often only a subset of these. Potentially informative insights can therefore be excluded to simplify and reduce costs.</td>
</tr>
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<td>NOT ALL described disease-related mutations may be covered</td>
<td>Del/dup costs in addition to panel sequencing</td>
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<td>Panel can be followed up with NGS Panel Plus, WES, WGS as new tests</td>
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<td>Incomplete information on the genes of interest</td>
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Please visit our website for more information:

www.centogene.com

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