ABOUT US
CeGaT was founded in 2009 in Tübingen, Germany. Our scientists are specialized in next-generation sequencing (NGS) for genetic diagnostics, and we also provide a variety of sequencing services for research purposes and pharma solutions. Our sequencing service portfolio is complemented by analyses suited for microbiome, immunology, and translational oncology studies.

Our dedicated project management team of scientists and bio-informaticians works closely with you to develop the best strategy to realize your project. Depending on its scope, we select the most suitable library preparation and sequencing conditions on our Illumina platforms.

We would be pleased to provide you with our award-winning service. Contact us today to start planning your next project.
Immunotherapy has revolutionized the treatment of many types of cancer, with an increasing number of immunotherapy-based clinical trials launched in the last few years. However, biomarkers are necessary in order to stratify patients for the best treatment choice, and also support the promising development of new immunotherapy combinations.

A biomarker which has been identified as particularly useful for immunotherapy is tumor mutational burden (TMB). TMB refers to the number of mutations present in a cancer patients’ tumor and is quantified as mutations per million base pairs (mut/Mbp). Another key immunotherapy biomarker is the Microsatellite Instability (MSI) status.

We offer different solutions for determining the TMB and MSI score as part of your study, depending on your needs and the availability of patient material.

**EXPLORE OUR TUMOR MUTATIONAL BURDEN PRODUCT PORTFOLIO**

<table>
<thead>
<tr>
<th>TIO Panel</th>
<th>TIO Exome</th>
<th>TS0500</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sequencing panel</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somatic Tumor Panel (CeGaT GmbH)</td>
<td>Whole exome sequencing (Twist Bioscience)</td>
<td>TruSight Oncology 500 (Illumina)</td>
</tr>
<tr>
<td><strong>Gene panel size (Mb)</strong></td>
<td>2.2</td>
<td>37</td>
</tr>
<tr>
<td><strong>Number of analyzed genes</strong></td>
<td>&gt;750</td>
<td>~ 20,000</td>
</tr>
<tr>
<td><strong>Analysis of tumor and normal tissue</strong></td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td><strong>Selection of our bioinformatic options</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TMB, MSI, alignment, variant calling (SNVs/InDels), annotation and filtering</td>
<td>Based on the CeGaT bioinformatic pipeline</td>
<td>Based on the TS0500 (Illumina) bioinformatic pipeline</td>
</tr>
</tbody>
</table>

**TIO**: Tumor Immuno-Oncology; *additional analysis of fusion and splice variants available using the TruSight Tumor 170 (Illumina) – RNA panel

**Starting material**: high-molecular weight DNA, or fragmented DNA (FFPE)

**TUMOR MUTATIONAL BURDEN**

*Measurement of the biomarker TMB*

**COMBINE YOUR TMB ANALYSIS WITH THE FOLLOWING SERVICES AVAILABLE AT CEGAT**:

- Microbiome analysis
- T Cell Receptor (TCR) sequencing
- Human Leukocyte Antigen (HLA) analysis
- Transcriptome sequencing
- Liquid biopsy analysis
- Single-cell RNA Sequencing