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Materialise Mimics Enlight CMF

Your CMF surgeries in one virtual planner.
Efficient. Easy. Robust.

How is your ideal CMF planning?

Orthognathic

Reconstruction surgery

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Spend your time in what matters the most: your patients

Mimics Enlight CMF

Spend your time in what matters the most: your patients

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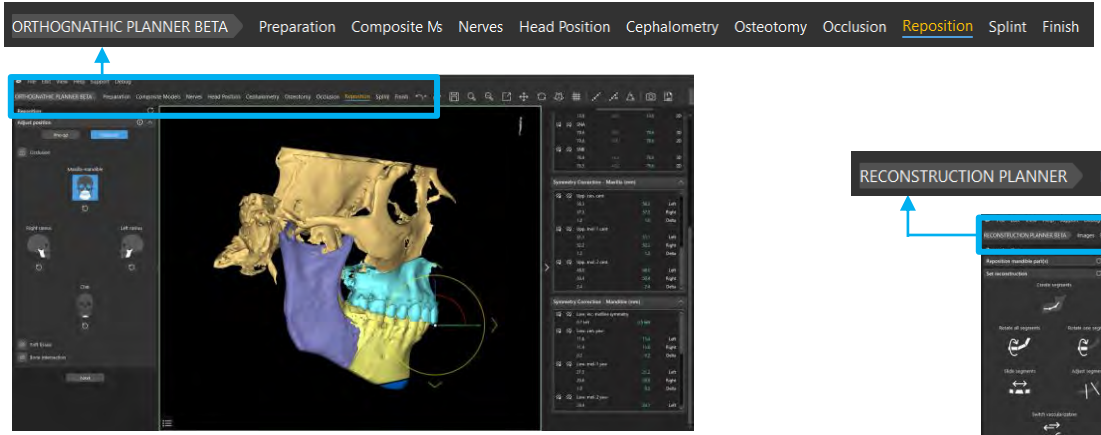
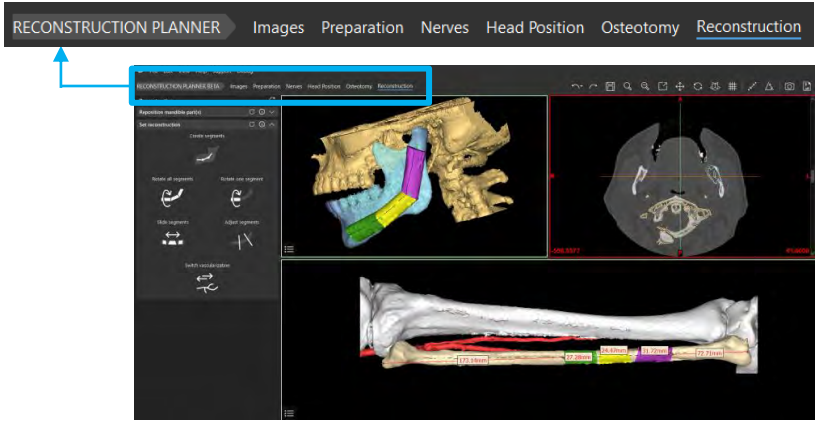
Effortless planning thanks to the intuitive workflow
Developed with surgeons, for surgeons





Spend your time in what matters the most: your patients

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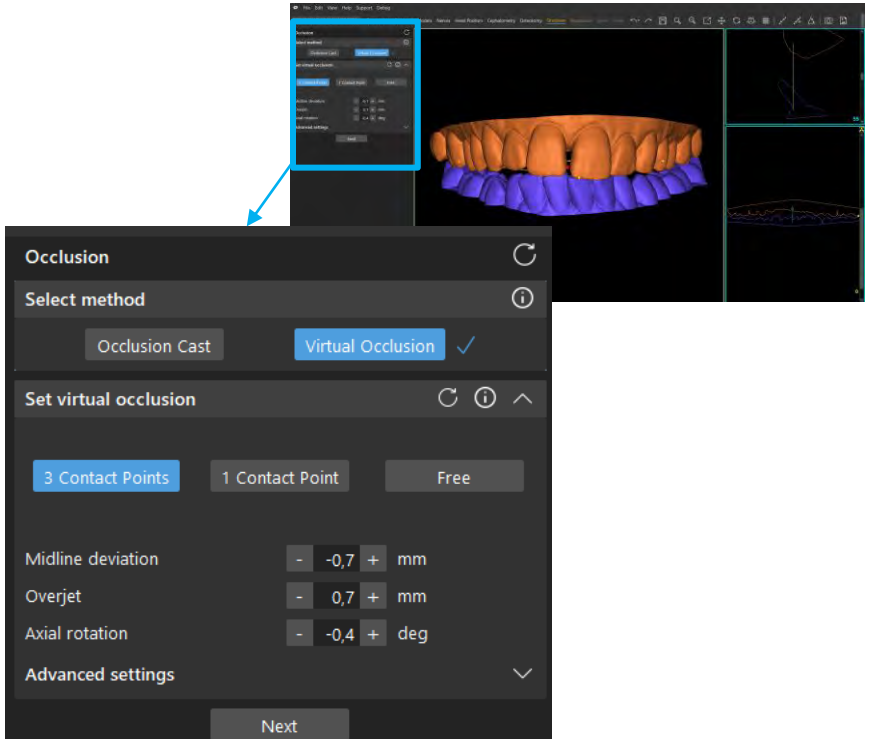
Automated planning and design tools, so you can focus in clinical decisions
Easy to learn

- Automatic mandible splitting operations
- Automatic fixing of dental scan STL files
- Automatic dental cast fusion on (CB)CT scan
- Convenient creation and adjustment of osteotomies
- Semi-automatic cast registration in occlusion phase
- Patented virtual occlusion algorithm to efficiently position the patient's teeth in the right occlusion



Spend your time in what matters the most: your patients

No time to waste: our support team responds promptly to your inquiries

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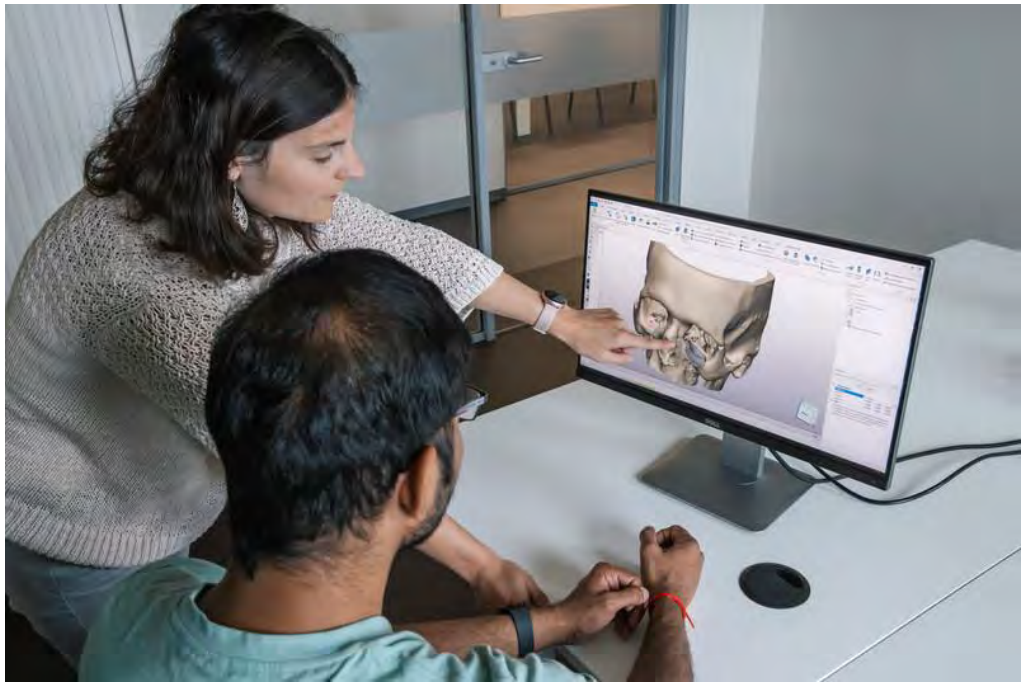

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Adapted to your needs and evolving surgical plans

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Adapted to your needs and evolving surgical plans

Plan orthognathic and reconstruction cases

Plan routine and challenging cases

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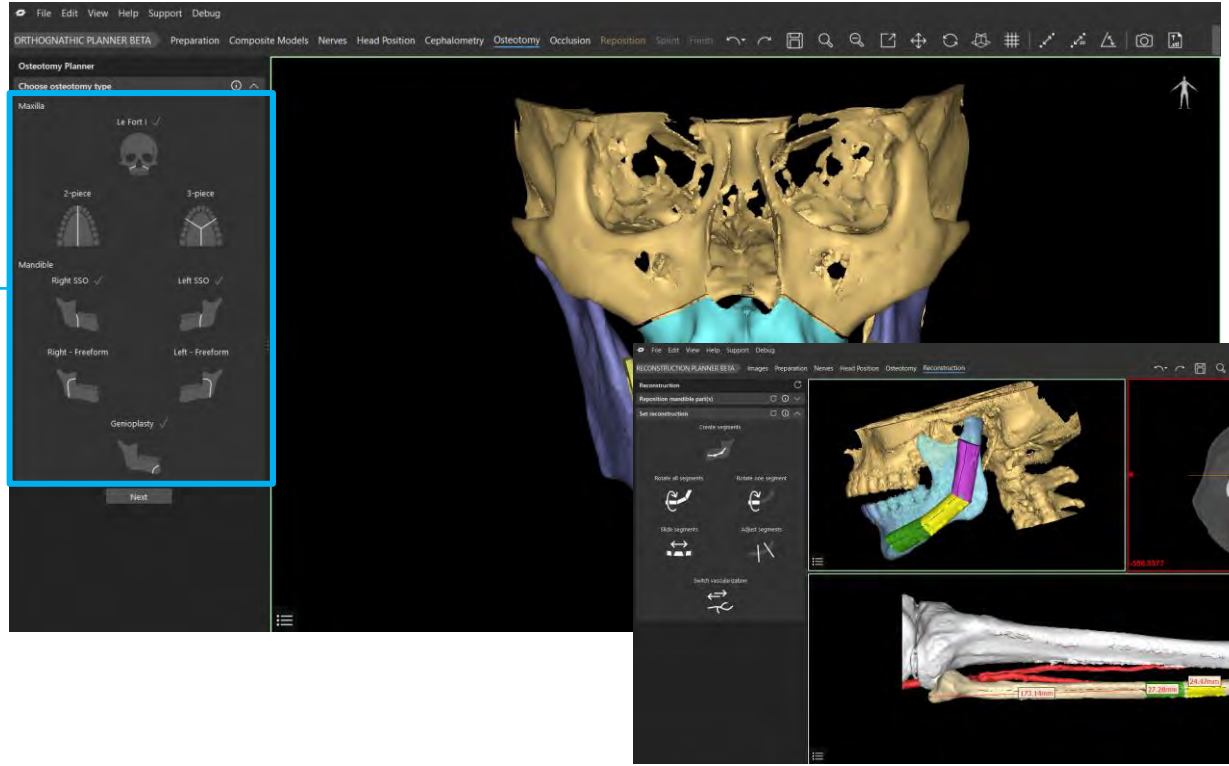

Adapted to your needs and evolving surgical plans

Adapt your plan at any moment in real time

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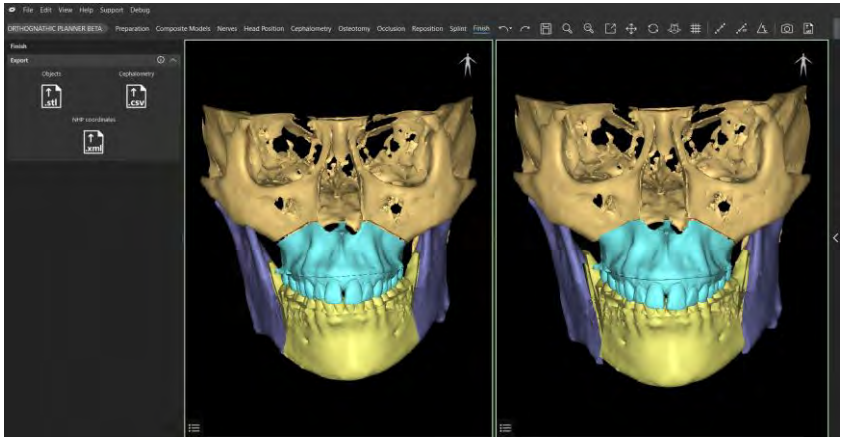
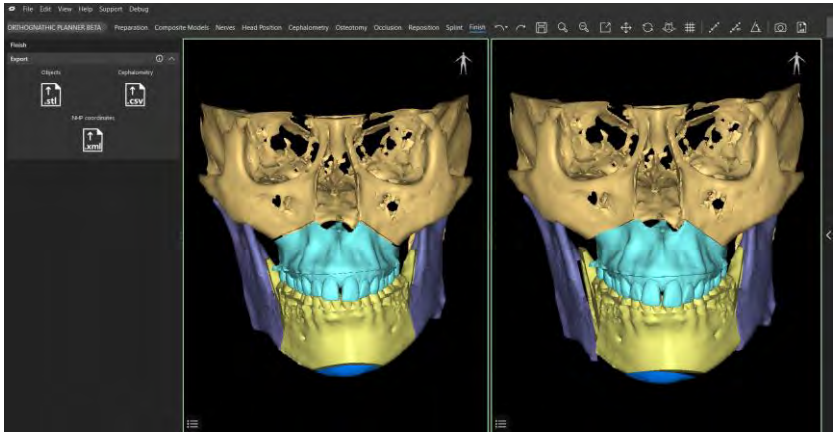
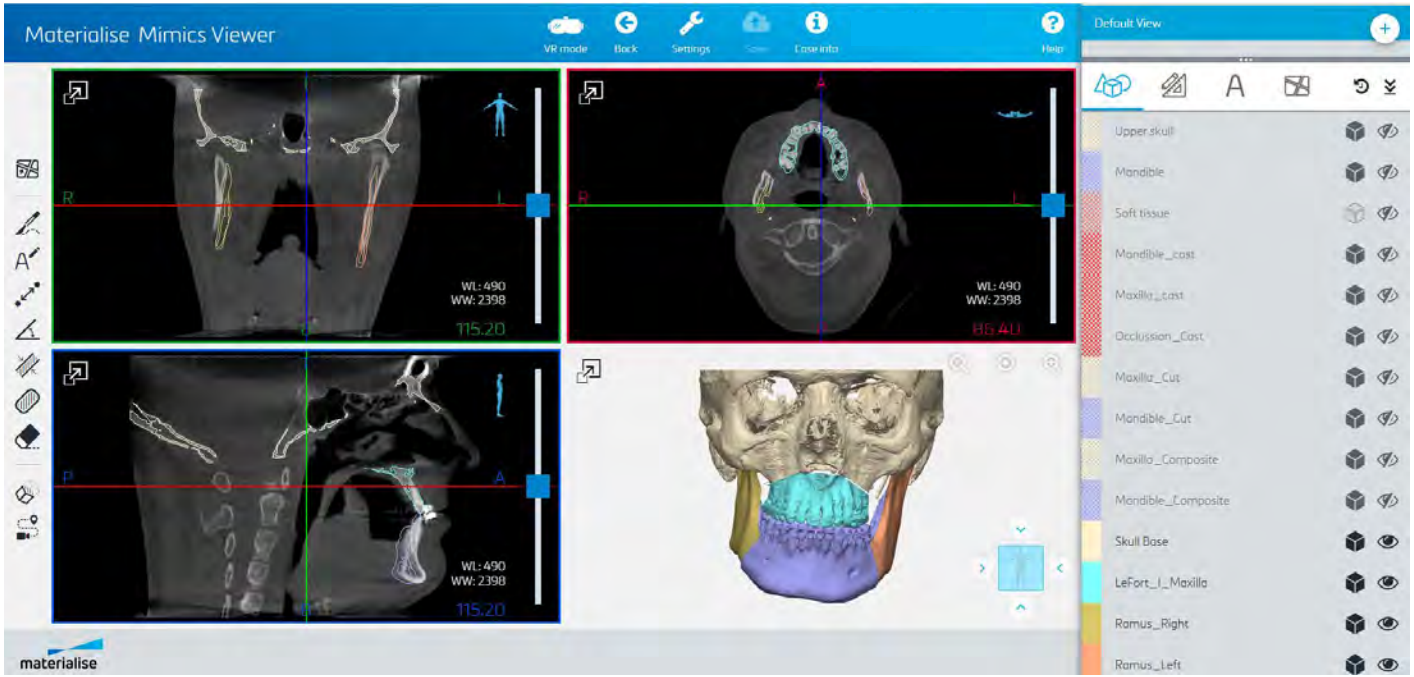
Automated replanning and design tools,
so you can focus on clinical decisions





Adapted to your needs and evolving surgical plans

Collaborate and communicate smoothly with all stakeholders



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Achieve the gold standard of patient care

Mimics Enlight CMF

Adapted to your needs and evolving surgical plans

Predict the final outcome in real time with our validated* soft tissue simulation

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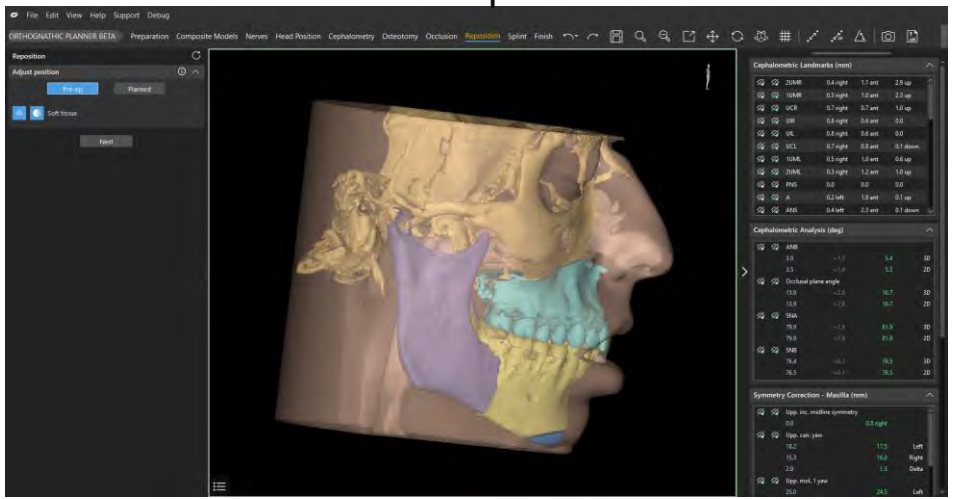
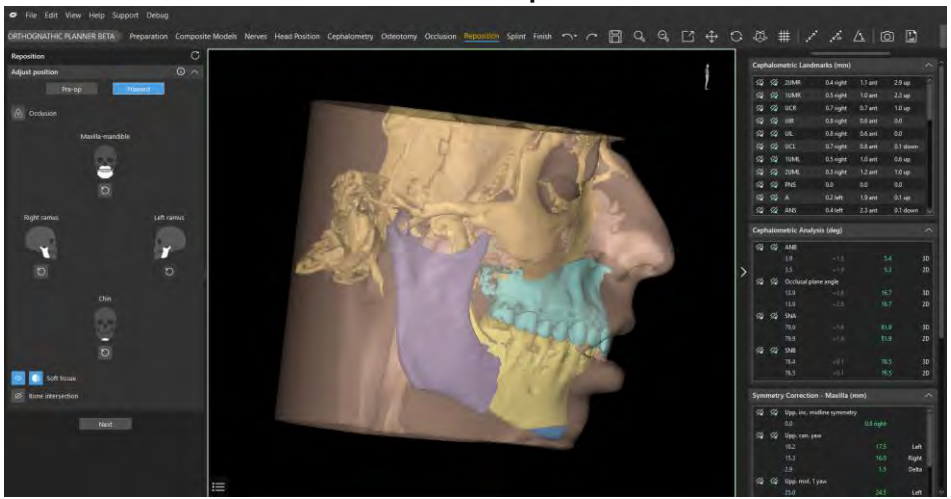
Pre-op



Post-op



*Knoops et al. Three-dimensional soft tissue prediction in orthognathic surgery: a clinical comparison of Dolphin, ProPlan CMF, and probabilistic finite element modelling
*Marchetti et al. Validation of new soft tissue software in orthognathic surgery planning
*Bianchi et al. Facial Soft Tissue Esthetic Predictions: Validation in Craniomaxillofacial Surgery With Cone Beam Computed Tomography Data

Achieve the gold standard of patient care

Rely on the knowledge of more than 20 years of CMF planning experience, with over 10,000 patients/year treated

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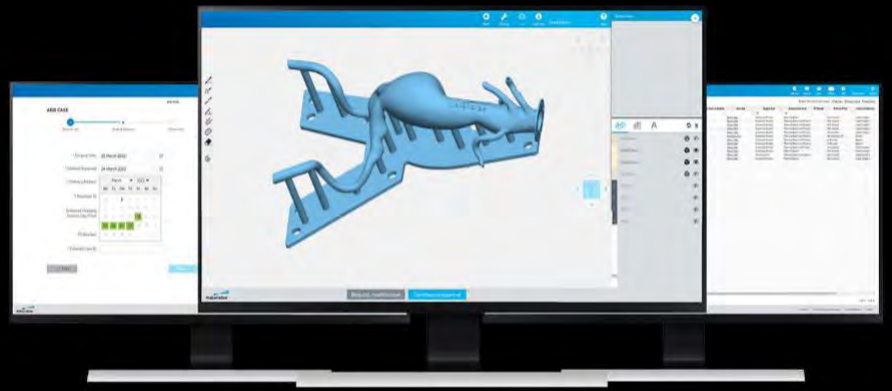
- CE marked
- 450+ centers worldwide are using Materialise's medical 3D software at the POC
- Future proof software (AI, VR, AR, continuous development)

How is your ideal CMF planning?



Efficient

Adapted to you

Gold-standard patient care

Orthognathic workflow

Mimics Enlight CMF

Mimics Enlight CMF - Orthognathic workflow

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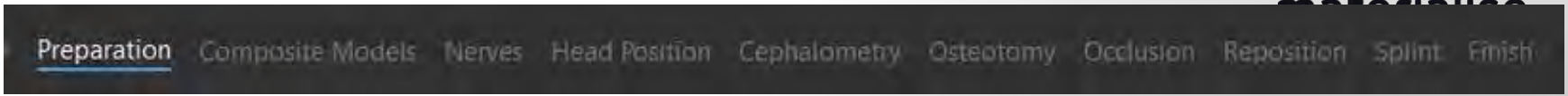
ORTHOGNATHIC PLANNER | Preparation | Composite Models | Nerves | Head Position | Cephalometry | Osteotomy | Occlusion | Reposition | Splint | Finish

Benefits

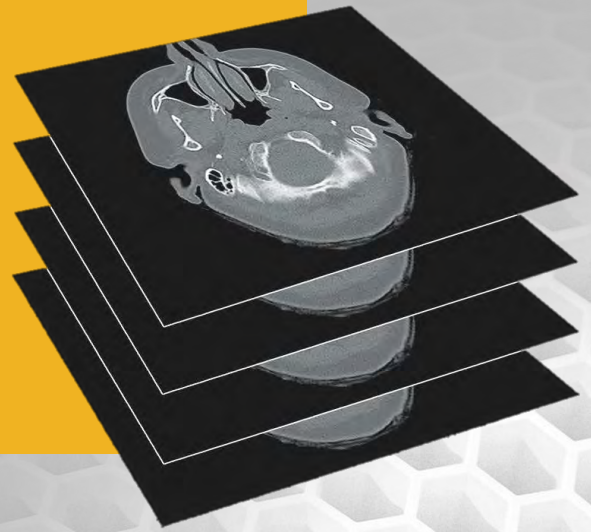
- Accurate 3D surgical planning
- Intuitive workflow, created for surgeons with surgeons
- Plan a case in less than 25 minutes

Mimics Enlight CMF - Orthognathic workflow



Preparing the anatomy

- Compatible with most CT/CBCT scanners
- Easy import of images and STL files (dentition data)
- Fast semi-automatic image segmentation for bones and soft-tissue, and 3D model creation
- Accurate segmentation



Mimics Enlight CMF - Orthognathic workflow

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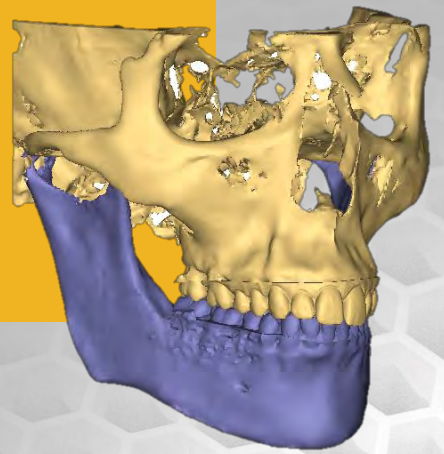
Preparation | Composite Models | Nerves | Head Position | Cephalometry | Osteotomy | Occlusion | Reposition | Splint | Finish

Creating the composite models

- Automatic merge of CT and dentition data
- Automatic fixing of dental scan stl files
- Compatible with intra-oral scans
- Automatic skull/mandible split

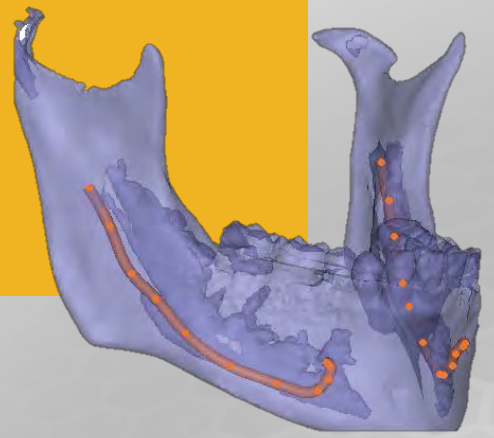


Mimics Enlight CMF - Orthognathic workflow

Preparation | Composite Models | Nerves | Head Position | Cephalometry | Osteotomy | Occlusion | Reposition | Splint | Finish

Identifying the nerves

- Nerve tracking with just a few clicks
- Image re-slicing in one plane for easier tracking
- Optional step

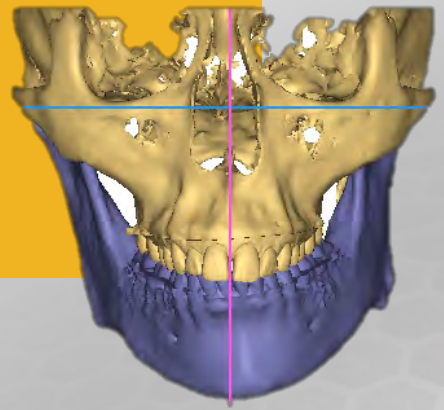


Mimics Enlight CMF - Orthognathic workflow

Preparation | Composite Models | Nerves | Head Position | Cephalometry | Osteotomy | Occlusion | Reposition | Splint | Finish

Setting the natural head position

- Indicate the Frankfurt horizontal plane with just 4 clicks
- Easily drag and rotate every orthogonal view for faster setting of the natural head position



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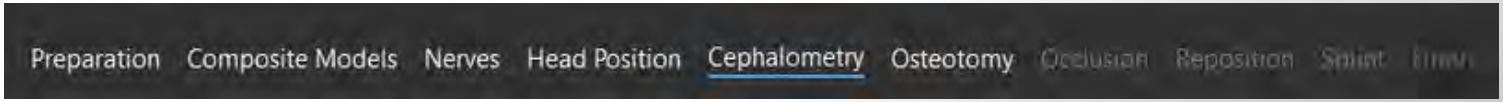
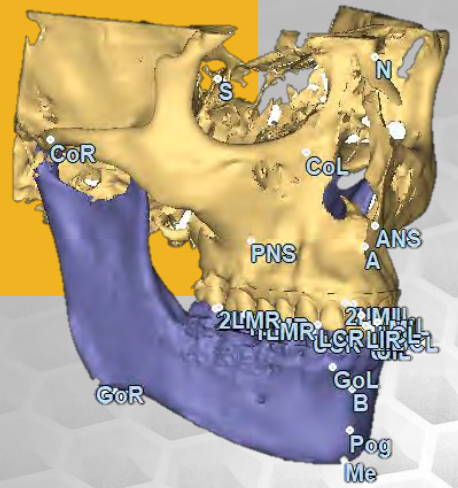
Mimics Enlight CMF - Orthognathic workflow



Creating cephalometric analysis

- Intuitive guided landmark setting
- Automatic view change for faster landmark setting



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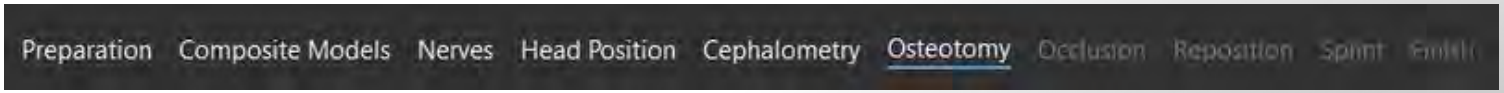
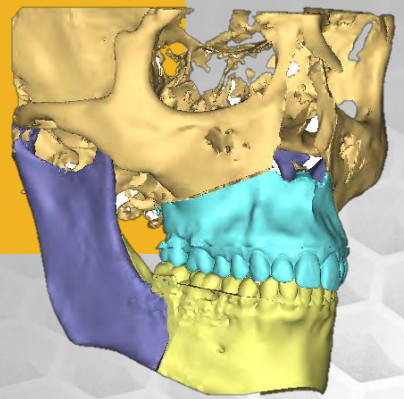
Mimics Enlight CMF - Orthognathic workflow



Planning the osteotomy

- Multiple maxilla ostetomy types: Le Fort I, 2-piece and 3-piece
- Multiple mandible osteotomy types: SSO, freeform and genioplasty
- Intuitive guided osteotomy plane, in just a few clicks



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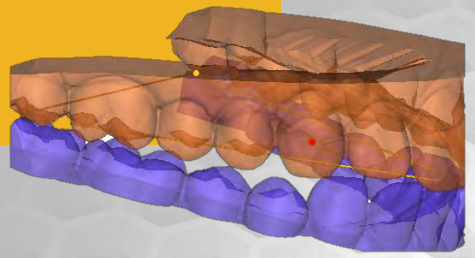
Mimics Enlight CMF - Orthognathic workflow

Preparation | Composite Models | Nerves | Head Position | Cephalometry | Osteotomy | Occlusion | Reposition | Splint | Finish

Placing the occlusion

- Traditional, virtual occlusion or both
- Semi-automatic cast registration in occlusion phase
- Patented virtual occlusion algorithm to efficiently position the patient's teeth in the right occlusion



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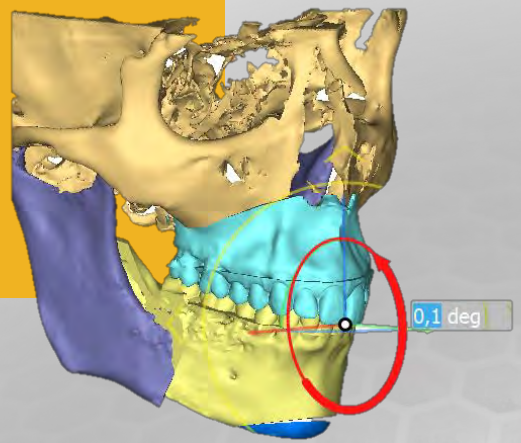
Mimics Enlight CMF - Orthognathic workflow

Preparation | Composite Models | Nerves | Head Position | Cephalometry | Osteotomy | Occlusion | **Reposition** | Splint | Finish

Repositioning the anatomy

- Interactive reposition of bone fragments
- Validated real-time soft tissue simulation



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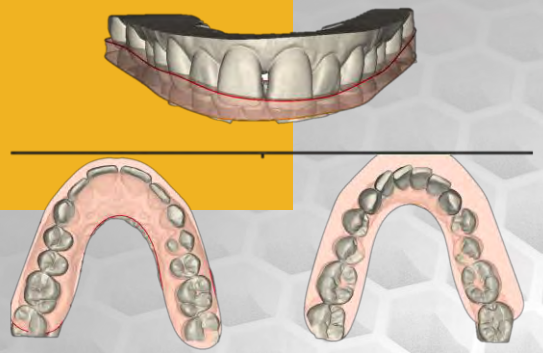
Mimics Enlight CMF - Orthognathic workflow

Preparation | Composite Models | Nerves | Head Position | Cephalometry | Osteotomy | Occlusion | Reposition | Splint | Finish

Designing the splint

- Intermediate and final splint design
- Semi-automatic splint design
- Full control over splint design with manual tools (including wiring holes)



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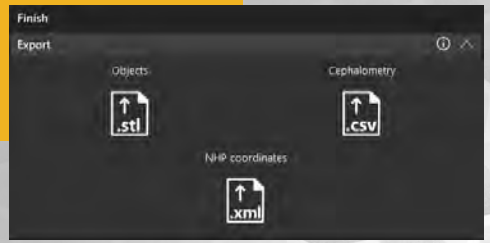
Mimics Enlight CMF - Orthognathic workflow

Preparation | Composite Models | Nerves | Head Position | Cephalometry | Osteotomy | Occlusion | Reposition | Splint | Finish

Export the plan

- Export all 3D models as .stl (incl. splints)
- Cephalometry analysis as .csv
- Natural head position as .xml



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Reconstruction workflow

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Mimics Enlight CMF - Reconstruction workflow

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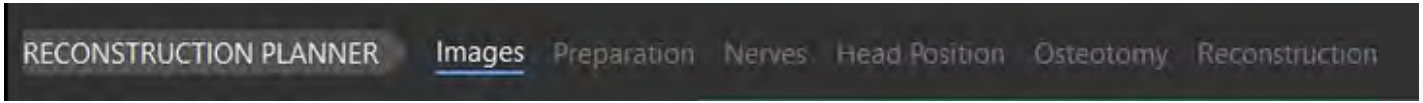
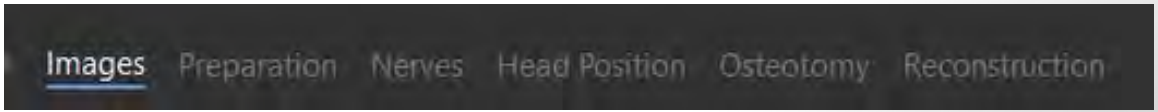


Benefits

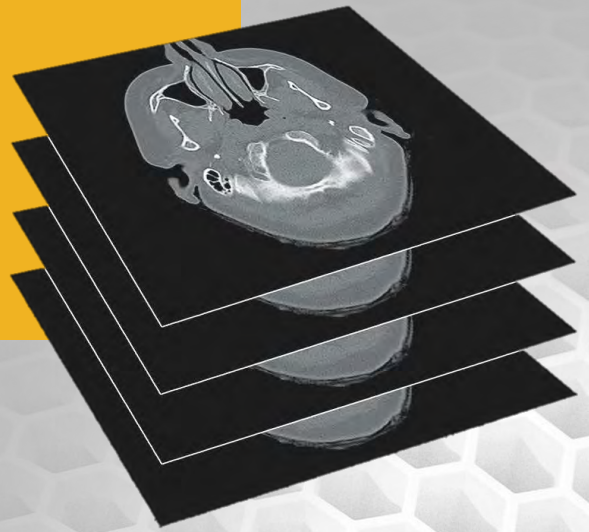
- Accurate 3D surgical planning
- Intuitive workflow, created for surgeons with surgeons
- Efficient case planning

Mimics Enlight CMF - Reconstruction workflow



Start the planning

- Import DICOM images
- Easy identification of skull and leg images



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Mimics Enlight CMF - Reconstruction workflow

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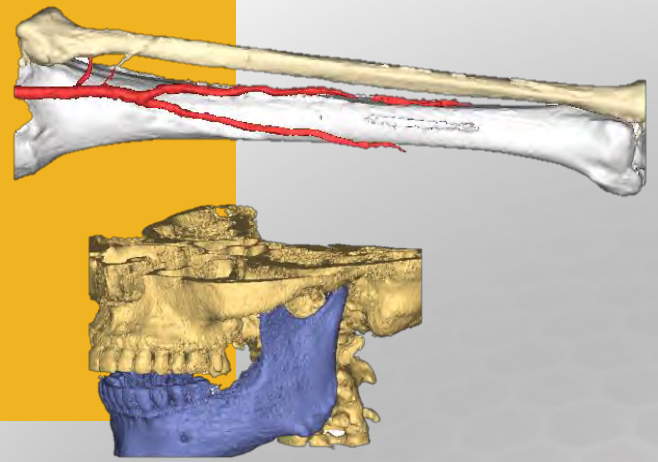
Images | Preparation | Nerves | Head Position | Osteotomy | Reconstruction

Preparing the anatomy

- Compatible with most CT/CBCT scanners
- Fast semi-automatic image segmentation for bones and soft-tissue, and 3D model creation
- Accurate segmentation
- Easy split between tibia, fibula and vessels and mandible and skull

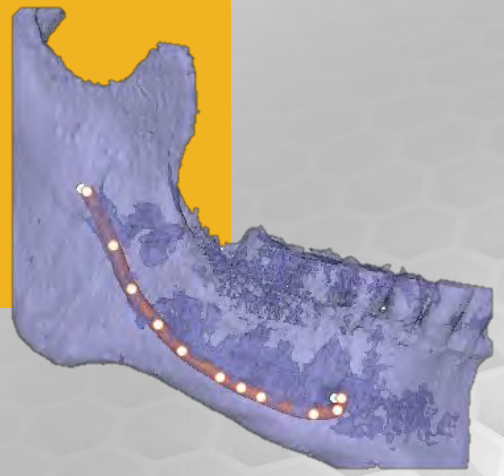


Mimics Enlight CMF - Reconstruction workflow

Images Preparation Nerves Head Position Osteotomy Reconstruction

Identifying the nerves

- Nerve tracking with just a few clicks
- Image re-slicing in one plane for easier tracking
- Optional step

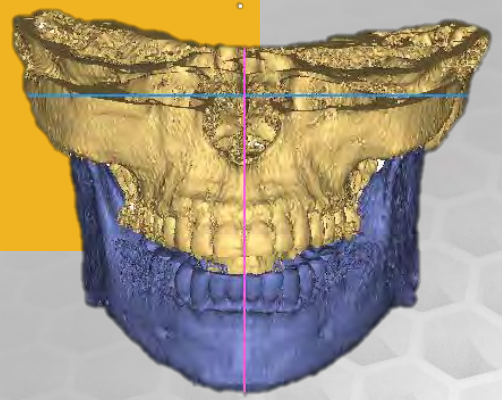


Mimics Enlight CMF - Orthognathic workflow

Images Preparation Nerves Head Position Osteotomy Reconstruction

Setting the natural head position

- Indicate the Frankfurt horizontal plane with just 4 clicks
- Easily drag and rotate every orthogonal view for faster setting of the natural head position



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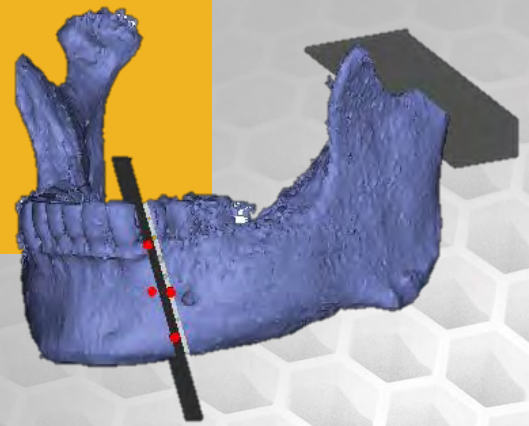
Mimics Enlight CMF - Reconstruction workflow

Images Preparation Nerves Head Position Osteotomy Reconstruction

Planning the osteotomy

- Intuitive guided osteotomy plane creation
- Fast and easy, in just a few clicks



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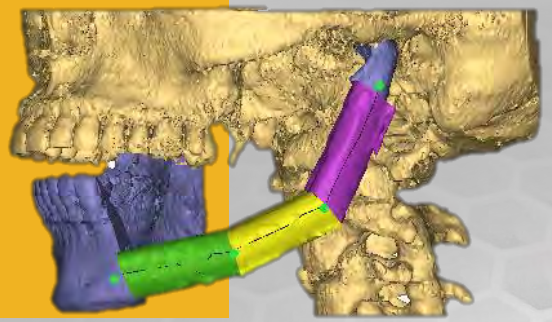
Mimics Enlight CMF - Reconstruction workflow

Images Preparation Nerves Head Position Osteotomy Reconstruction

Planning the reconstruction

- Mirrowing of the healthy side to plan the reconstruction
- Automatic creation of fibula segments
- Manual tools for fibula segments editiing



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Thank You

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