Materialise **OrthoView**

materialise
innovators you can count on

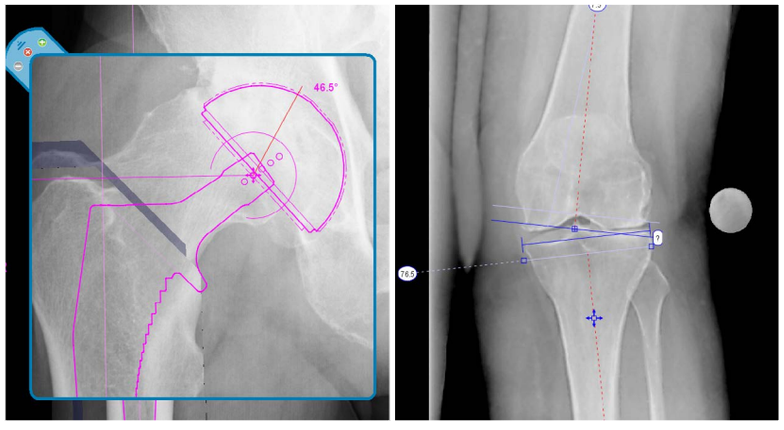
Plan.
Prepare.
Succeed.

Orthopedic Pre-operative Planning and Templating with Digital X-ray Images

Planning an Optimal Surgical Outcome for Each Patient

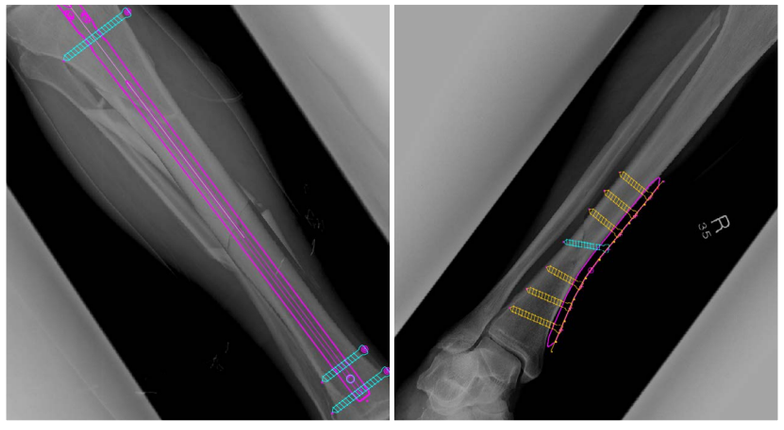
The development of Materialise OrthoView has been guided by orthopedic surgeons and their need for better digital pre-operative planning tools. Surgeons worldwide rely on Materialise OrthoView for planning hip, knee and other joint replacement procedures as well as assessing pediatric and spinal deformities and managing trauma fractures.

> "I plan all my cases beforehand in OrthoView so the number of decisions I need to make intra-operatively are significantly reduced."
>
> **Sabastian Sturridge,** Orthopaedic Surgeon, UK



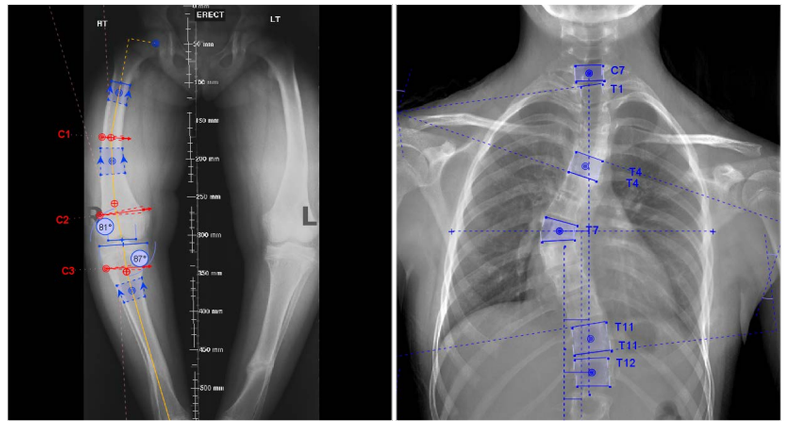
Joint Replacement

- Total Hip, Resurfacing, Hemiarthroplasty
- Total Knee, Partial Knee, HTO
- Complex revision implants
- Shoulder and small joints



Fracture Managment

- Identify & reduce fragments
- Template nails, plates, DHS
- Visualise plate bending
- Smart Templates have correct screws automatically



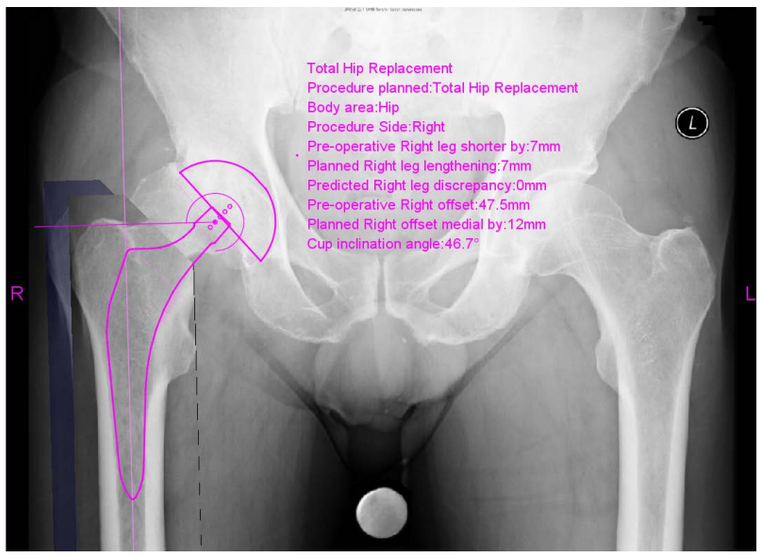
Pediatrics and Spine

- DDH Assessment
- Spinal assessment
- Limb Deformity Correction
- Osteotomy planning

For more information visit: www.materialise.com/orthoview

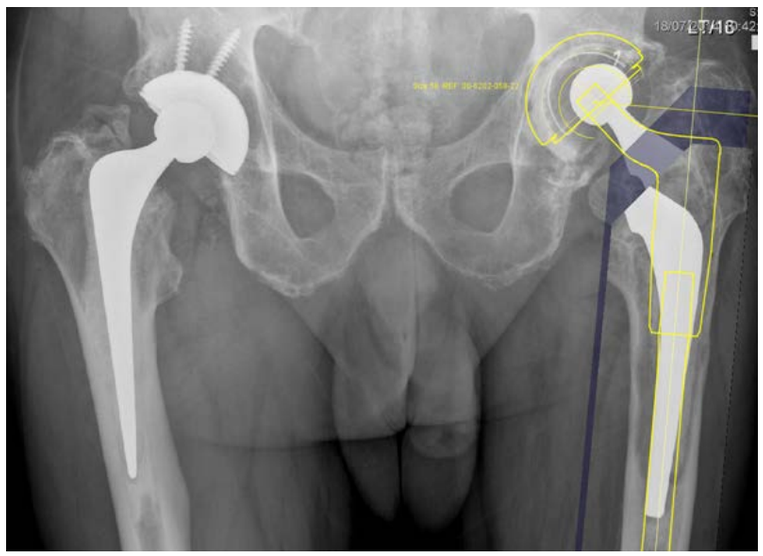
Planning Hip Procedures with Materialise OrthoView

Primary Total Hip Arthroplasty



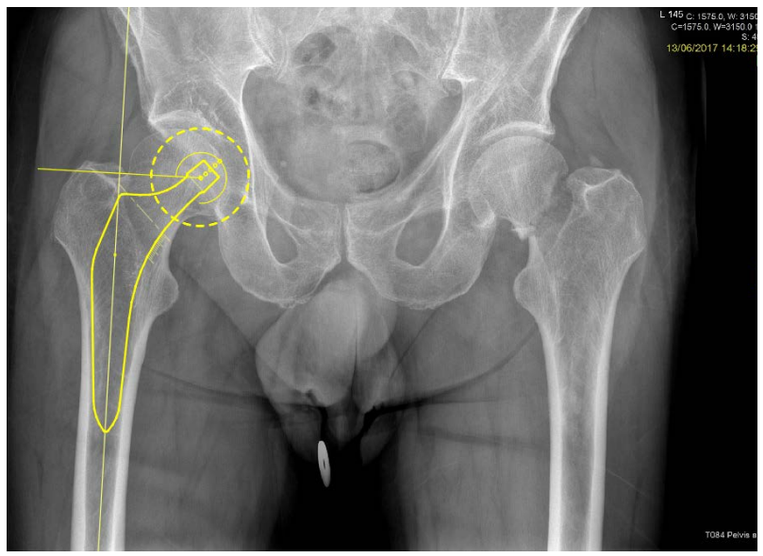
Planning a THA can take just 60 seconds with SmartHip. Automatic femoral canal detection, template sizing and initial positioning, as well as a readout of predicted changes to leg length and offset, help choose the implant options that offer an optimal bi omechanical outcome for the patient. On-screen reduction with a single mouse click is an additional option to aid visualization of the plan.

Total Hip Revision or Complex Primary



Revision arthroplasty procedures can be modelled on-screen as a connected whole. Entire assemblies are provided in template form, displaying the main components, including stem options, collars, and neck assemblies. A database built into the system's Smart Templates ensures only compatible components can be combined on-screen.

Hemiarthroplasty



Hemiarthroplasty is supported in planning with several templating options:

- Stems with anatomical heads
- Stems with bipolar cups
- Monoblock stems
- Planning on the contra-lateral side

Femoral Resurfacing

The Femoral Resurfacing wizard allows assessment of head size and neck angle and helps guide the surgeon to the correct drill approach position.

> "OrthoView is extremely valuable for hips due to its accuracy in assessing the measurements that are needed to obtain the true cup and stem size for my patient."

Thomas Mulvey MD
Orthopedic Surgeon, Peoria, Illinois, USA

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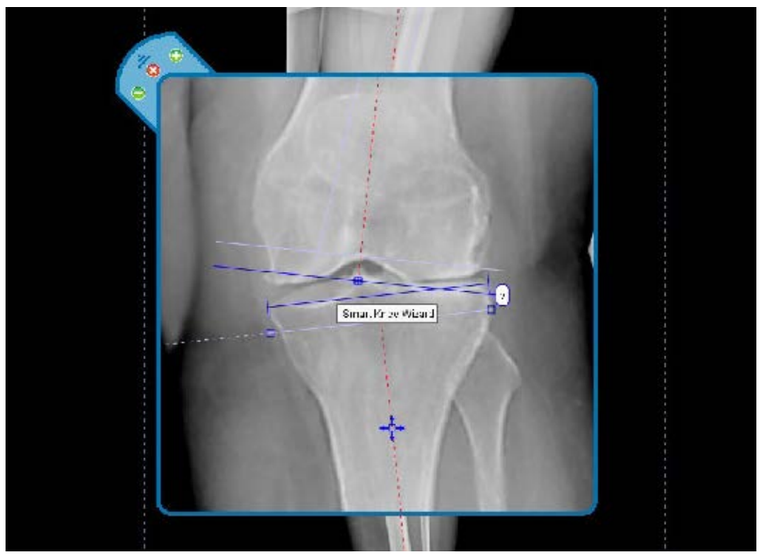
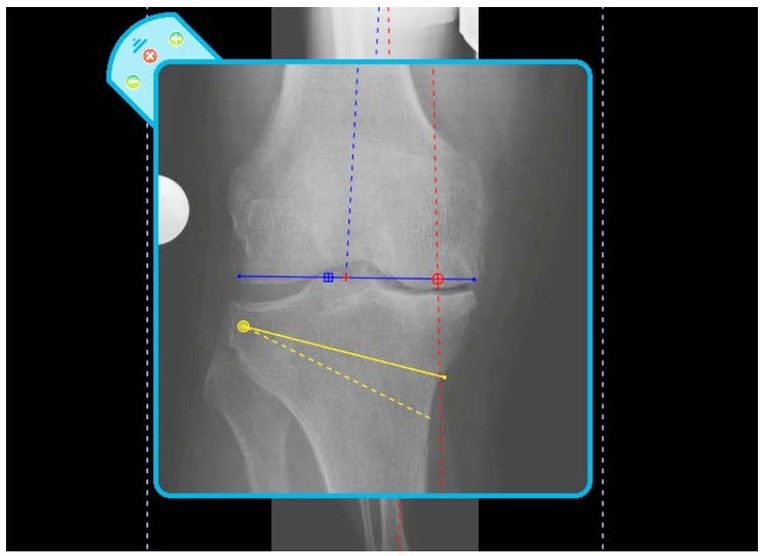
Planning Knee Procedures with Materialise OrthoView

Total Knee Arthroplasty



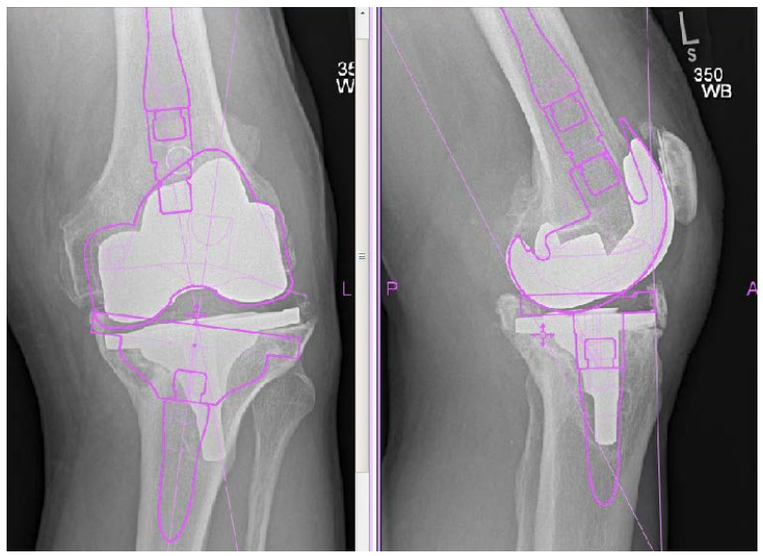
SmartKnee is a set of tools and automated wizards dedicated to knee arthroplasty planning with a minimum of mouse clicks. It incorporates automated anatomy detection, template placement and reduction and is especially useful in assessing alignment for complex primary knees and total knee revisions.

High Tibial Osteotomy



The HTO planning wizard allows you to assess the whole leg alignment to identify and analyze the initial deformity. A suitable cut angle and width can be visualised, along with a simulated post-osteotomy limb alignment.
Finally, you may select the size of plate required for your patient from the Materialise OrthoView template library.

Total Knee Revision



Revision knee templates are shown as complete connected systems for repositioning on-screen as one item (the primary component plus any stems or offsets).
While adjusting the primary component alignment, the effect on stem positioning and need for an offset can be seen and assessed.
When an offset stem is added, a unique polar display allows you to visualize the required orientation.

Partial Knee Replacement

The automated planning tool for unicompartmental knee surgery helps with correct implant sizing, positioning and alignment. Templates for patellofemoral and bicompartmental implants are also supported by this wizard.

Complex Primary Knee Replacement

Materialise OrthoView can help anticipate potential complications that can arise during knee joint replacement surgery. Key questions that can be evaluated include:

- Is the misalignment caused by tibial or femoral bone loss?
- How will the arthroplasty affect leg alignment?
- Are wedges and stems required to promote a stable arthroplasty?

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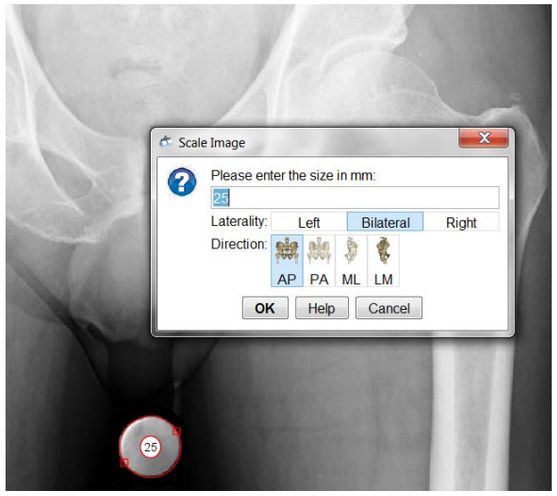
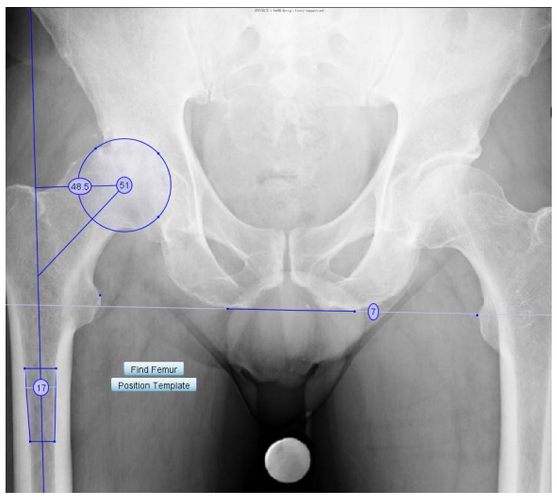
4 Simple Steps to Creating a Pre-operative Plan

1. Scale



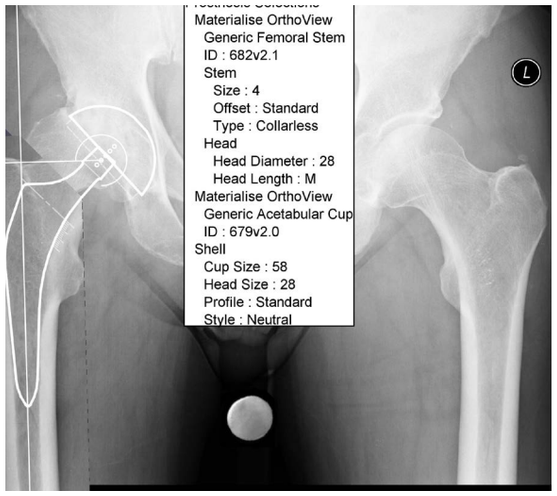
With one click of the mouse, Materialise OrthoView can identify the image magnification to assist with prosthesis template sizing, when an image scaling device or caibration object has been included in the digital X-ray (recommended). Alternatively, a known oversize percentage for the image may be entered to approximate the image magnification.

2. Analyze



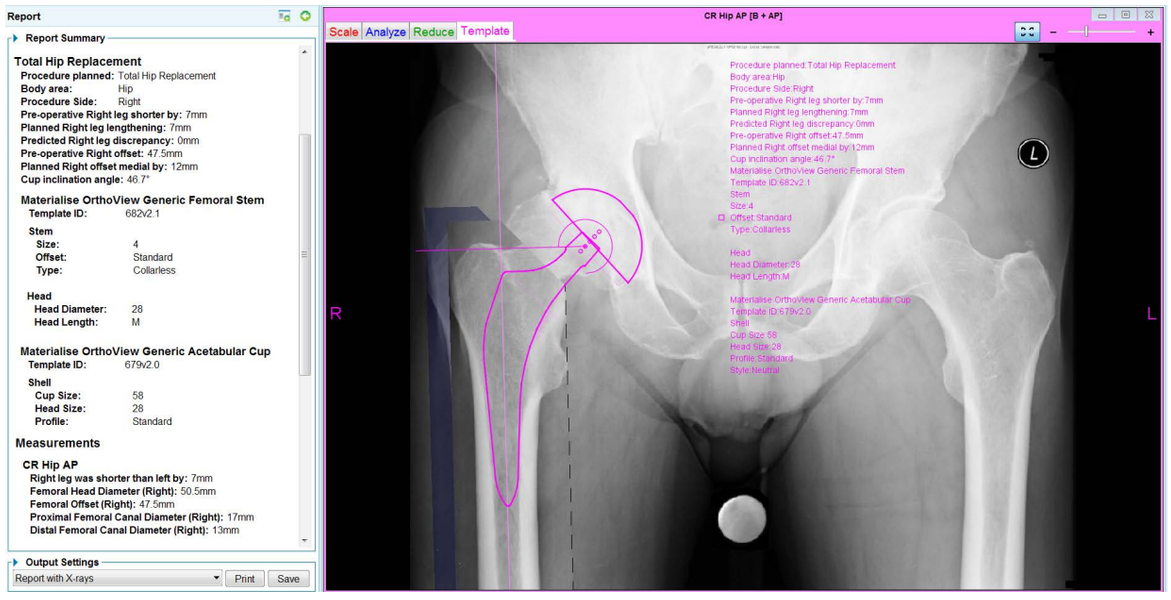
Measuring tools specific to your chosen procedure are provided. They help to position and size the prosthesis template and make key measurements with a minimum of effort.

3. Template



Prosthesis templates are grouped in families for rapid selection of the appropriate components. Smart Templates allow you to easily adjust the size and characteristics of each component on screen and plan the optimum fit for your patient.

4. Report



The completed plan, including templated images, prosthesis type and size, and key measurements, can be saved to the PACS or locally.
It can also be made available for reworking or referencing during surgery and can be shared with colleagues.

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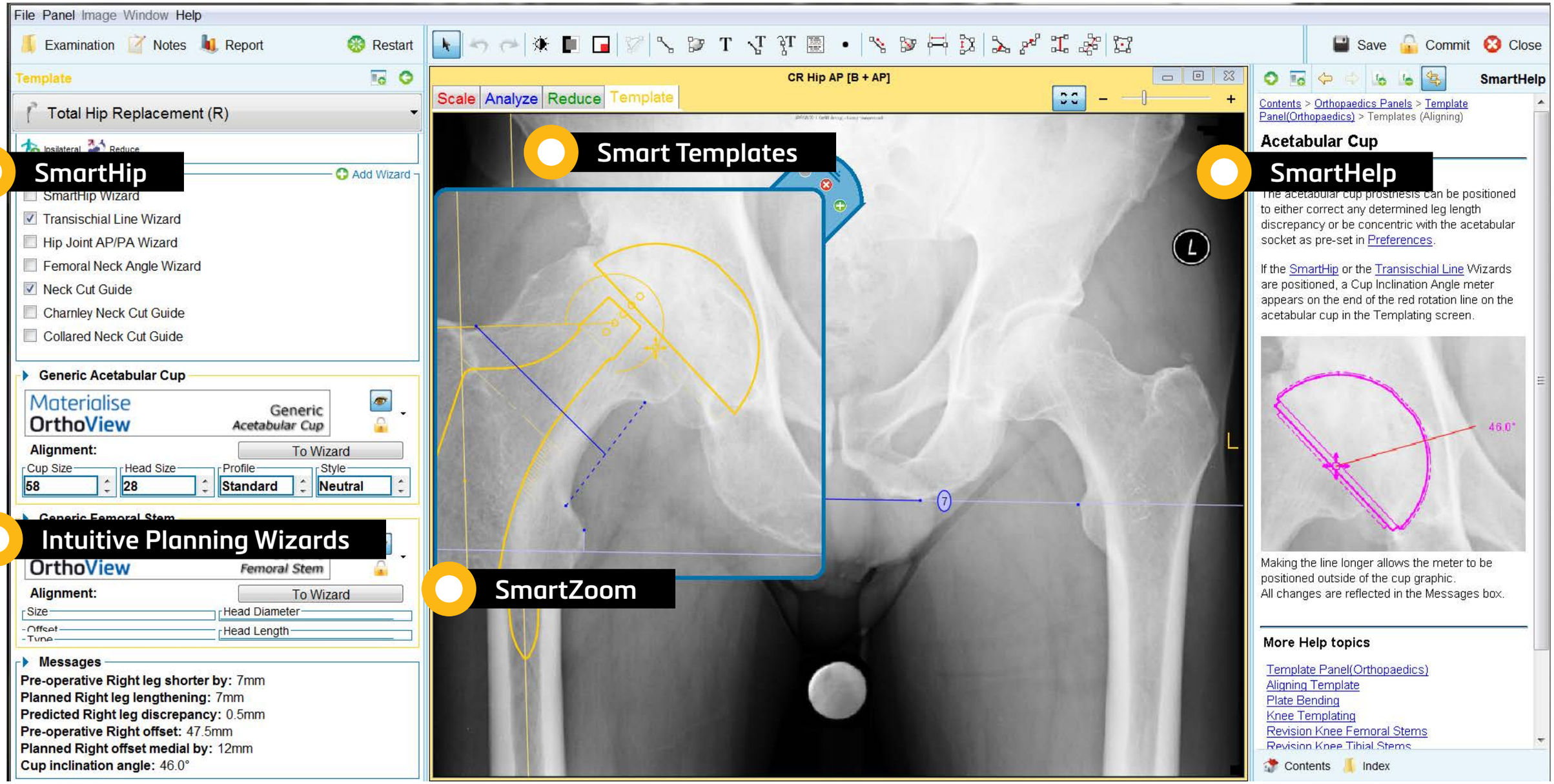
Intelligent Tools for Quick and Easy Planning



"The more thought that is put into planning the procedures before surgery, the quicker and more accurate the surgery will be."

Ron James, Orthopedic Surgeon,
Mercy Medical Group, Sacramento, USA

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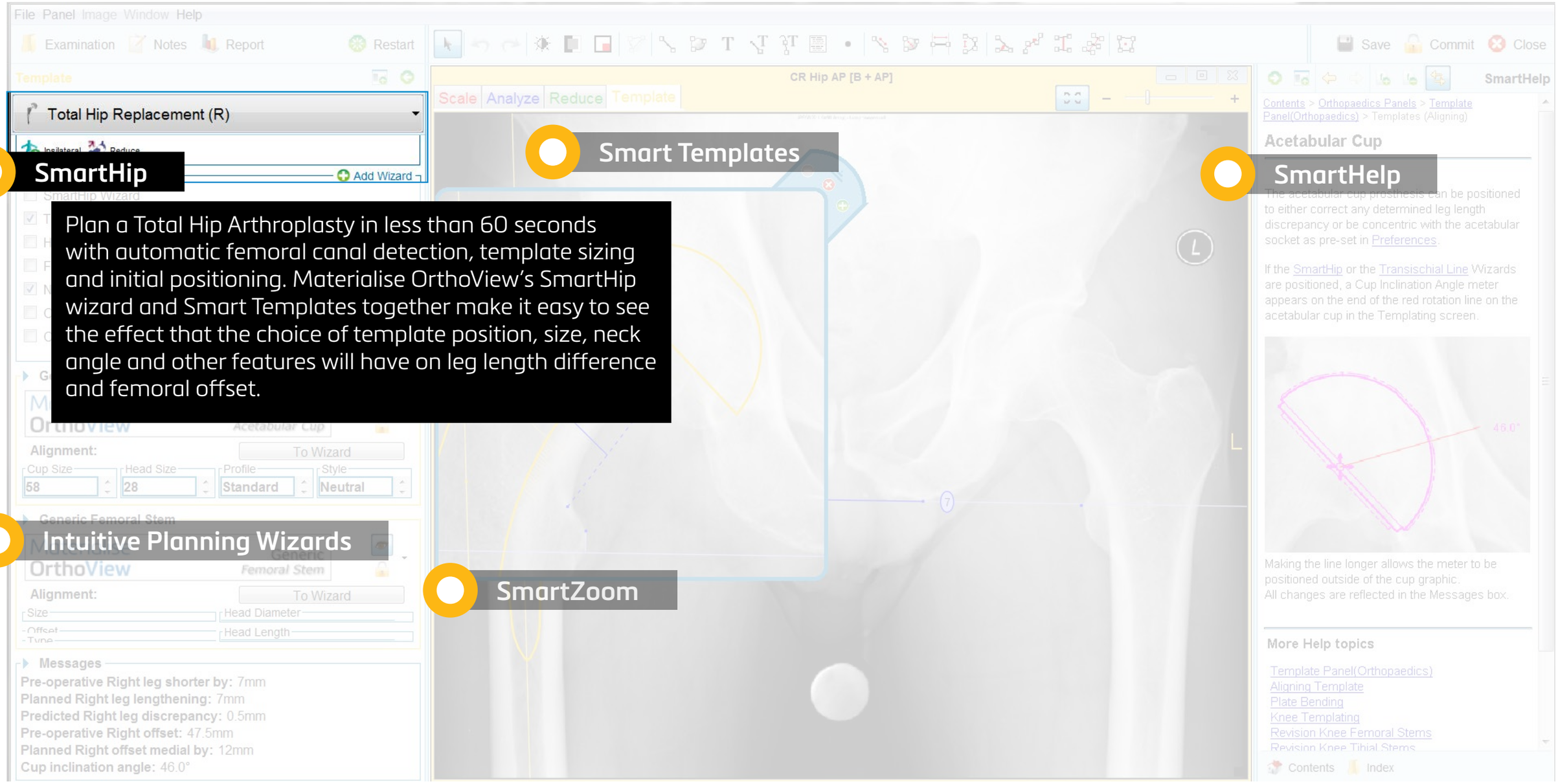
Intelligent Tools for Quick and Easy Planning



For more information visit: www.materialise.com/orthoview

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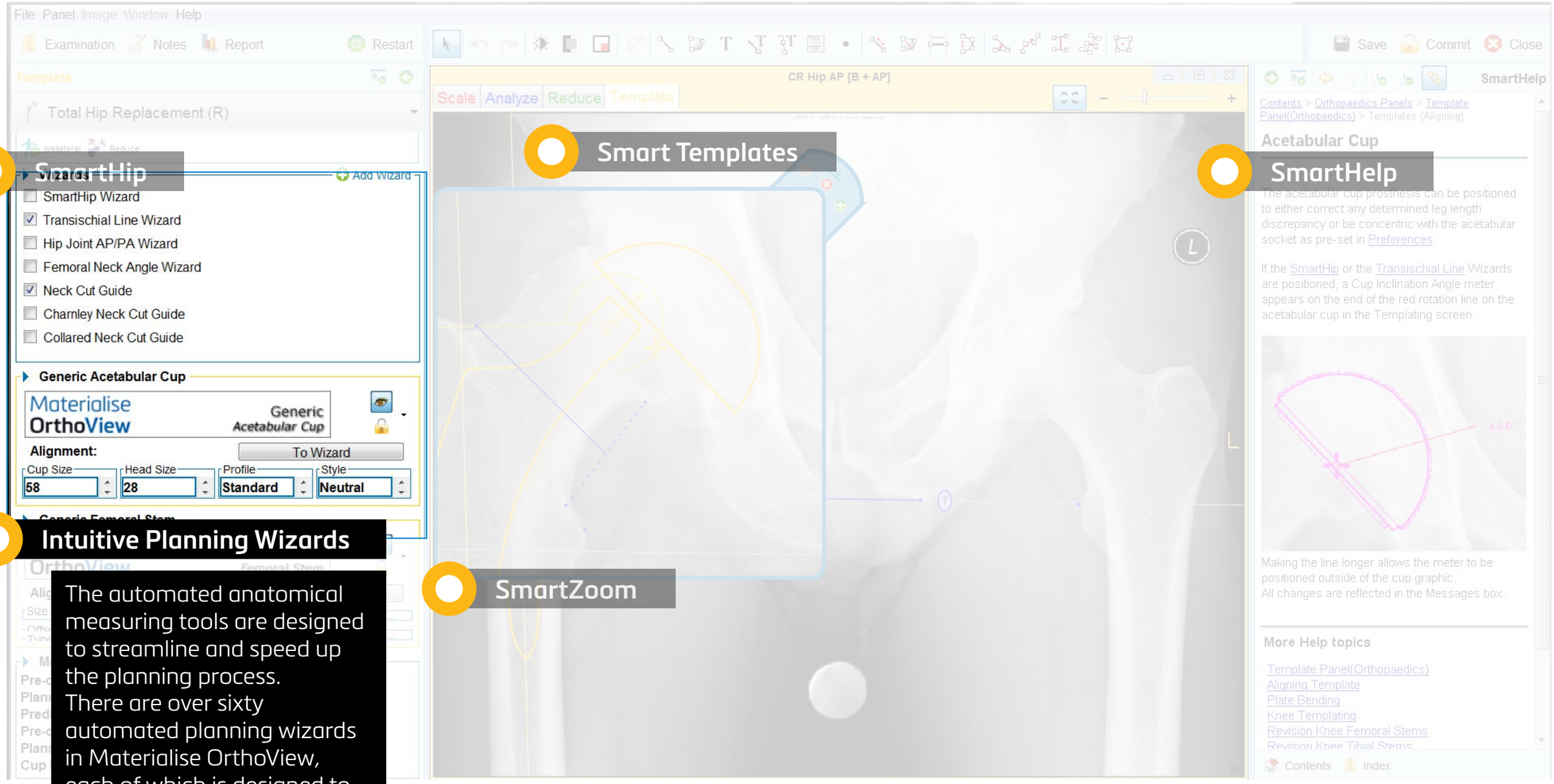
Intelligent Tools for Quick and Easy Planning



The automated anatomical measuring tools are designed to streamline and speed up the planning process.
There are over sixty automated planning wizards in Materialise OrthoView, each of which is designed to measure the anatomy and demonstrate, in line with real world surgical techniques, how adjustments to the plan may affect the outcome.

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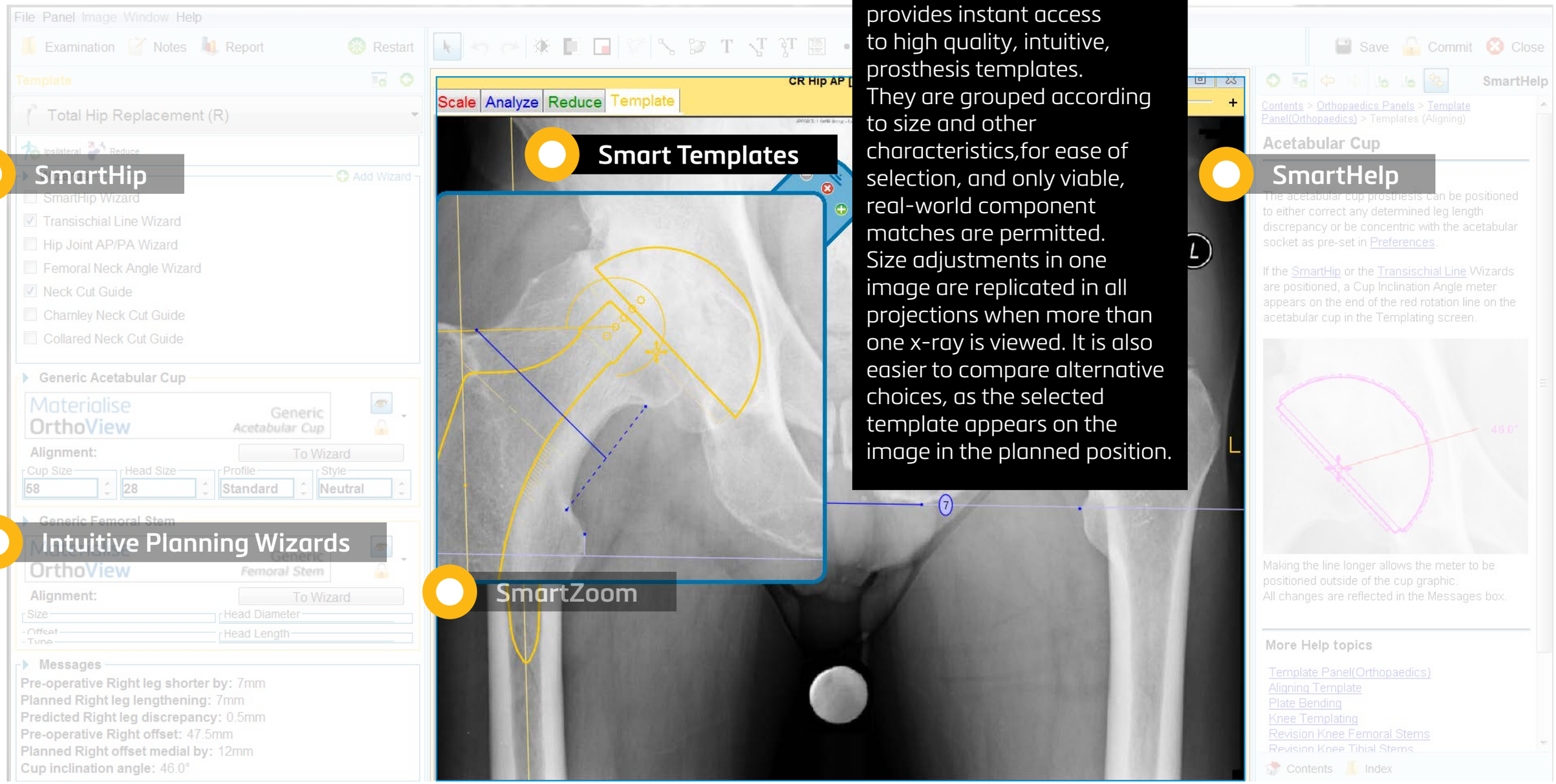
Intelligent Tools for Quick and Easy Planning



The extensive template library provides instant access to high quality, intuitive, prosthesis templates.
They are grouped according to size and other characteristics,for ease of selection, and only viable, real-world component matches are permitted.
Size adjustments in one image are replicated in all projections when more than one x-ray is viewed. It is also easier to compare alternative choices, as the selected template appears on the image in the planned position.

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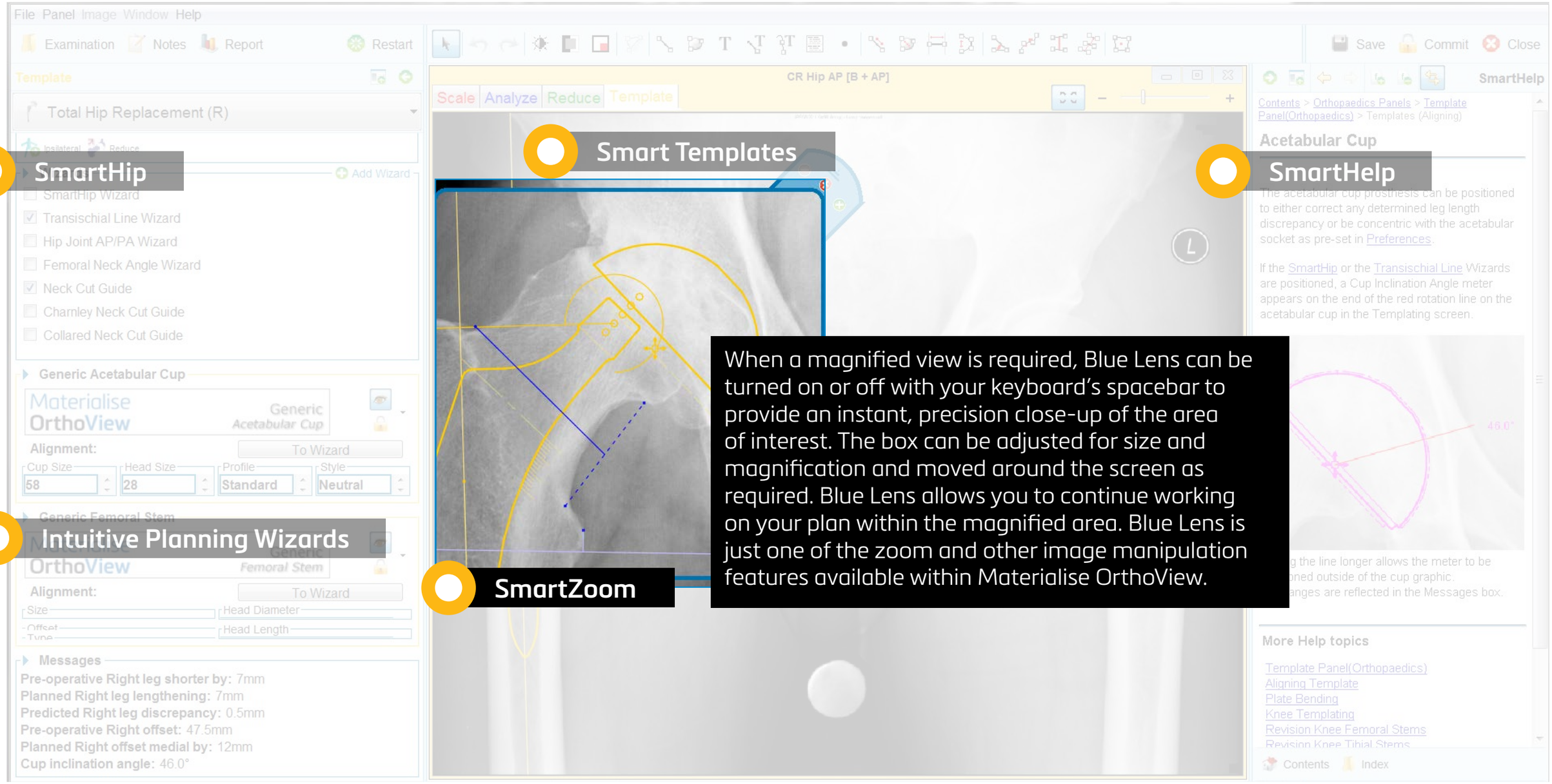

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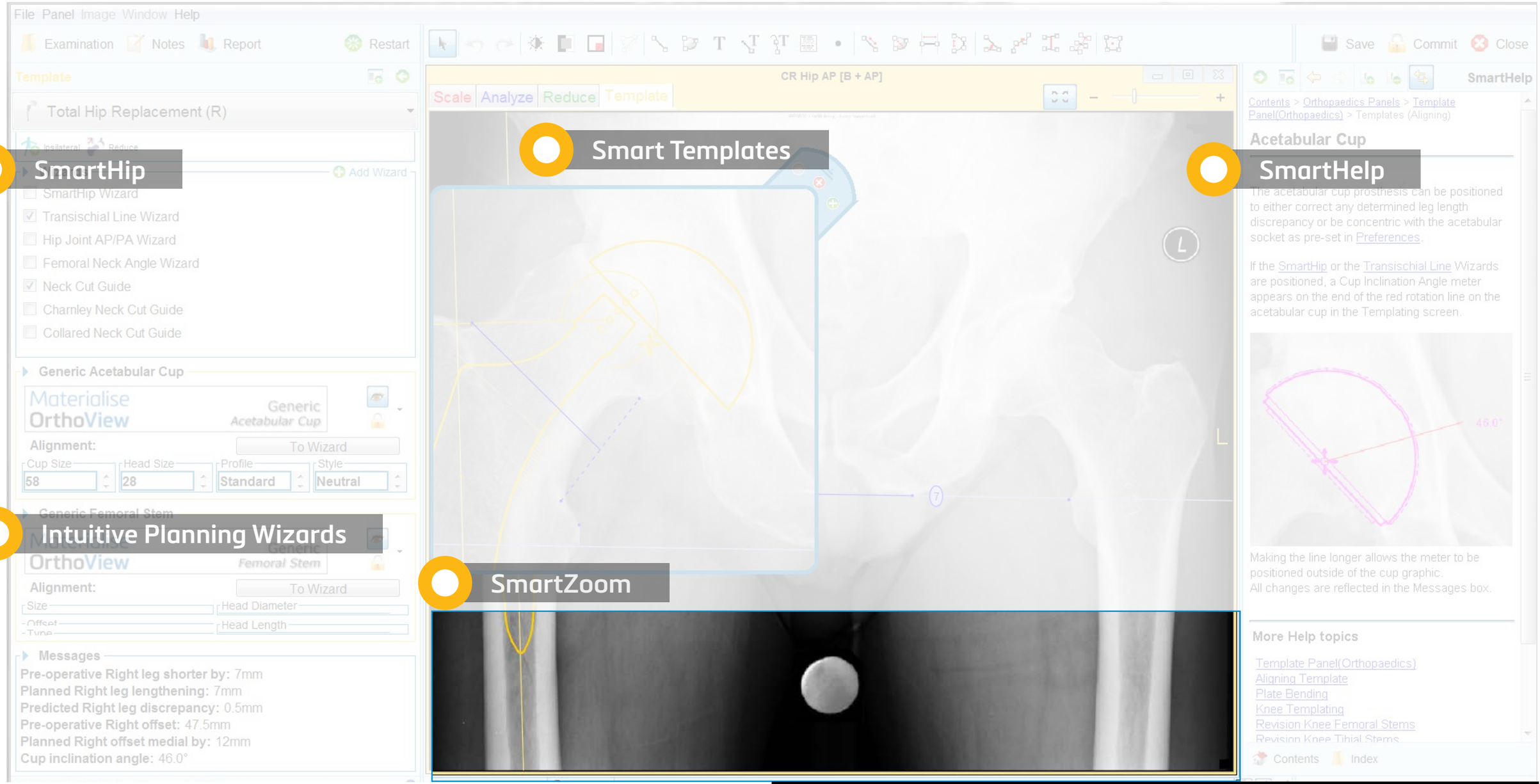

One-click image scaling instantly corrects for image magnification when a calibration marker is present on the image and correctly positioned in relation to the bone of interest. Any size or shape of marker of known length or diameter can be used to scale an image in OrthoView. Alternatively, a known oversize percentage can be entered.

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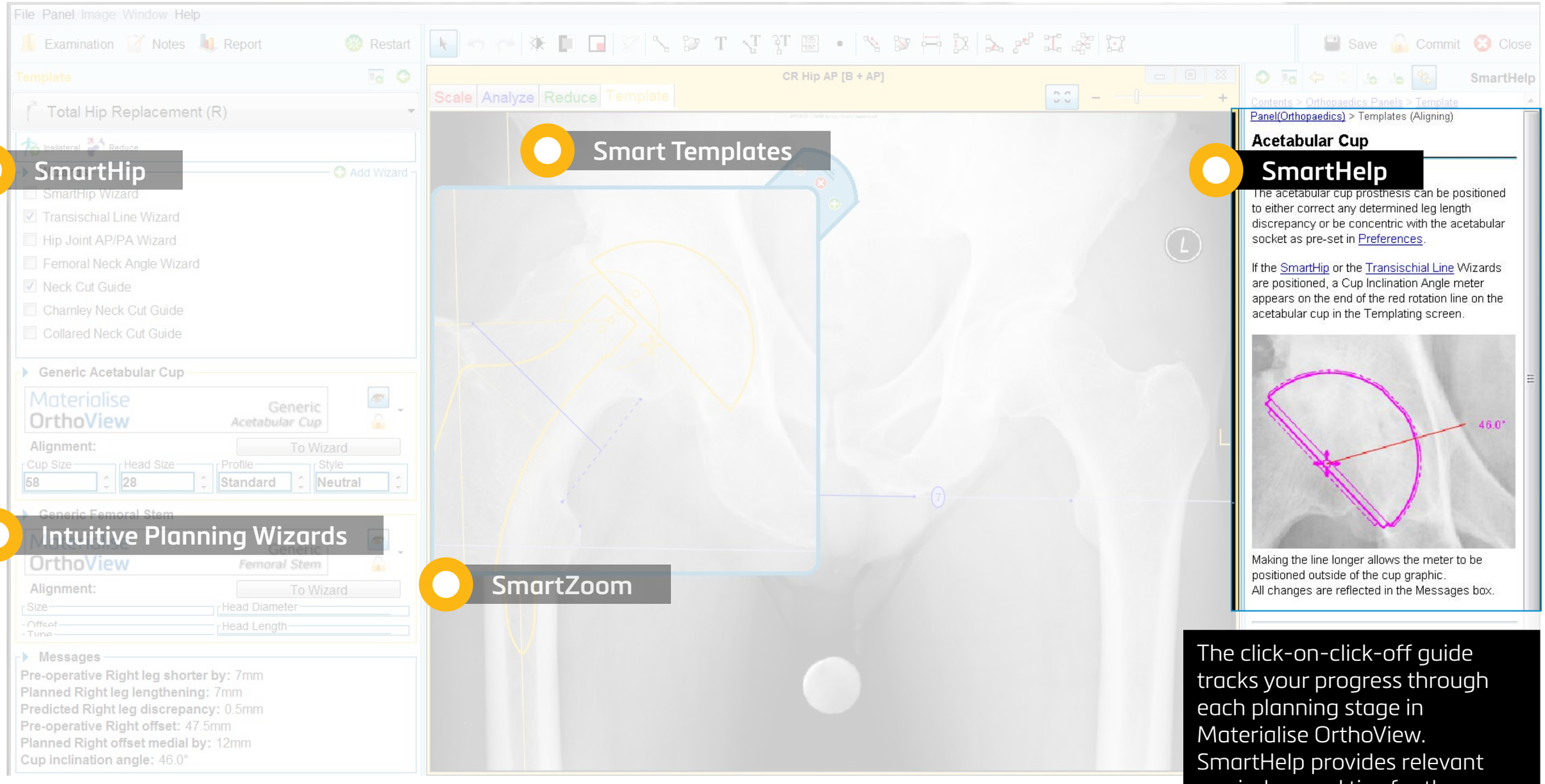
Intelligent Tools for Quick and Easy Planning



The click-on-click-off guide tracks your progress through each planning stage in Materialise OrthoView. SmartHelp provides relevant reminders and tips for the wizards and measuring tools specific to your chosen procedure and can be detached and repositioned on the screen as required.

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What's new in Materialise OrthoView 7?

Direct access to the full Materialise OrthoView library of up to date Smart Templates, from over 70 manufacturers, is provided via the Cloud with Materialise Version 7.

Optional Case Management and MobileViewer applications allow you to plan and share your cases, collaborate with colleagues and provide easy access to your plan during surgery.

Materialise OrthoView Version 7.3 further streamlines planning for hip and knee cases with:

- **Improved initial template positioning**
- **Additional intelligent tools:**
  - Cup Anteversion wizard
  - Femoral Stem Insertion Depth Wizard
  - Cup Positioning Wizard
  - Femoral Alpha Hip Wizard
- **Customizable on-image reports and wizards**

Contact us to find out more or

Request a Demo of OrthoView 7!

> "Digital pre-operative planning with OrthoView allows surgeons to recreate the normal biomechanics of our patients' hips. It precedes every case I perform."
>
> **Ross Barker,** Orthopaedic Consultant, Nobles Hospital, Isle of Man

*The availability of the latest OrthoView version may vary according to your PACS system. Please contact us on orthoview@materialise.co.uk for more information.

For more information visit: www.materialise.com/orthoview

Find Out More!

For more information about Materialise OrthoView, our partners and additional materials,
visit www.materialise.com/orthoview
where you can also request a trial license to evaluate the software.

You can also contact us on orthoview@materialise.com
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