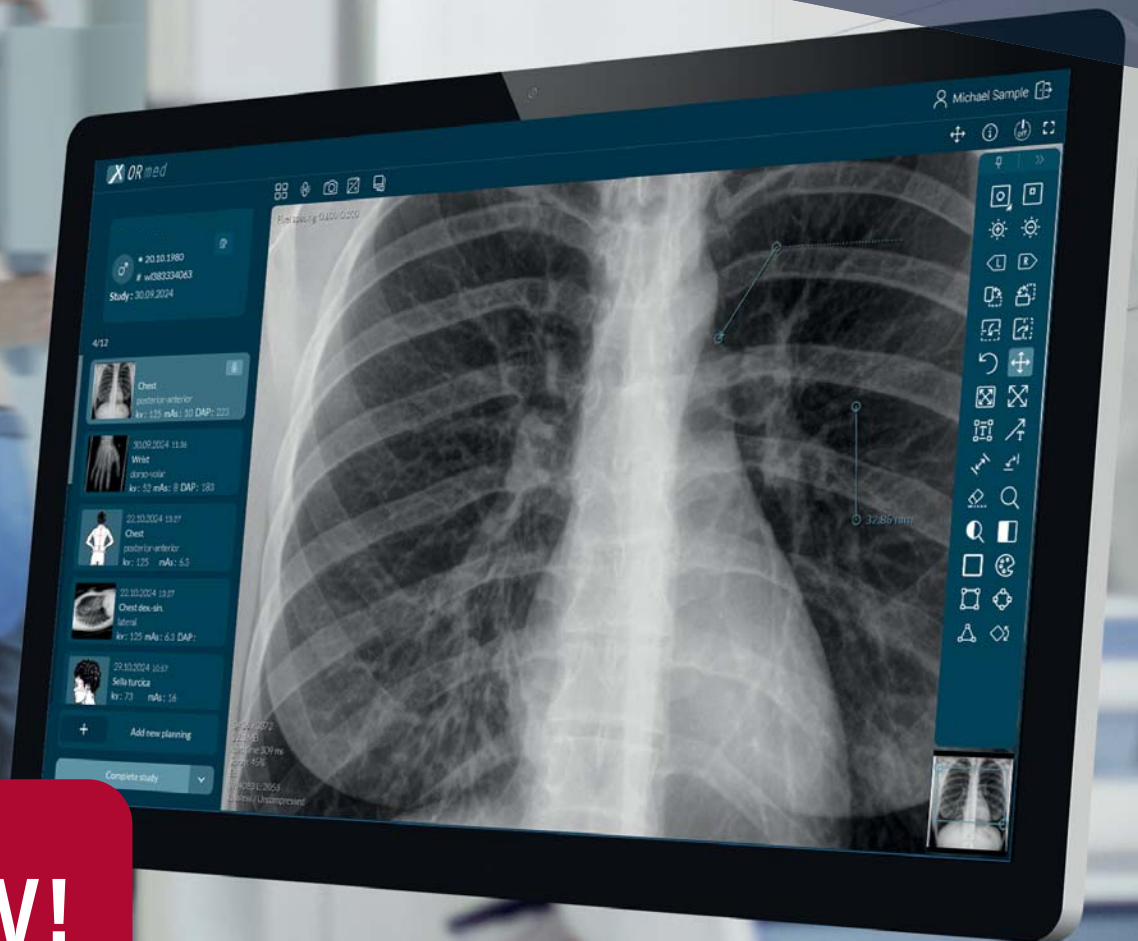


Acquisition software for X-ray images

from DR flat panels



NEW!



X ORmed

Patient name

07.03.1974, 51 years

XEZH-Y-436EN

Study: 14.03.2025

1/1



03.04.2025 10:44
Knee Röntgen
Knee Röntgen
KV: 66 mAs: 23 EXAP: 67.53



Add new planning

Complete study

Parafilm® G 100x0.300

2556 x 4320
24.2 MP
Exposure: 1040 ms
Zoom: 40%
18.330 / 18.277
W: 3993 L: 2091
Lorena / Anuskompress



Professional software for digital **X-ray image acquisition**

For small practices &
large hospital departments

ORmed[™] is a versatile software solution for the acquisition, processing, display and management of digital X-ray images. It supports both DR and CR systems and enables centralised control of compatible X-ray detectors and generators. The clearly structured user interface supports fast and efficient workflows.

Professional image processing automatically converts raw data into high-quality X-ray images. Examination-specific image processing and exposure parameters allow the system to be adapted to different anatomical regions and imaging conditions. Additional tools for manual image optimisation are available whenever required.

Preconfigured examination protocols and macros simplify standardised imaging workflows. The integrated multimedia X-ray assistant provides guidance on positioning techniques, patient positioning and the selection of suitable exposure parameters.

ORmed[™] integrates seamlessly into existing digital workflows: patient data and worklists can be exchanged with HIS and RIS systems, while X-ray images can be stored in DICOM format and transferred to PACS systems. In addition to conventional single-image acquisition, *ORmed*[™] supports dynamic X-ray imaging and the stitching of multiple overlapping images to create a single anatomically consistent composite image.

As a central component of digital X-ray systems, *ORmed*[™] is suitable for new complete systems with integrated generator control as well as for upgrading existing installations and – depending on the system configuration – for mobile solutions.



Efficient workflow

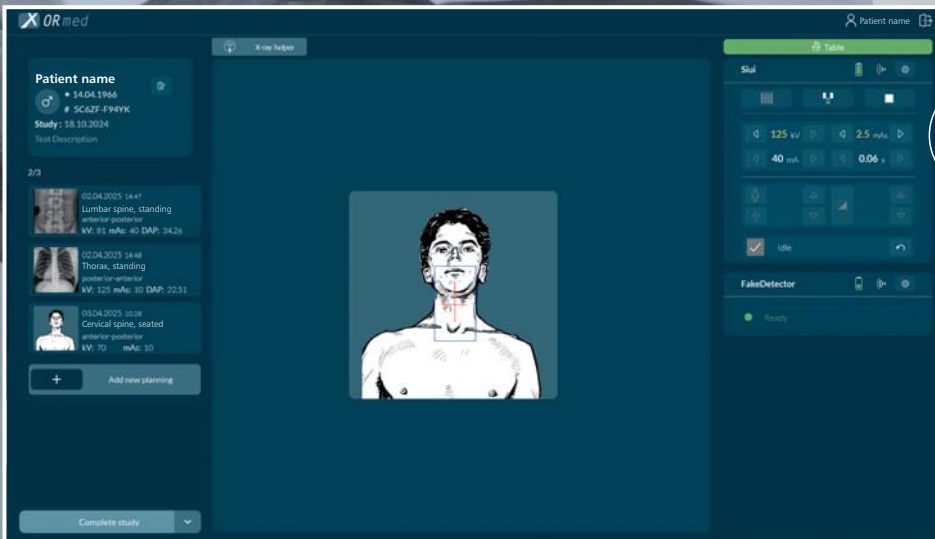
The easy-to-use software offers many advantages:

- **Modern graphical user interface (GUI)**, flexibly adaptable to different requirements
- **Operation via touchscreen or mouse** – for fast and efficient workflows
- **Import of patient data and worklists from connected HIS/RIS systems** – manual data entry is also possible
- Support for Procedure Codes for the **clear assignment of X-ray examinations** and linking with external descriptions
- **Flexible configuration of examination protocols for specific body regions**
– more than 400 examination protocols can be predefined and individually adapted
- **Fast registration of emergency patients** – acquisition mode can be started immediately, even without prior entry of patient data
- **Flexible selection and sequencing of planned examinations** for an efficient imaging workflow
- Additional images can be flexibly added to an ongoing study whenever required
- **Examination workflows can be combined into macros**, e.g. for full-leg or spine examinations
- **Integrated multimedia Radiographic Positioning Guide** with instructions, images and videos for correct positioning techniques and patient positioning



1

Planning X-ray examination using the body parts – switch to planning for children and infants with just one click



2

Select planned examination from the list [left] and recommended generator values for the respective examination (kV, mAs, focus, etc.) [right].



3

Integrated multimedia X-ray positioning guide for correct patient positioning

Procedure of an X-ray examination

4

Preview image for manual acceptance or rejection of the X-ray image (incl. various display options) plus work list



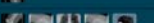
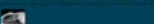
5

Viewing and processing of the X-ray image



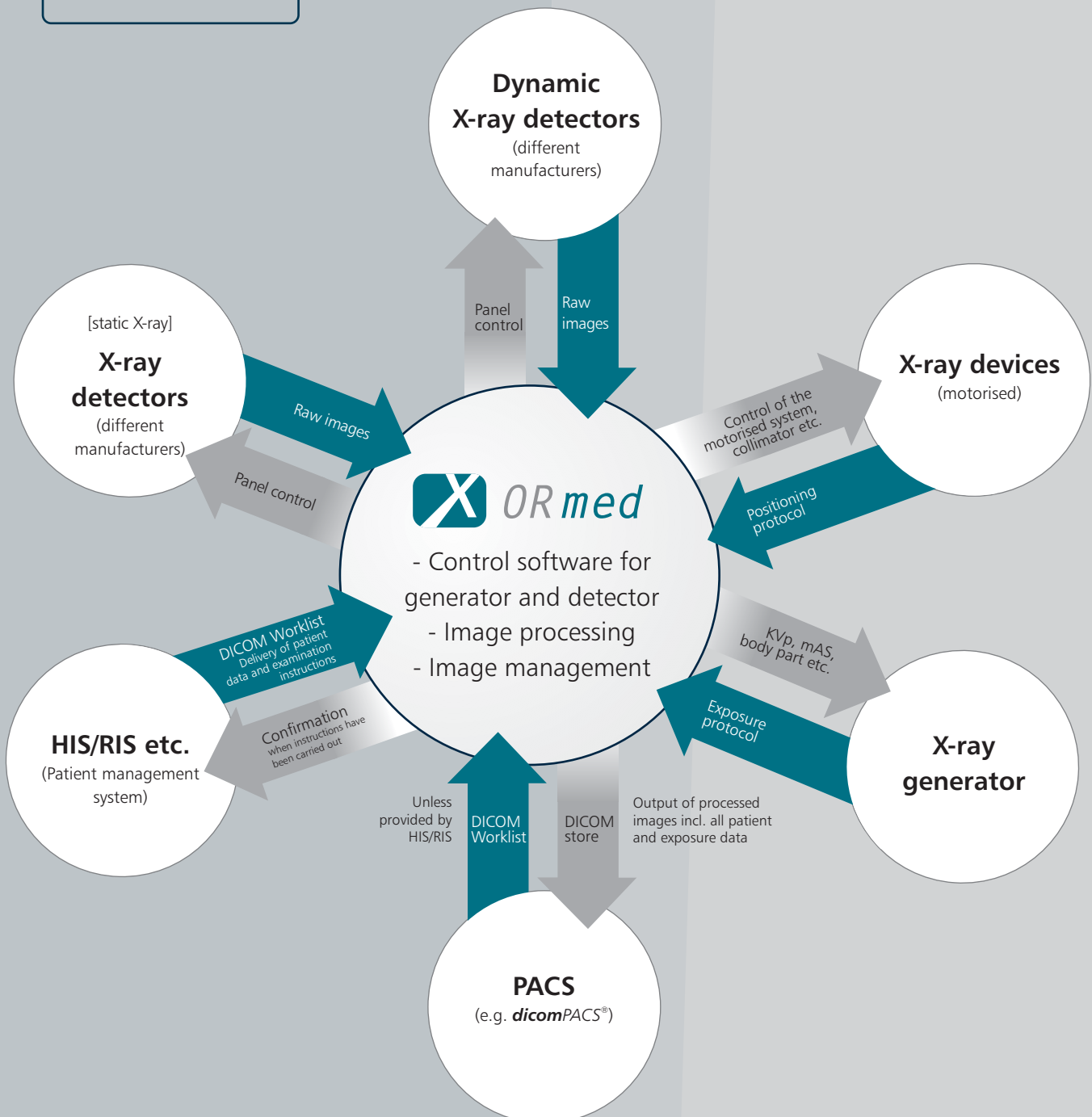
6

Study overview

Status	Date	Patient ID	Name	Date of Birth	Preview images
☐	18.10.2024, 15:02	SC6ZF-F94YK	♂ Peter Schmidt	14.04.1966	 + 11 more
☐	30.09.2024, 11:25	wf383334063	♂ Karl Jahnke	20.10.1980	 + 11 more
☐	19.09.2024, 16:25	30fb7e8b-7604-4...	♀ Ute Musterfrau	01.09.2000	
☐	30.09.2024, 11:41	85a4f640-5105-4...	♀ Mariah Schnell	01.02.1995	
☐	20.09.2024, 11:35	wf835166650	♂ Marius Möller	20.01.1984	
☒	24.10.2024, 16:46	NAG89-RBPMK	♀ Emergency		
☐	13.10.2024, 17:09	ZFP69-FUZMF	♀ Emergency		
☐	11.10.2024, 15:50	UBC4F-PYUY5	♀ Emergency		
☐	08.10.2024, 10:47	wf835166650	♂ Marius Möller	20.01.1984	
☒	08.10.2024, 17:57	aadad7cb-25da-4...	♀ Emergency		

How it works

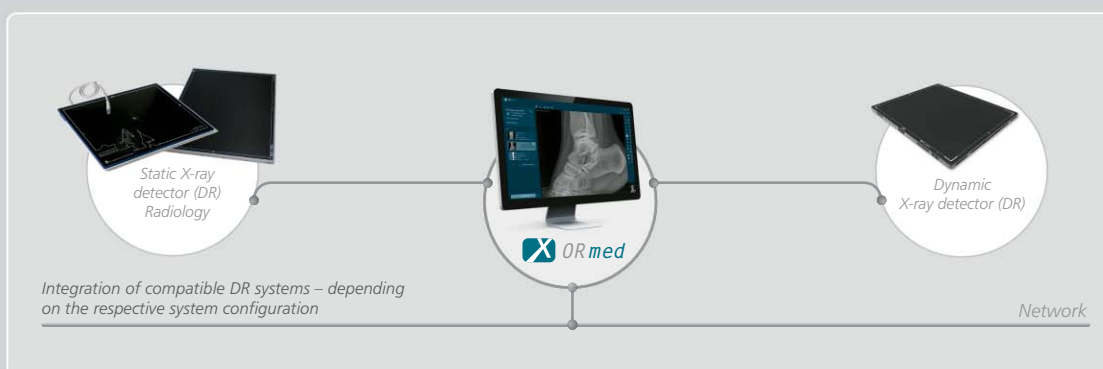
The *ORmed*[™] acquisition software supports efficient workflows in small practices and large hospitals.



Flexible image acquisition

Seamless integration
into different X-ray systems

- Connection of compatible DR systems for static and dynamic X-ray imaging
- Configuration of connected X-ray detectors and selection of workstation and detector directly in ORmed™
- When generator control is enabled, X-ray parameters are transferred directly from the software to the connected X-ray generator
- Examination-specific exposure parameters for different anatomical regions facilitate standardised imaging workflows
- Individual adjustment of X-ray parameters according to patient size, body-part thickness and density settings
- AEC (Automatic Exposure Control) supports automatic exposure control with compatible X-ray systems
- Display of relevant acquisition information such as AEC, DAP and grid – depending on the respective system configuration
- Exposure Index, Target Exposure Index and Deviation Index support the assessment of exposure quality
- Dynamic X-ray imaging enables the acquisition, display and processing of image sequences



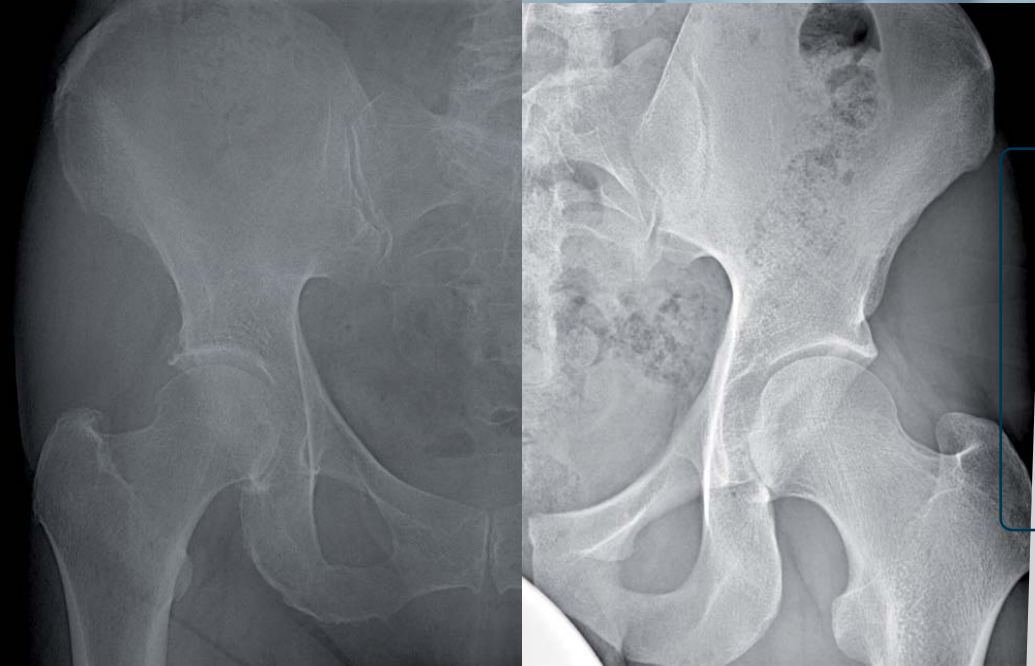
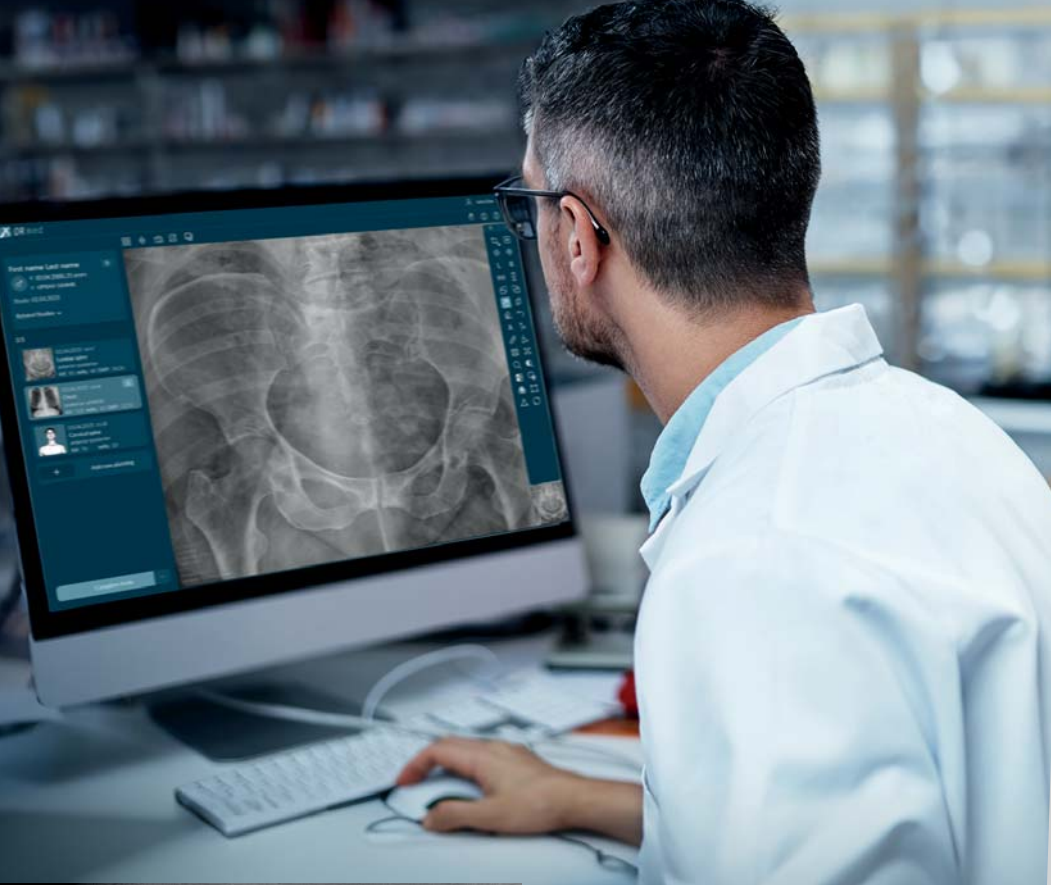
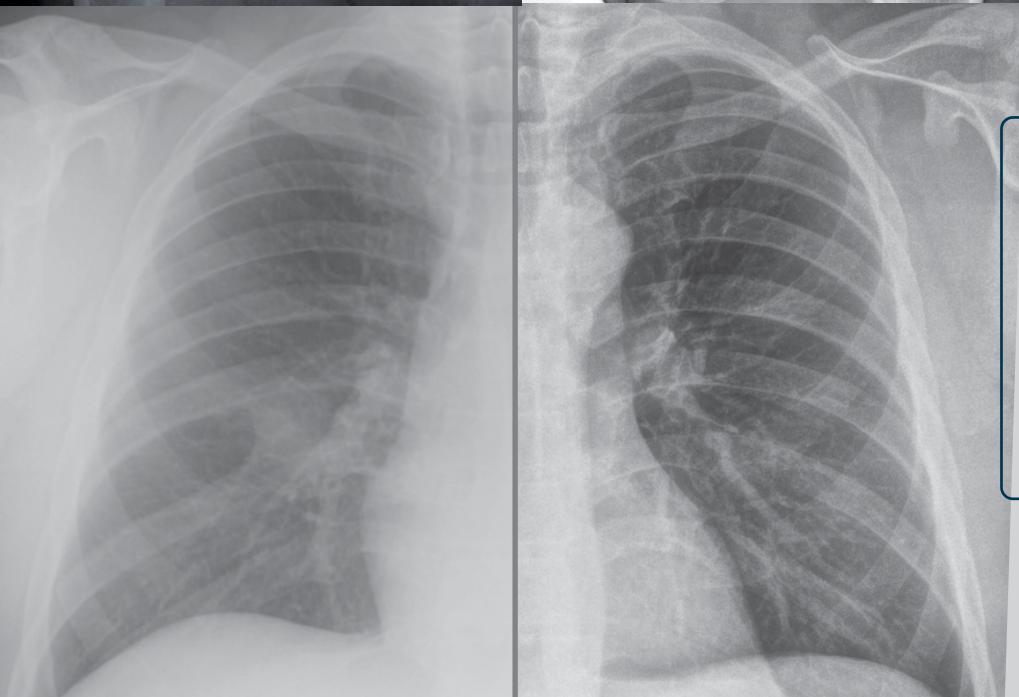


Image processing

Left:
Image with conventional
image processing

Right:
Image with *ORmed™* image
processing



GLI image comparison

Left:
Image without grid

Right:
Same image with GLI
activated

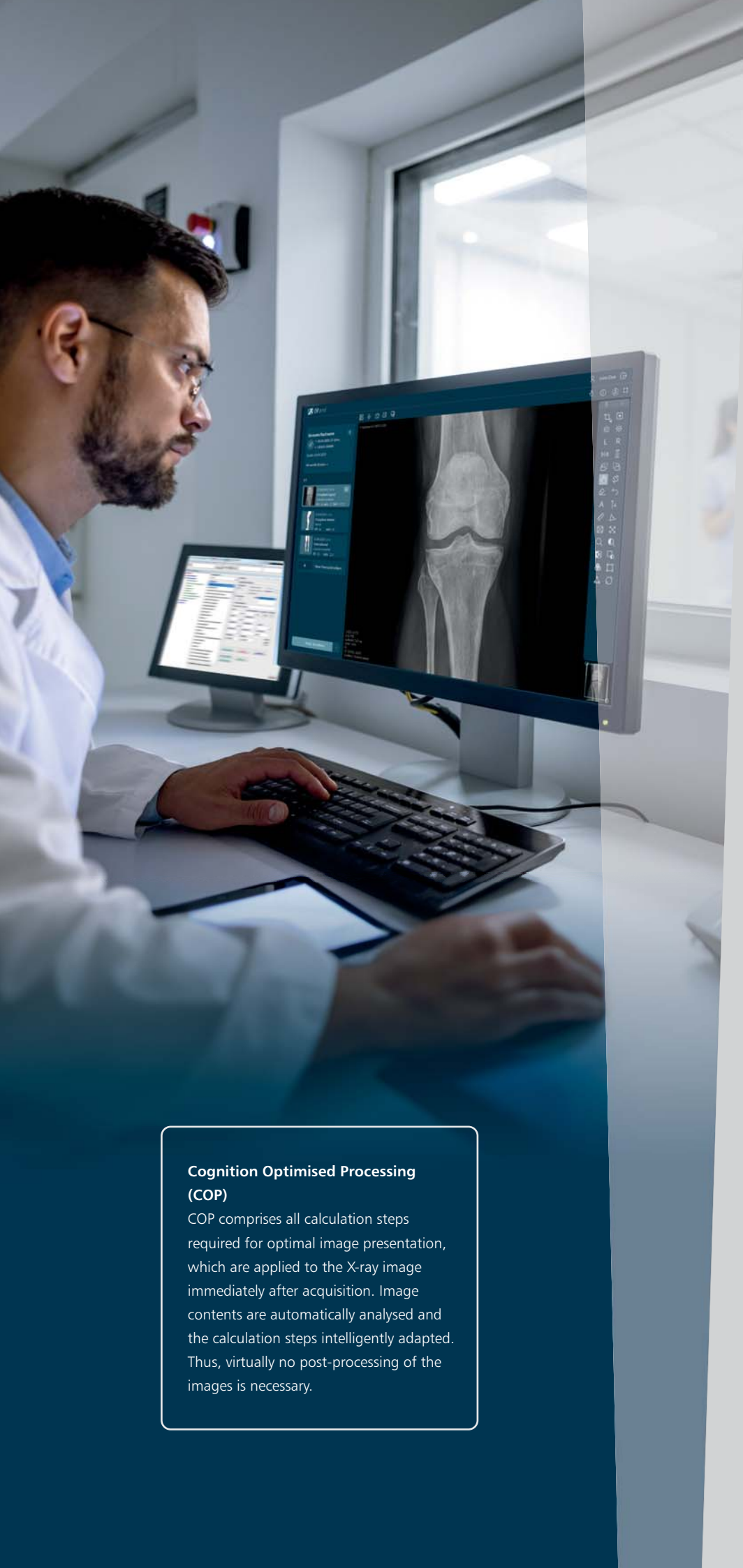
Image processing

Automatic image optimisation
for perfect images

- Consistently high-quality images – usually **no post-processing** required
- Integrated software for **automatic image optimisation with COP**
- **Examination-specific image processing** can be adapted to different anatomical regions and imaging conditions for optimal image calculation tailored to specific customer requirements
- Compensation for exposure differences within defined limits for largely **consistent brightness and contrast**
- **Automatic analysis of soft-tissue and bone structures** for differentiated image display – enabling significantly improved diagnostic assessment
- Multi-frequency analysis for **high image sharpness and detail contrast**
- **Automatic noise reduction**
- **Automatic black masking** to hide image areas outside the collimated field
- Automatic **suppression of grid lines** at suitable grid frequencies

X-ray imaging without a physical grid

GLI enables image display comparable to an acquisition performed with an anti-scatter grid. For suitable examinations, the method can replace the use of a physical grid and supports high-contrast image display without visible grid structures.



Cognition Optimised Processing (COP)

COP comprises all calculation steps required for optimal image presentation, which are applied to the X-ray image immediately after acquisition. Image contents are automatically analysed and the calculation steps intelligently adapted. Thus, virtually no post-processing of the images is necessary.

Optimisation of image data

with the Cognition Optimised Processing

The automatic calculation steps of Cognition Optimised Processing (COP) include:

ADPC – automatic dead pixel correction

Automatically eliminates dead pixels – this reduces the need to calibrate the flat panel

AIAA – automatic image area analysis

Automatically analyses each image for soft tissue and bone structures and applies the most suitable processing algorithms

MFLA – multi frequency level analysis

Analyses each image on various frequency levels for ideal sharpness and contrast

ANF – automatic noise filter

Algorithm for optimal noise reduction

GLI – gridless imaging

Exposures without grid: enables the display of an image as if it had been taken with a grid – this is useful for supine chest exposures (bedside).

AGLS – automatic grid line suppression

Automatically removes gridlines from flat panel images – suitable for grids from 100 LPI to 200 LPI

IBC – intelligent brightness control

Automatically displays the image at the ideal level of brightness

ACO – automatic contrast optimisation

Automatic contrast equalisation across the entire image – this enables the optimal display of soft tissue and bones at the same time

ABBS – automatic black border shutter

Automatically darkens all parts of an image outside the collimated area – varying degrees of transparency are available and manual adjustments are easy to make.

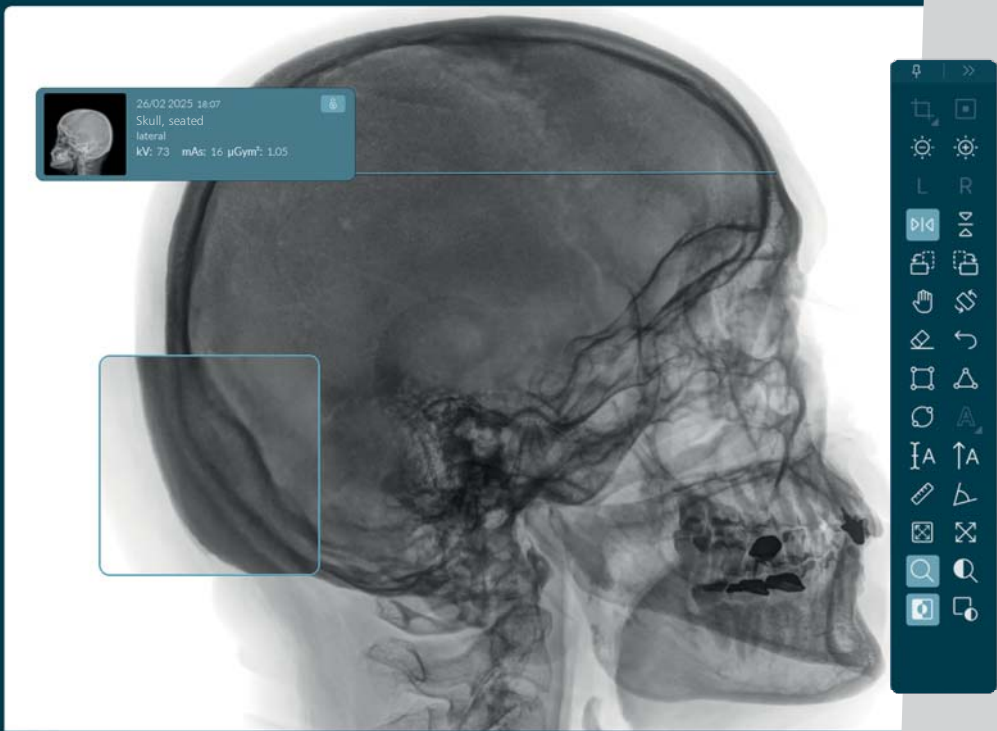


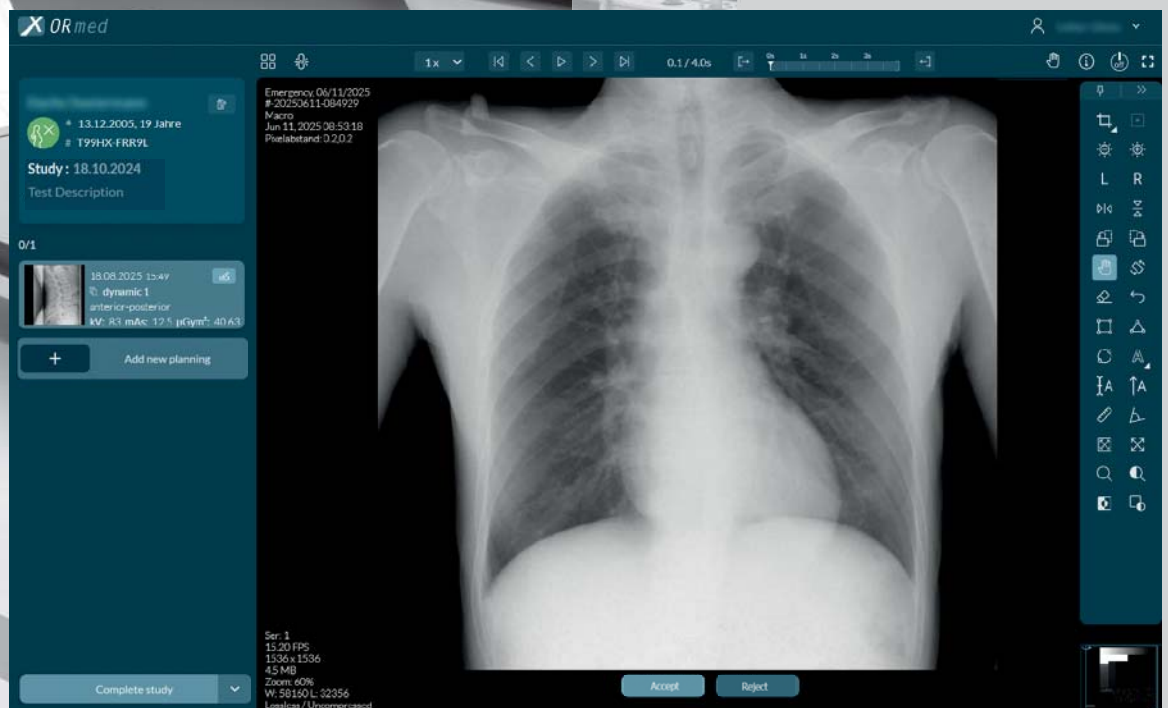
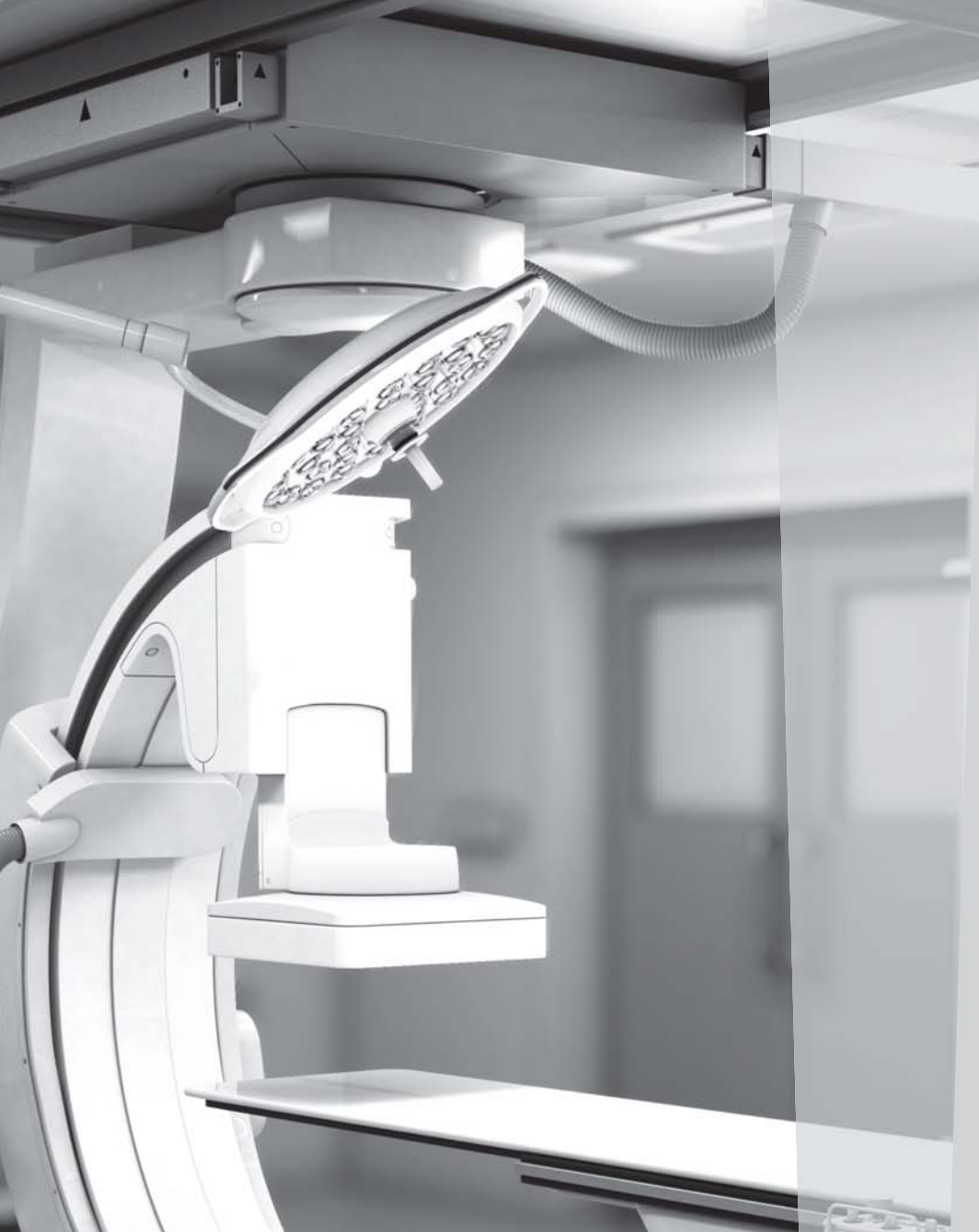
Image display/image processing

Comprehensive tools for viewing,
reviewing and processing X-ray images

- **Integrated image display** with automatic image processing and additional options for manual image optimisation
- **Zoom and Zoom 100%** for detailed viewing of acquired images
- **Magnify and Magnify WWWC** for targeted magnification of specific image areas
- **Crop, pan, rotate, flip and invert functions** as well as automatic and manual Black Mask functions
- **Text and arrow annotations as well as right / left markers** for clear image labelling
- **Measurement of distances and angles** directly in the X-ray image
- **Window Levelling** for individual adjustment of image brightness and contrast
- Display of multiple images in a grid with **synchronised zoom and pan functions**
- Tools for measurement, annotation and detailed image viewing support preoperative planning

Image export and management

- Automatic transfer of completed DICOM images to connected PACS systems
- Direct export of X-ray images from *ORmed*[™]
- Storage of studies and X-ray images in the *ORmed*[™] database
- DICOM-based integration into existing image management and PACS workflows



Dynamic X-Ray Imaging

Acquisition, display and processing
of image sequences [optional]

With its Dynamic X-Ray Imaging mode, *ORmed*[™] supports the continuous acquisition of X-ray images over a period of several seconds. Typically, around 5 to 15 images are acquired per second to visualise movements such as breathing, swallowing or joint movement. Dynamic X-ray imaging requires suitable X-ray detectors as well as powerful X-ray generators and tubes.

Dynamic X-ray imaging is fully integrated into the *ORmed*[™] workflow. Dynamic examinations can be planned using examination templates, and the X-ray parameters can be adjusted to the relevant body region. During acquisition, the recorded images are displayed live in *ORmed*[™].

Benefits of Dynamic X-Ray Imaging with *ORmed*[™]

- Continuous acquisition of image sequences over several seconds
- Typically 5 to 15 images per second for visualising movement
- Live display of acquired images during acquisition
- Image sequences can subsequently be viewed as individual images or as a film
- Adjustable playback speed and frame-by-frame navigation
- Individually selectable start and end points for video playback
- Image processing tools can also be applied to dynamic X-ray images
- Display of DAP and dose rate, where available



Individual adaptation
of the graphical user
interface according to
the specifications of the
OEM partner



Complete control of
X-ray generators and X-ray
systems from various
manufacturers



Efficient and optimised
workflow
&
Simple and intuitive user
interface

Looking for OEM software?

ORmed[™] as a flexible OEM and white-label solution

Manufacturers of X-ray systems can integrate *ORmed*[™] into their system solutions under their own brand as part of an OEM partnership. Using an established software platform reduces in-house development effort and can significantly shorten the time-to-market for new digital X-ray solutions.

ORmed[™] combines key digital radiography functions in a single application: acquisition with DR systems, control of compatible X-ray detectors and generators, professional image processing, image management and communication with HIS, RIS and PACS systems.

The flexible system architecture enables the integration of different hardware components and adaptation to individual system configurations and workflows. Supported detectors and generators are defined on a project-specific basis.

As a white-label solution, *ORmed*[™] can be extensively adapted to meet the requirements of the OEM partner. The look and feel, user interface, corporate identity and corporate design can be tailored to the partner's individual brand identity, allowing the software to integrate seamlessly into the partner's product portfolio.

OEM partners benefit from an established and field-proven software platform, helping to reduce development and integration costs and accelerate the implementation of their own digital X-ray systems.

ORmed[™] therefore provides a powerful and individually adaptable software platform for stationary, mobile and retrofit X-ray systems – from hardware interfacing, image acquisition and processing through to integration into existing IT and PACS infrastructures.



OR Technology

INSTANT DIAGNOSTIC IMAGING.



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Further information
about ORmed™ is available here.