

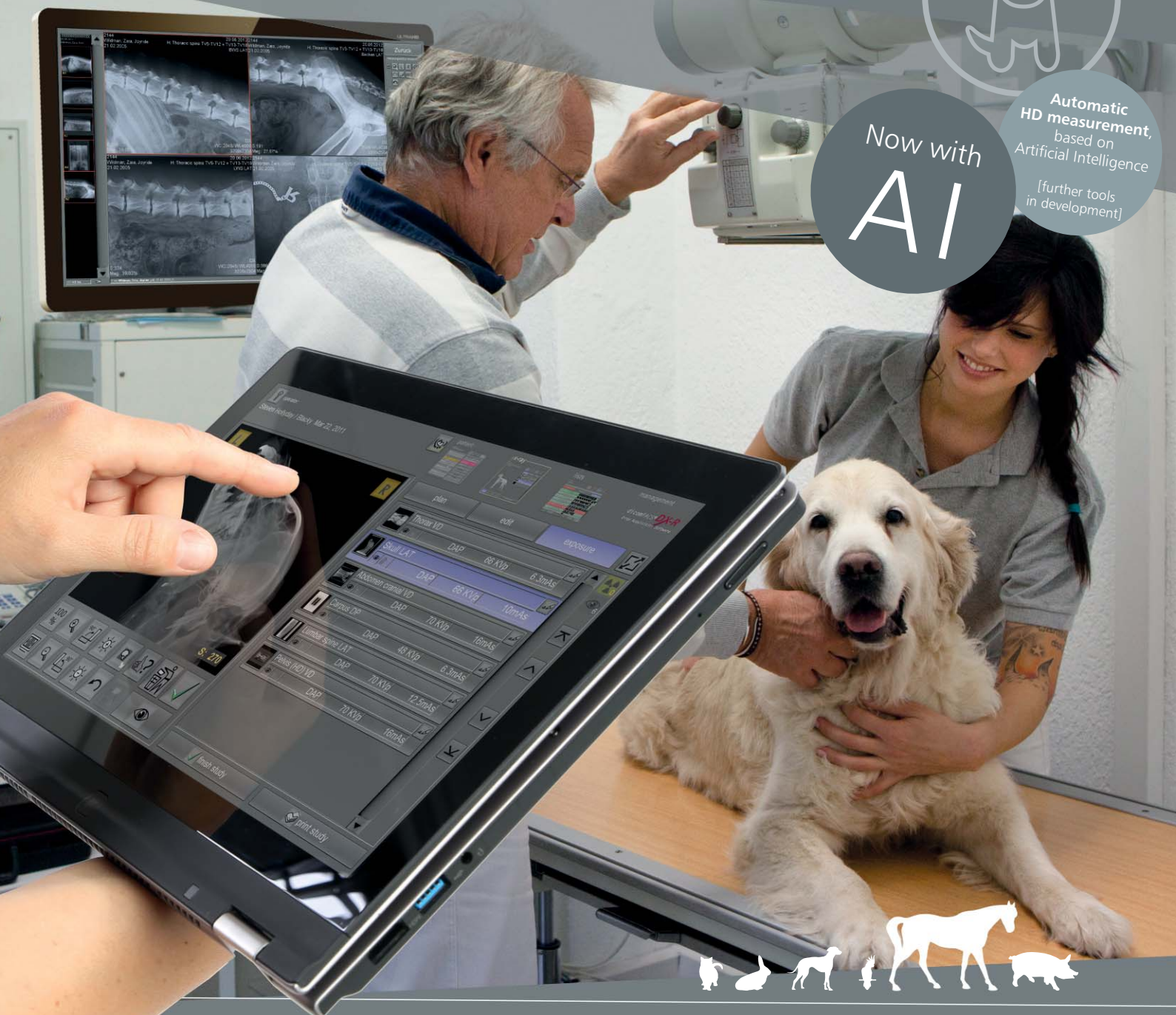
# Acquisition and Diagnostic Software for X-ray images

from DR flat panels or CR systems in veterinary medicine



Automatic  
HD measurement,  
based on  
Artificial Intelligence  
[further tools  
in development]

Now with  
**AI**





# Professional



# acquisition software

## for static and dynamic X-ray images

for small veterinary practices, mixed practices & large horse clinics

*dicomPACS*<sup>®</sup>DX-R is a **professional acquisition software for X-ray images from flat panel systems (DR) and CR units (computed radiography with imaging plates) by any origin**. In addition, the software **controls X-ray generators and X-ray units** of various manufacturers, providing a smooth and systematic workflow. A simple and **user friendly GUI (graphical user interface) operated by touchscreen or mouse** completes the system.

The professional *dicomPACS*<sup>®</sup>DX-R image processing can be adapted to individual users' needs and offers outstanding image quality. It has been specially developed to enable organ specific optimisation, guaranteeing the highest quality X-ray images.

Many helpful integrated functions such as the radiographic positioning guide and intuitive operation greatly simplify daily routine tasks.

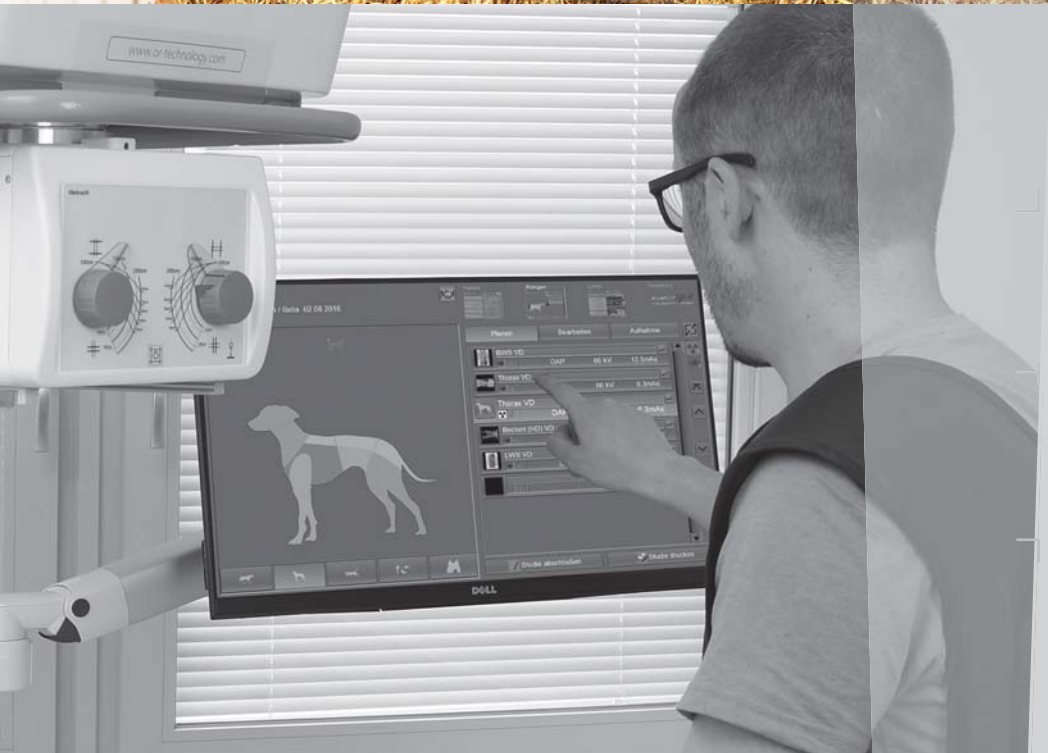
In addition, *dicomPACS*<sup>®</sup>DX-R allows **integration with existing patient management systems**. The integrated full *dicomPACS*<sup>®</sup> viewer even enables the user to diagnose X-ray images within the acquisition software. Therefore, the system can also be applied as fully-fledged diagnostic workstation with the option to upgrade to a PACS (Picture Archiving and Communication System).

*dicomPACS*<sup>®</sup>DX-R forms the core of a digital X-ray unit, whether it is a retrofit system to upgrade existing X-ray units, a complete new unit including generator control, or a portable suitcase solution for mobile X-ray generators.





Storage of recurring examination procedures as macros (e.g. documentation of X-ray services for horse purchase examinations)



The software can be operated via touch screen and guarantees fast, efficient work and an optimal workflow.



Your smartphone as remote control for recording and viewing images during the X-ray process

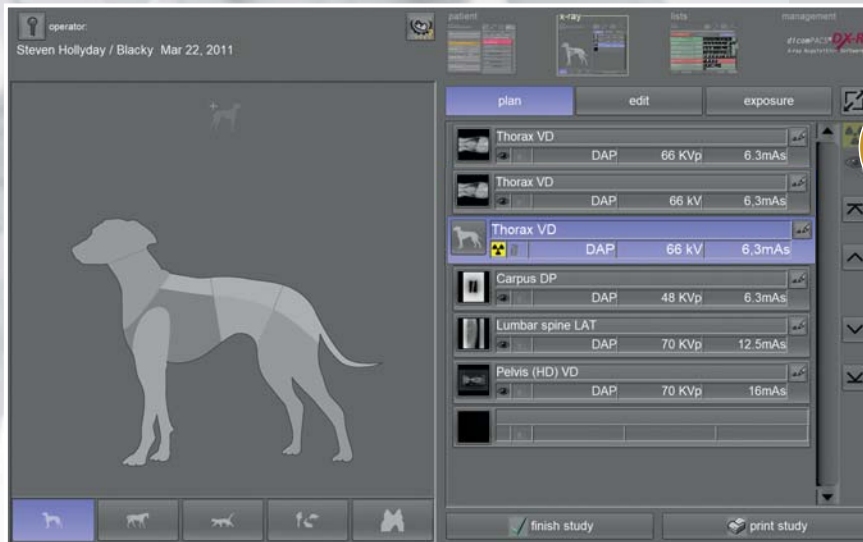
**App**  
„dicomPACS® DX-R  
remote control“  
now with  
**enhanced  
functionality**

# Optimal workflow

The easy-to-use acquisition and diagnostic software offers many advantages:

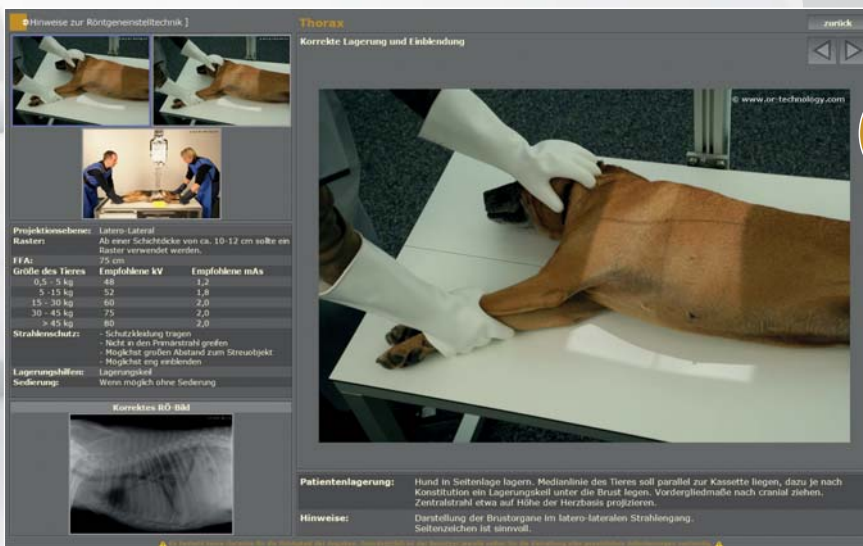
- Modern graphical user interface (GUI) adaptable to almost **any language**
- **Touchscreen** operation – to ensure quick and efficient work and a smooth workflow
- Capture of patient data via **DICOM Worklist, BDT/GDT, HL7** or other protocols – data may also be captured manually
- Use of **DICOM Procedure Codes** for transferring of all relevant examination data directly from the connected patient management system (HIS/RIS)
- **Freely configurable** body parts with more than **400 projections** and numerous possible adjustments already included
- Safe and fast **registration of emergency patients**
- Allows the user to **switch between examinations** of a patient, for instance to avoid having to re-position the patient frequently
- Allows the user to **subsequently add images** to an examination, even after that examination has already been completed
- Special tools for veterinary medicine, such as an extra dialog box for patient and owner data, integrated **hip dysplasia measuring, special image filters** and much more...
- Entry of recurring **examination procedures as macros**, e.g. documentation of X-ray services for horse purchase examinations
- **Fully integrated radiographic positioning guide** for each examination incl. comprehensive notes, photos and correct X-ray images
- Option to **control a digital X-ray system via wireless remote** with the app „dicomPACS®DX-R remote control“ via smartphone or tablet. Incl. display of the worklist, preview of the image taken for checking – directly in the app a X-ray can be repeated or a new one can be planned

# Procedure of an X-ray examination with **dicomPACS® DX-R**



1

Planning the X-ray examination using the body parts – switching to planning for horses/ large animals, cats, exotic/ small animals and dental with just one click



2

Fully integrated radiographic positioning guide for correct adjustment procedure



3

Proposal of the recommended generator values for the respective study (kVp, mAs, focus, etc.) and worklist [right]

4

Preview of the X-ray image (incl. various display options) [left] and work list [right]



5

Findings in the professional PACS viewer incl. further processing, images storage and much more



Now with AI-supported measurement functions\*

6

Extensive search functions and display of the result list



\*Automatic HD measurement via AI-supported algorithms (further tools in development)



Using your  
smartphone as  
a remote control  
for taking and viewing  
images during  
the X-ray process

All info about



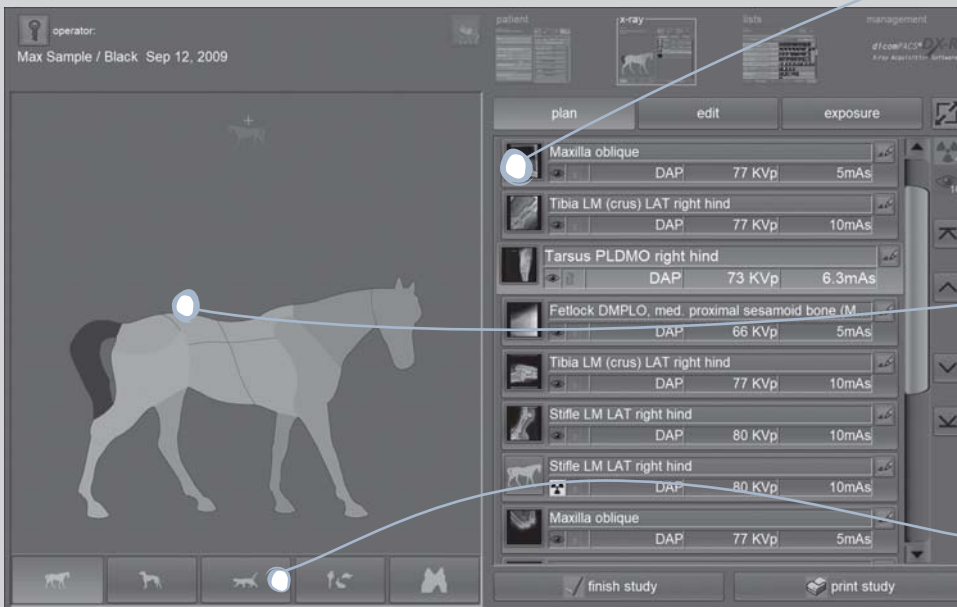
dicomPACS®DX-R  
remote control



# Optimal workflow

Modern graphical user interface with clearly arranged functionalities

## Job creation

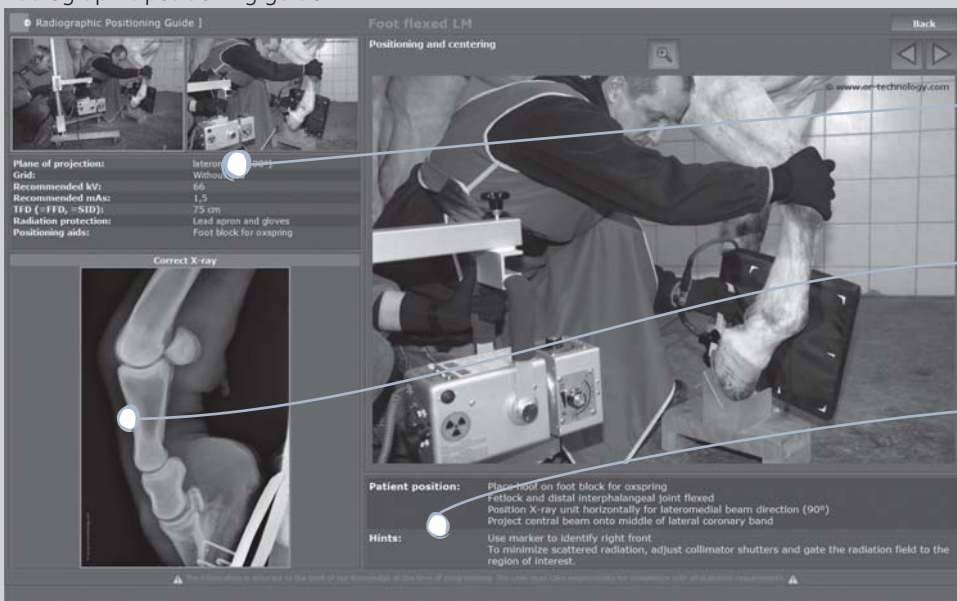


The correct settings for horses, dogs and cats are available at a click

Chart for planning an individual X-ray job

Switch to planning X-ray jobs for horses, dogs, cats, exotics and dental

## Radiographic positioning guide



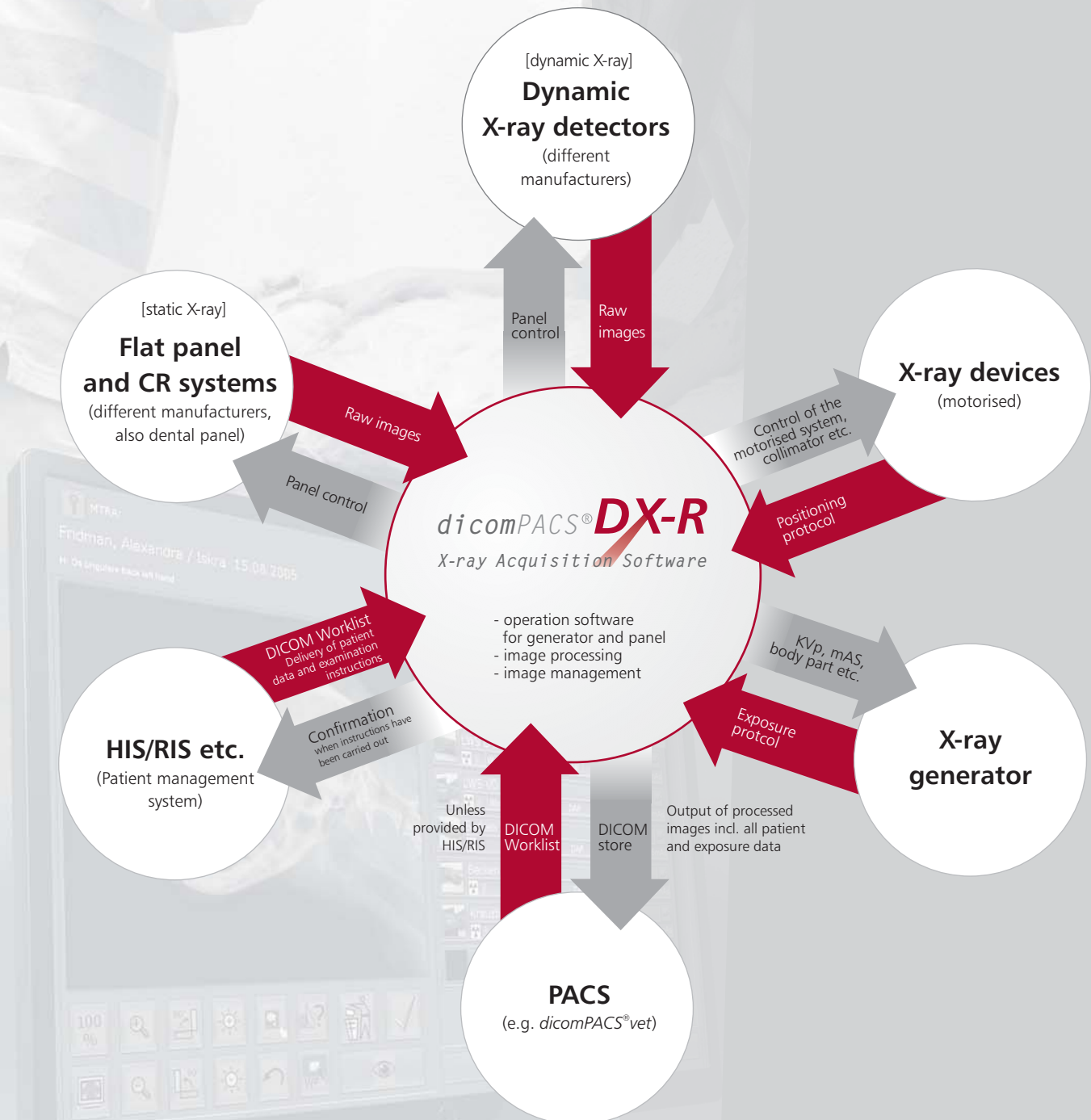
Step-by-step video with sound for patient positioning

Shows an example of a correct X-ray image

Presentation of helpful hints for positioning the patient, central beam, tips and tricks, frequent errors etc.

### Function principles

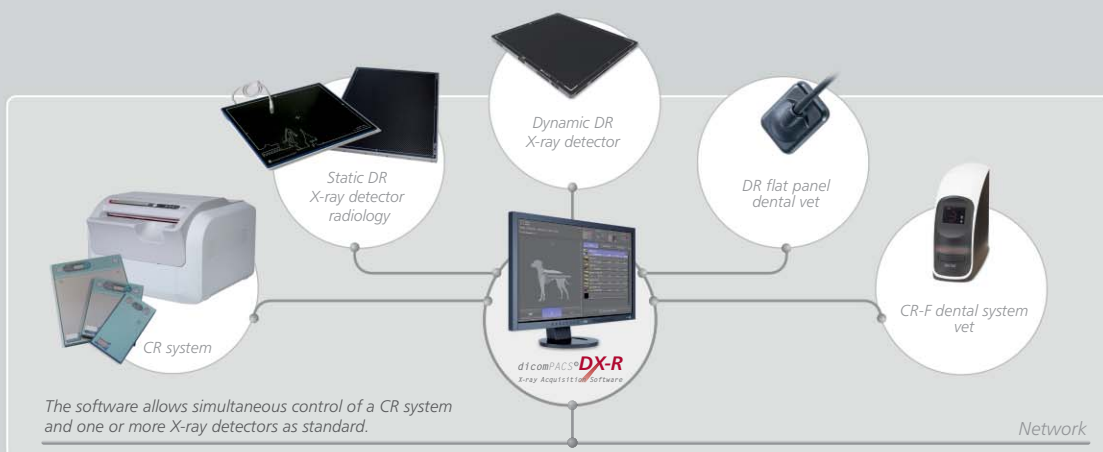
The acquisition software *dicomPACS®DX-R* guarantees an optimal workflow in small practices as well as in large hospitals.

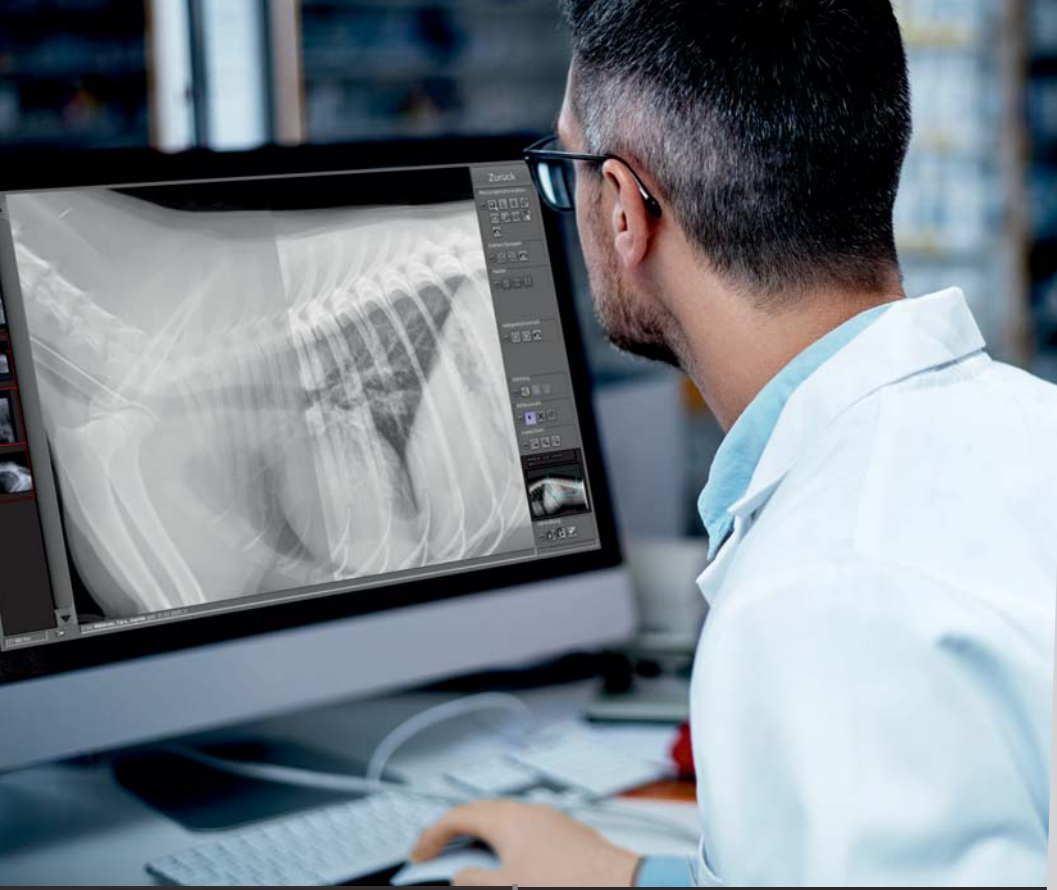


# Flexible image acquisition

## Optimum adaptation to all X-ray systems

- Integration of various **flat panel and CR systems** by different manufacturers **for static and dynamic X-ray** [dynamic x-ray of image sequences see page 28/29]
- Option to **connect up to 3 flat panels** (bucky, wall stand and mobile) to one system
- The **configurable generator interface** enables the user to control X-ray generators or X-ray systems by different manufacturers, delivering the generator settings directly from the software.
- Option for the **parallel operation of a flat panel and a CR system** included in the standard package. The user has the choice to take the next image with either the flat panel or the integrated CR system. This flexibility also provides an **excellent emergency concept** in case of a defective flat panel.
- **AEC** (Automatic Exposure Control) and **ARP** (Anatomical Programmed Radiography) allow the user to **automatically adjust all X-ray options** for each projection with an option to subsequently edit the image manually.
- Integration of **dose area product meters** (DAP) – the readings are saved directly to the relevant image
- Electronic **X-ray log** (optional)





#### **Image processing**

*Left:*

Conventional image processing

*Right:*

dicomPACS® DX-R Image Processing



#### **GLI image comparison**

*Left:*

Exposure without grid

*Right:*

Same exposure with GLI scatter reduction

# Image processing

## Automatic image optimisation for perfect images

- Perfect images at all times – generally **no adjustment** required
- Integrated software for **automatic image optimisation with COP**  
[see page 12/13]
- Professional, **adaptable image processing** for each individual examination to obtain best possible image settings for each customer's needs
- Due to specially developed processes, the image processing allows the user to **vary the X-ray settings on a large scale** while the image quality remains virtually the same (**possibility of dosage reduction**)
- Bones and soft tissue in one image – this enables the user to significantly improve the diagnosis
- **Details of bones and microstructures are very easy to recognise**
- Noise suppression
- **Black border** (automatic shutters)
- Automatic **removal of grid lines** when using fixed grids
- **GLI (gridless imaging)** – reduction of scattered radiation:

### **GLI: X-ray imaging without grid**

Grids are required for X-raying large body parts in order to focus the radiation and reduce scatter, thus improving the contrast and brilliance of X-ray images. The virtual scatter reduction GLI works like a grid and can be used instead of a physical grid for all body regions, including thorax, abdomen, skull, spine, pelvis and upper and lower extremities.



**Cognition Optimised Processing (COP)**

COP contains all calculation steps for an optimal image presentation, which the X-ray image passes through directly after its creation. Image contents are automatically analysed and the calculation steps intelligently adapted. Thus, no post-processing of the images is necessary.

# Optimisation of image data

with the **dicomPACS® DX-R** 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 image processing algorithms

## **MFLA – multi frequency level analysis**

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

## **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**

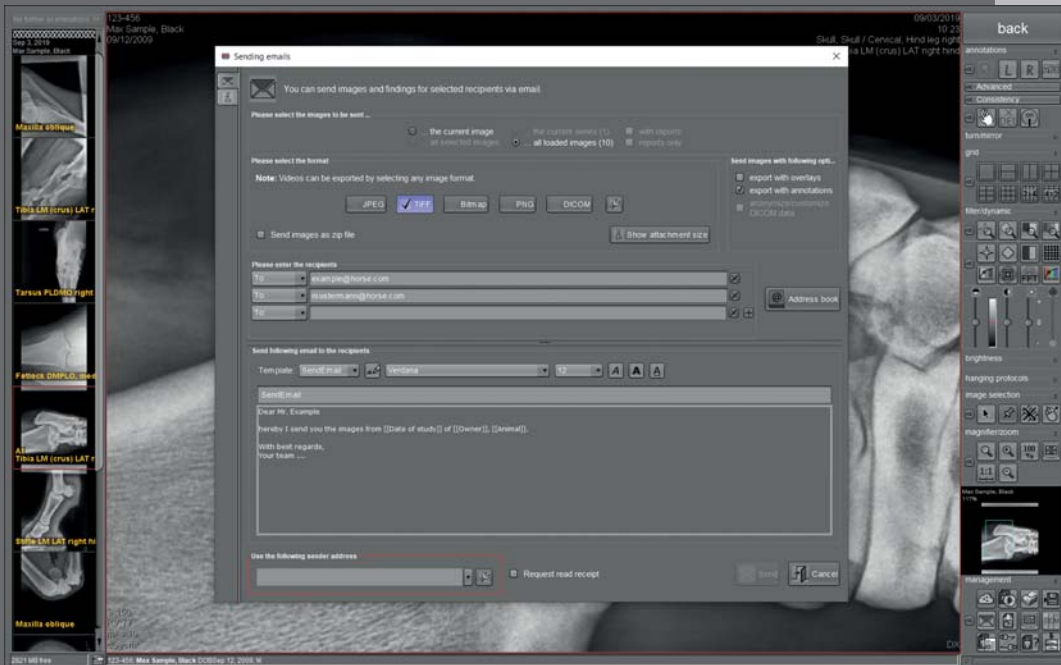
Automatic contrast equalisation across the entire image – this enables the optimal display of soft tissue and bones at the same time

## **ABBS – automatic black border shutter**

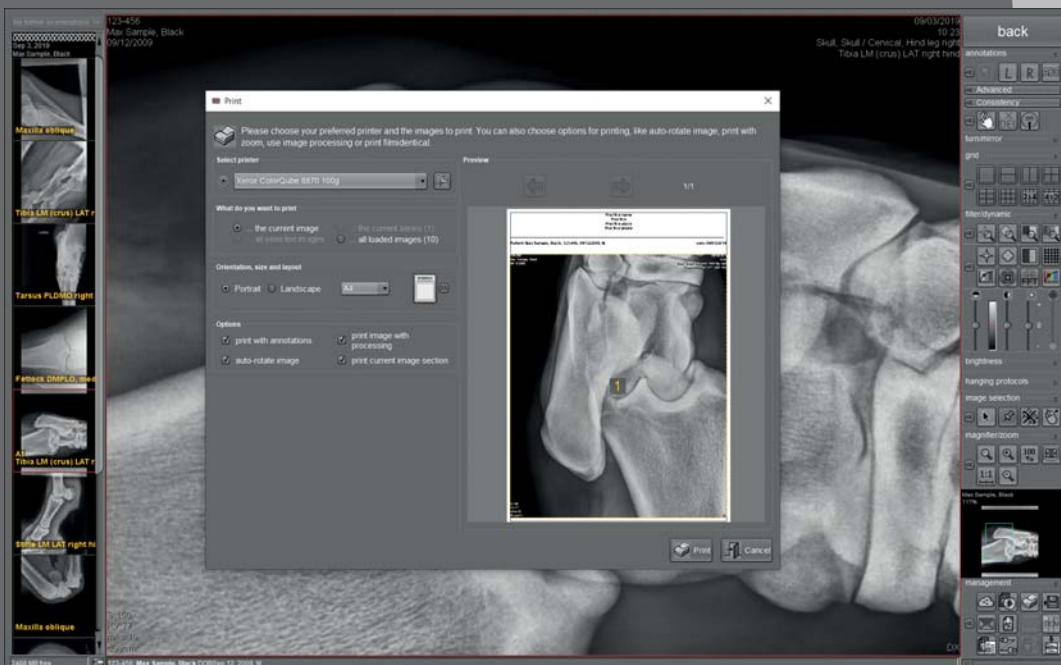
Automatically darkens all parts of an image outside the collimated area – varying degrees of transparency are available and manual adjustments are easy to make.



**Professional diagnosis**  
with the completely  
integrated *dicomPACS<sup>vet</sup>*  
Viewer for image  
diagnosis



**Image export:**  
Send images by email  
directly from the software



**Image export (optional):**  
Print of X-ray images on  
Windows printers (paper)  
and laser imagers (film)



# Image diagnosis

Professional diagnosis and image processing with the integrated viewer

- Completely integrated **dicomPACS® viewer for image diagnosis**, further processing and storage of images in an SQL database incl. image manipulations, export options, layout adjustments, freely configurable user interface and much more
- Stepless **zoom, PAN, magnifyer, ROI, crop, rotate, mirror** etc.
- Insert **image annotations**, e.g. free texts, arrows, ellipses etc.
- **Measure** distances, angles, areas and density
- Adjust window/level options and **gamma correction**, sharpening filters, noise suppression
- Many additional functions such as **heart measurement according to Buchanan**, various measurement tools such as **MMP and TTA, automatic HD measurement for dogs (AI-based), integrated capturing of diagnostic reports** etc.
- Easily upgradable to the **integrated image management system (PACS)**

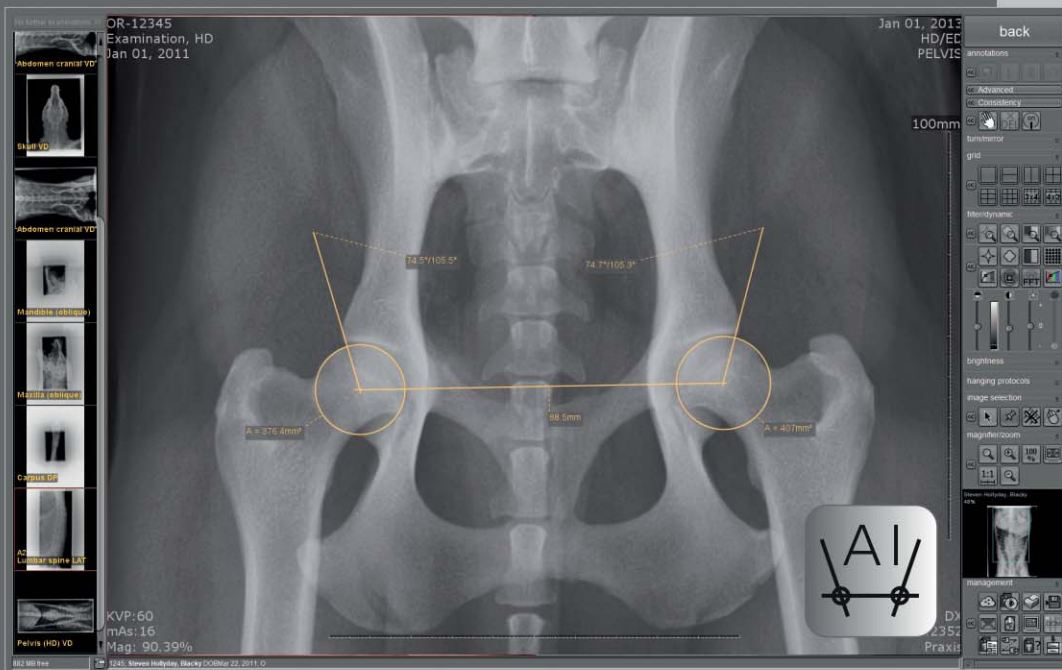
## Image export

- **Export images** to JPEG, TIFF, BMP and DICOM formats
- Print images both on Windows printers and laser imagers via **DICOM Basic Print** (optional)
- Creat **DICOM patient CDs** with free Web viewer
- Inbuilt **email tool** to image distribution - no external email application necessary

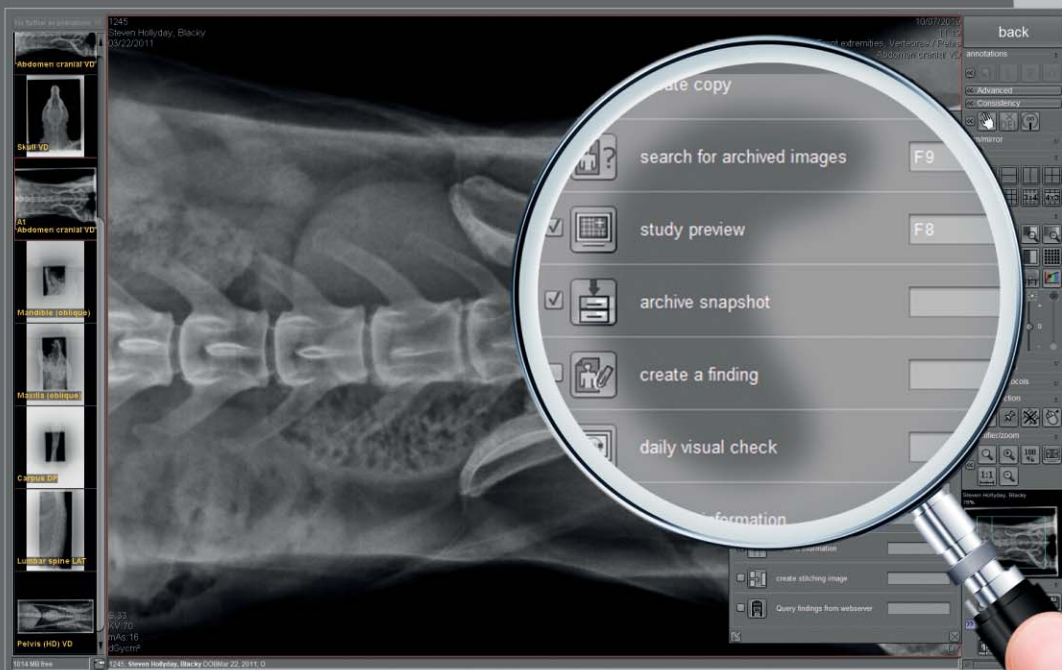
# Integrated Viewer



Integrated *dicomPACS*<sup>®</sup> Viewer for **image diagnosis, further processing and storage of images** in an SQL database incl. image manipulations, export options etc.

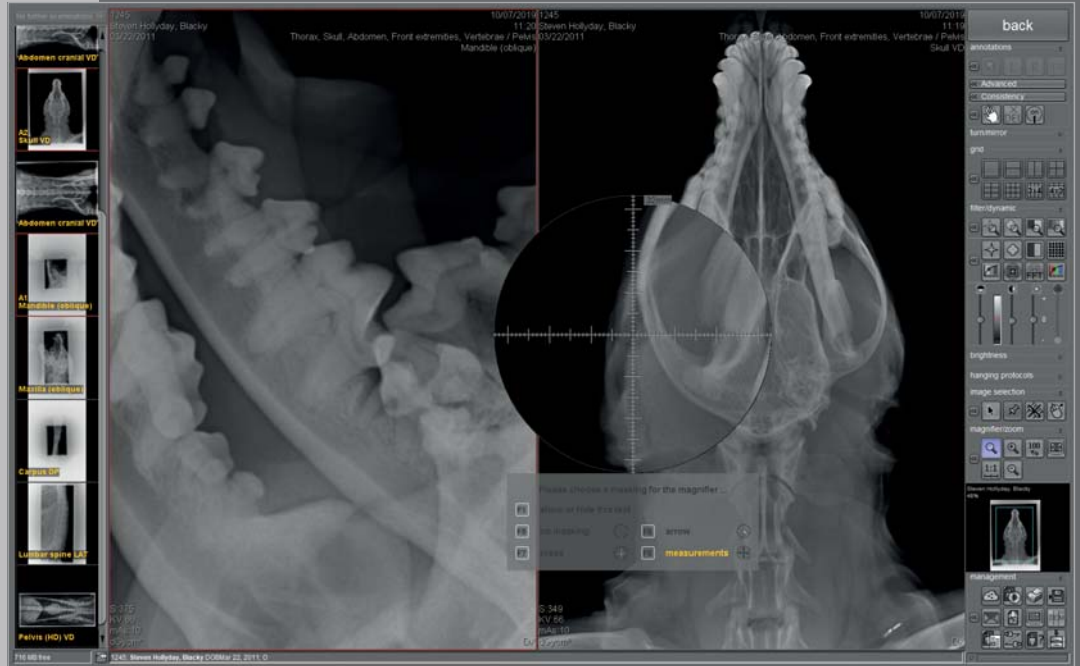


With the help of an algorithm **based on Artificial Intelligence, the HD measurement is inserted automatically.** The measurement can then be manually edited.



The system enables quick and **easy adaptation of the user interface** to individual customer requirements

Useful tools, such as the configurable measuring magnifier, make reporting significantly easier



The stitching module creates a single image from separate digital X-ray images (optional)



Comprehensive search tools allow the comparison of X-ray examinations, even of different patients





# Special functions

## for veterinary medicine

Digital X-ray images have the advantage that exact measurements can be taken at the monitor and the image quality can be improved by a number of manipulations. *dicomPACS®DX-R* now offers some special functions.

### MMP (Modified Maquet Procedure)

The MMP (Modified Maquet Procedure) is a method of measurement for dogs with a cruciate ligament disorder, in which the distance for the placement of the MMP Wedge is determined. Since angles and lines are calculated automatically, determining the wedge size only requires a few steps.

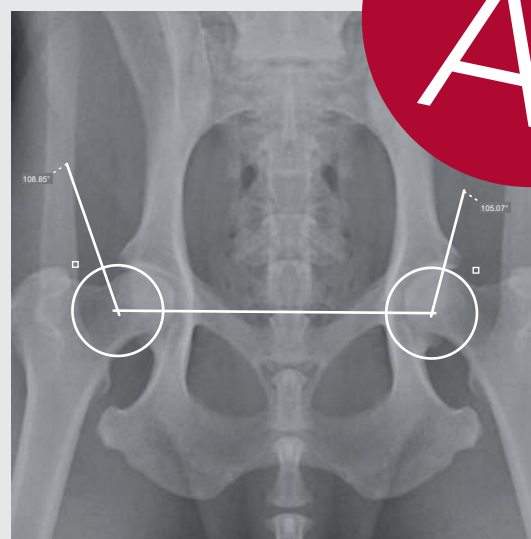
For this annotation we created an illustrated annotation guide with a help text indicating the correct step-by-step method of the measuring procedure. If lines or dots were placed inaccurately, corrections can be made throughout the measuring process by means of the Alt key.



### Automatic HD measuring technique for dogs with AI support

X-ray examination is a reliable way of detecting the severity of hip dysplasia. An important evaluation criterion is the Norberg angle. It is defined as the angle measured between the centre of the femoral head and the anterior edge of the acetabulum.

To ensure a very fast and reliable determination including documentation of the Norberg angle, *dicomPACS®vet* provides a special tool based on Artificial Intelligence. The HD measurement remains editable after automatic insertion. Thus, the centre of the femoral head, the circle for determining the joint margin and the Norberg angle can be corrected manually.

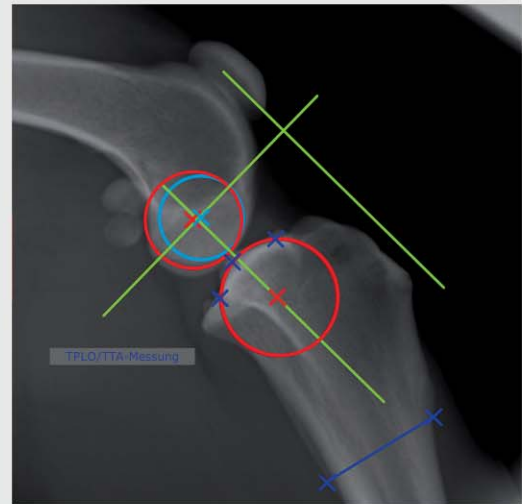


## Special functions for veterinary medicine

### TTA (Tibial Tuberosity Advancement)

The TTA measuring technique for treating crucial ligament ruptures in dogs is one of the numerous functions of *dicomPACS®DX-R*.

When applying TTA (Tibial Tuberosity Advancement) as opposed to TPLO, osteotomy is applied to the non-load-bearing part of the tibia. Accordingly, the TTA measuring tool is used to apply the translated length measurements at the tuberositas tibiae.



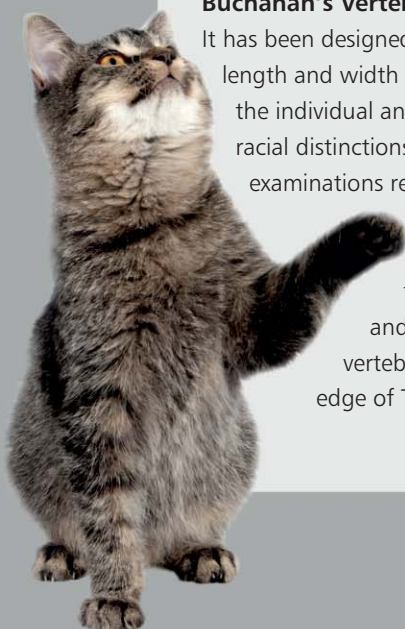
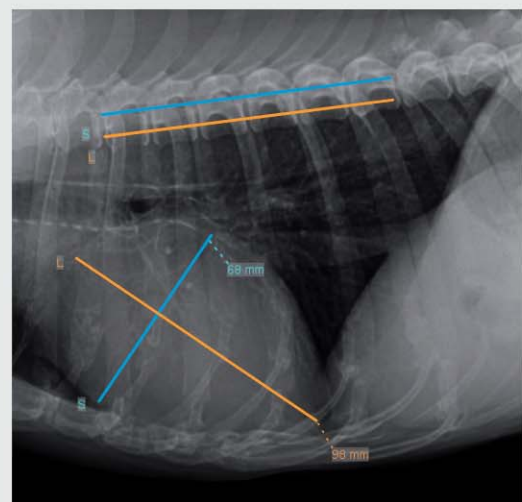
### TPLO (Tibial Plateau Leveling Osteotomy)

It was necessary to implement this function, since crucial ligament ruptures in dogs are increasingly treated by changing biomechanics, using osteotomy – an operation procedure involving precision cutting through the bone and securing it in a changed position by means of plates and screws, with a view to permanently correct displacements. The TPLO measuring tool helps to determine the existing slope of the tibial plateau and its theoretical optimisation. The TPLO provides the surgeon with a promising method to treat crucial ligament ruptures in dogs, allowing the patient to walk again without any pain within a short period after the operation.



### Buchanan's Vertebral Heart Score

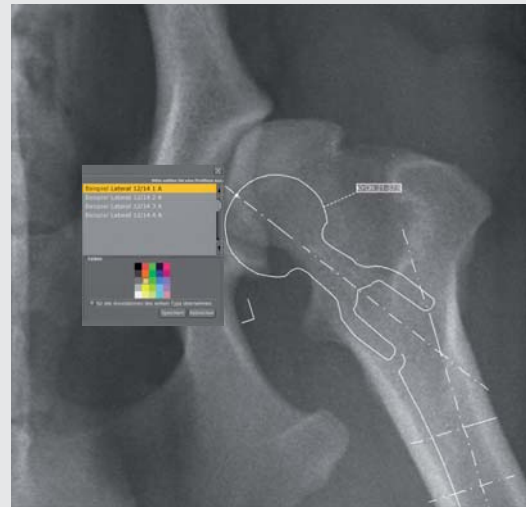
It has been designed specifically for cats and dogs. The length and width of the heart are put into relation to the individual animal's vertebral body width. Therefore, racial distinctions are brought to bear on the examinations results. The Vertebral Heart Score (VHS) is measured by the long axis (L) and the short axis (S) which are transposed onto the vertebral column and recorded as the number of the vertebrae beginning with the cranial edge of T4.



### Prosthesis documentation module (optional)

There are two options to plan an operation with prosthesis templates:

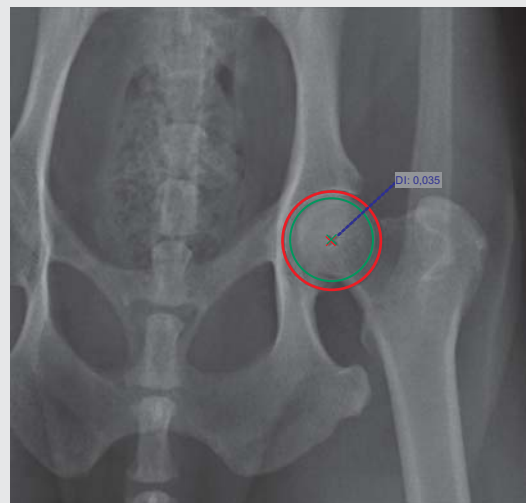
1. Planning and / or documenting operations by digitised prosthesis templates do not require a film identical image display. The prosthesis template is simply selected from a set of templates and displayed in the image as an annotation.
2. Planning with existing transparency prosthesis templates (provided by the manufacturers) requires a film identical image to be displayed on the monitor in the same size as an equivalent analogue X-ray image on film.



### Measuring the distraction index

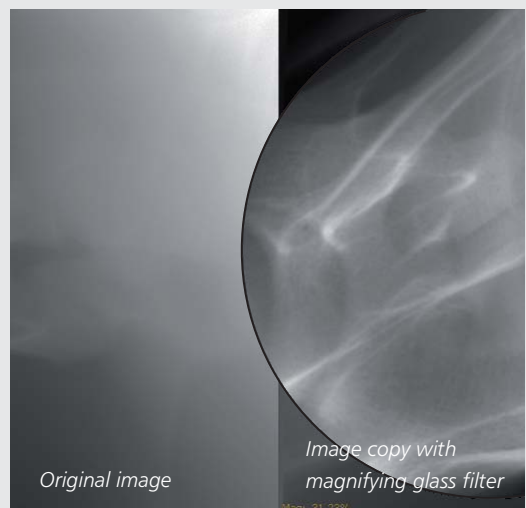
The distraction index measures how loose the hip joints are and is thus an important measuring instrument to assess hip dysplasia.

The distraction index serves to determine the displacement of the femoral head from the joint socket of the hip joint. This measuring function provides an easy tool for veterinary medicine to assess this displacement.



### Special filter for the optimisation of bones and soft parts

Image manipulation of conventional image processing systems is usually limited to brightness / contrast (Window level), dynamics or image sharpness. The disadvantage lies in the fact that changes always affect the whole image. This has the effect that special details do not become better visible without changing the whole image. In addition the manipulations do not accommodate the specific image quality in different regions of the X-ray image. For the best possible visualisation of details, the digital qualities of just the Region of Interest (ROI) should be electronically modified.





#### CR systems

In combination with the professional image acquisition software *dicomPACS®DX-R*, a CR system combines all necessary image processing functions.



#### DR systems

DR X-ray systems can be controlled by the professional acquisition and diagnostic software *dicomPACS®DX-R*.



# Modalities

Which flat panels and CR systems does **dicomPACS® DX-R** support?

*dicomPACS® DX-R* is a generally open system. Its conception and development was independent of hardware manufacturers.

Components from the following manufacturers have already been integrated (We are continuously working on the integration of new models and manufacturers):

## X-ray detectors (DR)

**ATLAIM**

 CARERAY

**DRTECH**

**HAMAMATSU**

 奕瑞影像  
iRay Technology

Kodak | Dental Systems



**KONICA MINOLTA**

 **LG**

 上海品臻影像科技有限公司  
Shanghai PZMedical Technology Co., Ltd.

**RAYENCE**

**THALES**

**Canon CETD**

 **VAREX**  
IMAGING

**VIEWWORKS**

## CR systems

 Divario CR Systems

**FireCR**

**Carestream**  
HEALTH

**FUJIFILM**



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



Orderly and optimal workflow & Simple and user-friendly user interface

# OEM: Software wanted?

Who is interested in **dicomPACS® DX-R**  
from OR Technology?

OEM partnerships provide numerous benefits to manufacturers who are interested in combining their X-ray systems with our *dicomPACS® DX-R* acquisition software under a chosen brand name. The software helps all manufacturers **reduce their development costs** and significantly **shorten the time until market entry for digital solutions**.

*dicomPACS® DX-R* is THE software for the complete integration of X-ray generators, stands, detectors, CR systems, image processing, file management, patient administration and PACS (including cloud computing).

The system is openly programmed and can be **customised to the specifications of the OEM partner**. The Look & Feel can be adapted to the existing CI/CD.

*dicomPACS® DX-R* is a professional acquisition software for X-ray images generated by various X-ray detector systems (DR) and CR units (imaging plate reader). The software also controls the operation of X-ray generators and X-ray units manufactured by various companies, thus ensuring an efficient and orderly workflow. The user-friendly and straightforward visual interface functions via touchscreen and mouse.



**Equine Clinic Cardiff**  
Dr. John Reynolds  
Dr. Steven Williams  
Veterinarians specialising in horses

**X-ray protocol for prepurchase examinations**

Owner: Joe Bloggs  
Name of horse: Demo horse, \*01.04.1998  
UENL number: 013412  
Prepurchase examination number: PE-4163786  
Special notice: Risk

Limbs	Projection	Notice
Front left	Foot 90°	-
1.4.1: measured at right angle/ middle of pedal bone < 1.5 cm - 2 cm; 1.7.5: longitudinal-oval opacity with different interpretation		
Image: 1002 (L_00010267_S1_0002.dcm)		
Limbs	Projection	Notice
Front left	Oxspiring 0°	-
2.2.4: contour margo solearis - irregular; 2.3.3: aligned - difference left from right		
Image: 1004 (L_00010267_S1_0007.dcm)		

Limbs	Projection	Notice
front right	Foot 90°	-
2.2.4: contour margo solearis - irregular; 2.3.3: aligned - difference left from right		
Bild: 1001 (L_00010267_S1_0001.dcm)		
Limbs	Projection	Notice
front right	Oxspiring 0°	-
1.4.1: measured at right angle/ middle of pedal bone < 1.5 cm - 2 cm; 1.7.5: longitudinal-oval opacity was different interpretation		
1003 (L_00010267_S1_0006.dcm)		
Projection	Notice	
Tarsus 45°-70°	-	
werte compact tibia % kompakt; 3.2.5: aligned - difference		
71_0003.dcm)		



The optional report module for X-ray services of equine pre-purchase examinations enables the fast generation of reports by the automatic transfer of the X-ray images as well as the provision of the appropriate diagnostic texts. [currently only available for Germany]

# Upgrading

Which possibilities can be added to the **dicomPACS® DX-R** software?

[optional]

*dicomPACS® DX-R* may not only be used as a software for the acquisition and processing of X-ray images, but can also be upgraded to a MiniPACS or even to an Enterprise Multi Modality PACS. Thousands of installed workstations in over 100 countries (as of 10/2019) prove that our customers are satisfied.

A single workstation system with installed *dicomPACS® DX-R* software can be upgraded with the following options (extract):

## Extended viewer functionalities

- **Generator control** for transmitting of the set parameters for the X-ray image to the generator (for already integrated generators)
- Tools for creating full-leg and full-spine images (**image stitching**)
- Preparation of diagnostic reports with integrated images in MS Word
- Connection of several diagnostic monitors
- Capturing additional patient and examination data and freely configurable **statistical analysis**
- **Video module, processing of CT and MRT series, hanging protocol** and special **solutions for distributed archives**
- Working with **digital prosthesis templates for surgery planning** and documentation - Prosthesis templates can be selected from a set and inserted into the image as annotations
- Fast and easy **preparation of equine pre-purchase examinations** with automatically inserted X-ray images (only for Germany)
- And much more...



operator: admin

Configuration of macros/examinations

Dynamic X-Ray	Consistency test 70kV, coll. AEC
unknown procedure code	Consistency test 70kV, coll. custom set
Consistency test 70kV, coll. AEC	Consistency test 70kV
Consistency test 70kV, coll. unknown set	Consistency test 100kV, coll. AEC

Black Mask and Labeling | X-Ray Guide & Demo Images

Exposure Technique | Exposure Index

Examination Data | Image processing

Name of examination:  
dynamic X-Ray

Projection (PA ...):  
Orientation (right ...)

Image laterality:  
unpaired

Change font colour for the examination:  
Choose colour | Sets the default colour

Procedure Code:  
DICOM SRT  
dicomPACS DX-R  
DR-4-14-189 | Standard  
dynamic X-Ray  
dynamic X-Ray

Changing the Capture Mode

Patient name: Examination

Play: 1.64s

0.0 0.0

Working mode: soft tissue cat

Working mode: soft tissue cat

Patient name: Examination

Play: 1.64s

0.0 0.0

Capture mode: thorax cat

Capture mode: thorax cat

# Dynamic X-ray

## Acquisition, diagnosis and archiving of image sequences [optional]

In addition to classical X-ray examinations, it is sometimes necessary to clarify special suspicious facts and unclear diagnoses further in the context of a radioscopic examination. *dicomPACS®DX-R* supports this procedure with the special imaging mode "Dynamic X-Ray", in which the region to be examined is continuously "X-rayed" with pulsed X-rays and displayed directly on the diagnostic monitor.

Dynamic X-rays also allow the evaluation of moving structures, such as the respiration-dependent movement of the diaphragm or the beating of the heart. This examination method is also necessary for various contrast agent examinations, especially of the gastrointestinal tract, which can be excellently imaged with *dicomPACS®DX-R*.

*dicomPACS®DX-R* supports dynamic X-ray with selected X-ray detectors of different resolution and size.

### Advantages of dynamic X-ray with *dicomPACS®DX-R*

- Before continuous shooting, it is possible to take still images to check the exposure parameters.
- After the recording is finished, the length of the image sequence or Windows level values can be adjusted, for example.
- Various diagnostic options are available, such as playing the sequence as a single frame sequence or as a video via cine loop.
- The recordings can be saved as uncompressed DICOM or in JPEG 2000 format.
- The recording sequence can also be saved as a series of individual images (required for PACS systems that do not support multi-frame DICOM).



MRI/CT



DR system



Dental X-ray  
Vet CR/DR



OP  
documentation



X-ray  
generators



CR system



Patient CD  
writer



Ultrasound



Video projector



Document  
scanner



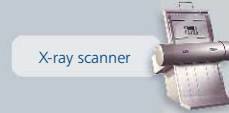
Laser printer



Equine pre-purchase  
examination



Laser imager



X-ray scanner

### Image sources

### Image display

## dicomPACS<sup>®</sup>vet network



Diagnostic station



Backup server

### Image viewing

### Picture archiving



Viewing station



DICOM cloud

ORCA<sup>®</sup> Archive

### Image processing



Multi monitor  
workstation

Interfaces to practice  
management



Home workstation



Telemedicine



Cloud sharing



Cloud solution  
ORCA<sup>®</sup>

### Functional principle

The diversity of *dicomPACS<sup>®</sup>*



# Upgrading

## Upgrade to an integrated multi-modality PACS

[optional]

**DICOM reception** from any DICOM sources, e.g. CT, MRI, scintigraphy, ultrasound etc

**DICOM distribution** with freely configurable rules

**DICOM DIR import** for archiving patient CDs from other manufacturers

**DICOM Query/Retrieve** (SCP/ SCU)

DICOM Auto **Pre-fetching**

**DICOM Print Server** to convert DICOM Basic Print into Windows print jobs

**DICOM Compression** according to freely configurable rules

DICOM CD/DVD Backup Module, also via robot systems

Integration of **film and document scanners**

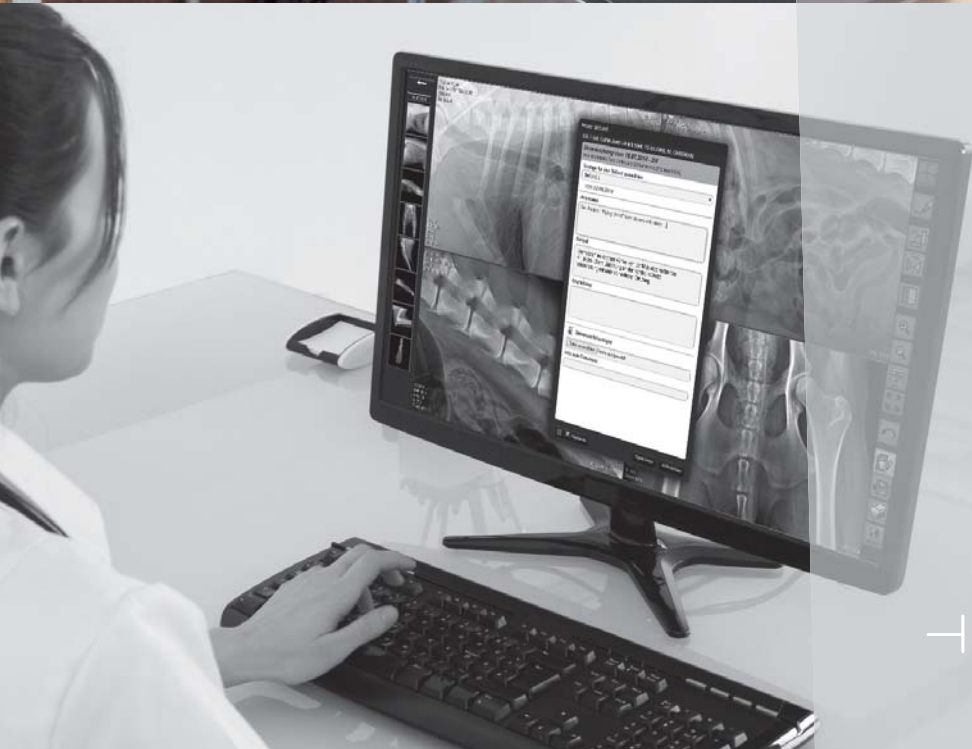
Digitalisation of standard and non-standard video signals, e.g. **endoscopy, angiography** etc.

Fully automatic **synchronisation** of two image databases, e.g. laptop and main archive

**Exchange of images and diagnostic** reports between individual clinics by means of teleradiology

**ORCA® – cloud-based solution:** enables worldwide image distribution to referring doctors and patients via the internet [detailed description on page 32-35]

**Web-Viewer dicomPACS® MobileView:** distributes images within a hospital and displays the images in a web browser [detailed description on page 36/37]



### Benefits of Cloud archiving through ORCA®

**Minimal expenditure:** ORCA® does not require investing in expensive infrastructure such as server and data cables.

**Scalability:** The amount of memory required when using ORCA® is determined by the demand.

**Long-term security:** ORCA® archives data on many individual European servers in professional and air-conditioned data centres. Server technology is continuously updated.

**Accessibility:** ORCA® stands out by being highly accessible. Since data is saved with multiple redundancy, ORCA® guarantees more continuity than a mere server solution.

**Environmentally friendly:** ORCA® is sustainable – through the optimised use of resources and their distribution.

**Location-independent:** ORCA® guarantees access to archived patient data – worldwide.

**Simplicity:** ORCA® allows easy access to data from any computer – from your workplace, from the comfort of your home or from any other computer or tablet PC.

**Stress-free:** ORCA® deals with everything – no need to struggle with loose network cables, removed hard drives or software problems.

# Modules & Features

**ORCA®** – Cloud-based telecommunication solution and data archiving for images, documents and diagnostic evaluations for stationary and mobile applications [optional]

Even for state-of-the-art practices and hospitals, the rapidly rising data flood of digital images, diagnostic reports and other documents is becoming increasingly challenging. Current legislation demands safe and long-term storage of patient data which generally requires investing in expensive hardware infrastructure as well as maintenance and corresponding staff costs.

To this end, we developed the *ORCA®* Cloud archiving solution, thus paving the way for cost-effective and safe Cloud-based data archiving in practices and clinics. *ORCA®* offers two application options:

→ **ORCA® Archive:** Safe, long-term archiving of patient data with intelligent usage of internal databases



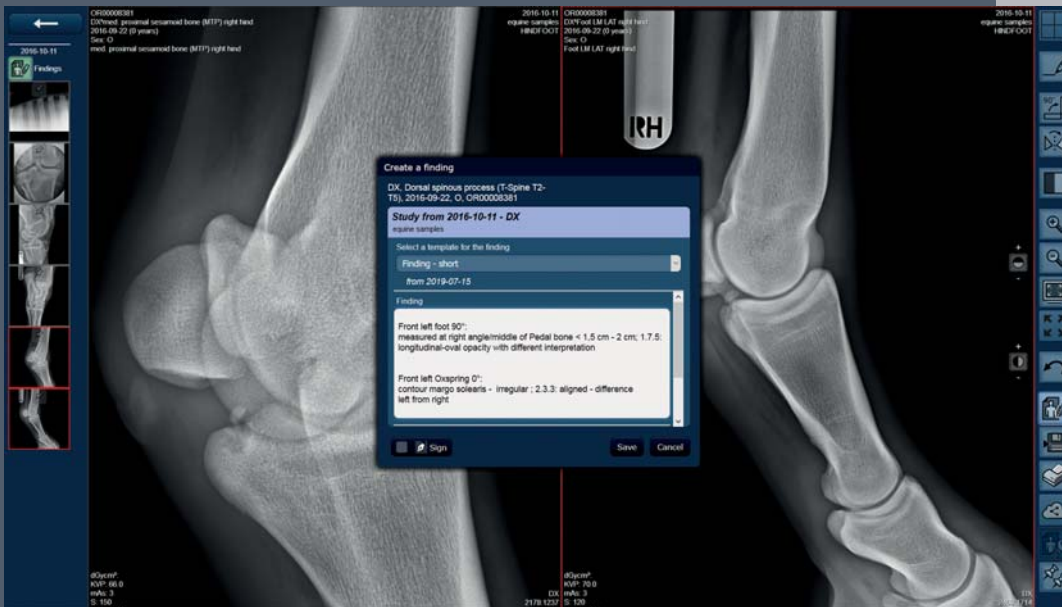
→ **ORCA® Share:** Communication platform (exchange of images and diagnostic reports) with colleagues and specialists or as an easy way to forward image data to patients (an alternative to creating patient CDs)



Data is archived exclusively on European servers with the relevant safety certificates.



Print images and documents



Medical reports including customisable report templates

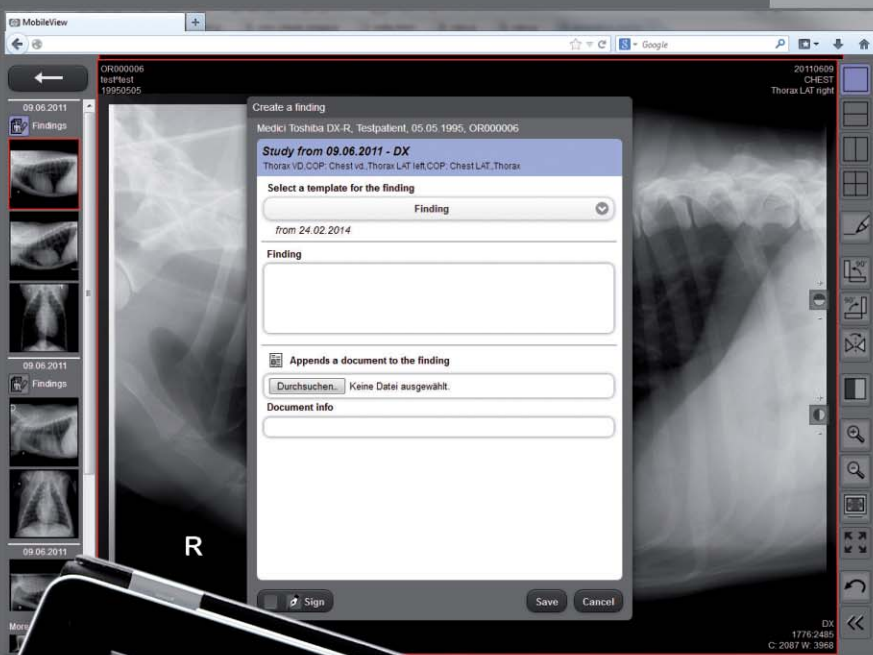
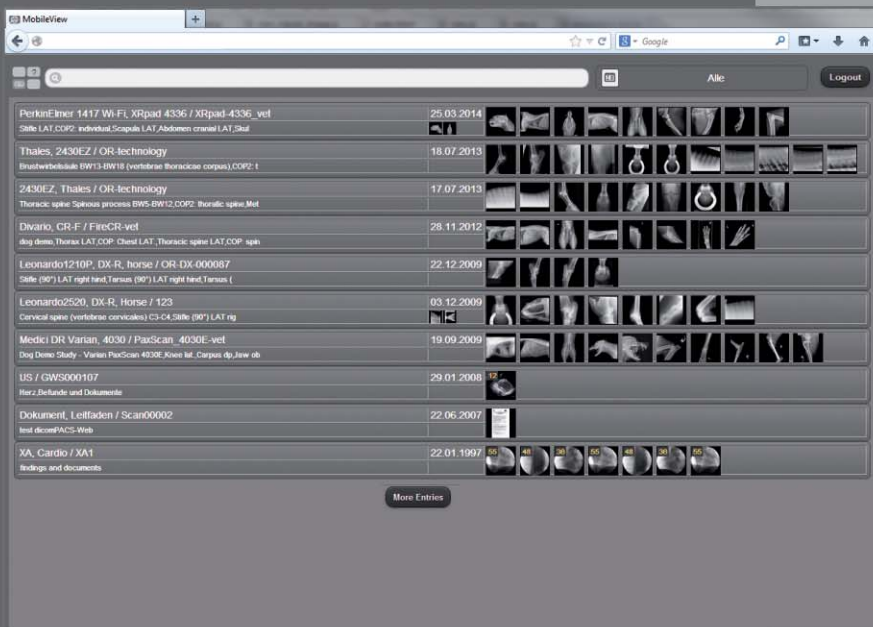


Various functions for image processing: image inversion, brightness and contrast adjustment, resizing

## ORCA<sup>®</sup> View basic functions of the DICOM cloud

ORCA<sup>®</sup> View is a web-based image viewer offering file sharing capabilities (email with integrated address book, image anonymisation, etc.), print and export functions, as well as all basic functions for viewing and analysing images:

- Image annotation in various colours (e.g., arrow, text)
- Measurement (e.g., length, angle)
- Reports including customisable report templates
- File attachment
- Image comparison using different grids
- Image rotation and mirroring
- Brightness and contrast adjustment, image inversion, zooming in/out
- Full screen and fit image modes
- Image panning
- Image series scrolling
- Cine loop for multi-frame series and MRI/CT
- Document and image export
- Document and image printing



### The main advantages at a glance:

- The web-based viewer offers an important range of functions of a professional PACS viewer:
  - Draw annotations
  - Measurements
  - Registration of diagnostic findings
  - Attach documents
  - Draw lines and arrows (multi-coloured)
  - Compare images in different grids
  - Adjust brightness / contrast
  - Flip and rotate images
  - Adjust brightness / contrast
  - Invert, zoom in / out
  - Full screen, fit image
  - PAN
  - Scroll through image series
  - Cine loop for multi frame series and CT / MRI
  - Export images and documents
  - Print images and documents
- High flexibility through the use within various internet browsers, including Microsoft Internet Explorer, Mozilla Firefox, Google Chrome, Safari 5, Safari for iPad and Android browser
- Intuitive operation
- Supports the multi-touch operating technology (e.g. zoom in and out with two fingers)
- Supports full screen mode
- Allows accessing the *dicomPACS*<sup>®</sup> database without any additional modules
- Allows playing series (e.g. ultrasound)
- High loading speed with modern streaming technology



Further information about *dicomPACS*<sup>®</sup> *MobileView* is available here:

# Modules & Features

Web-based viewer solution ***dicomPACS<sup>®</sup> MobileView***  
for mobile or stationary devices [optional]

The web-based viewer *dicomPACS<sup>®</sup> MobileView* counts among the many extension modules of *dicomPACS<sup>®</sup> vet* diagnostic software. **Virtually browser-independent, it allows the viewing of image material on mobile devices also outside a clinic or a practice.** The vet or the veterinary assistant can access all image material from the *dicomPACS<sup>®</sup> vet* system worldwide via a network connection.

In addition to mere diagnostic evaluation of images, the *dicomPACS<sup>®</sup> MobileView* viewer **allows diagnostic reports to be captured and exported.** Documents may be attached and exchanged. All diagnostic reports of a patient are always displayed. Individual diagnostic reports of a patient may be selected for exporting and formatted.

There are many application possibilities, *dicomPACS<sup>®</sup> MobileView* can be installed in addition to existing *dicomPACS<sup>®</sup> vet* diagnostic modules (diagnostic workstations). It is irrelevant whether the software is used on a network PC (pure viewing workstation) or / and on a mobile device.

*dicomPACS<sup>®</sup> MobileView* can be installed in addition to existing *dicomPACS<sup>®</sup>* diagnostic modules (diagnostic workstations). It is irrelevant whether the *dicomPACS<sup>®</sup> MobileView* software is used on a network PC (pure viewing workstation) or/ and on a mobile device. **Worldwide access to** all image material is available via a network connection, e.g. VPN access via the internet, of the used mobile device to the central *dicomPACS<sup>®</sup>* system in the office or clinic.

# OR Technology

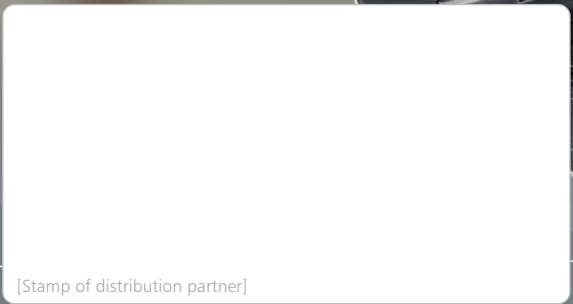
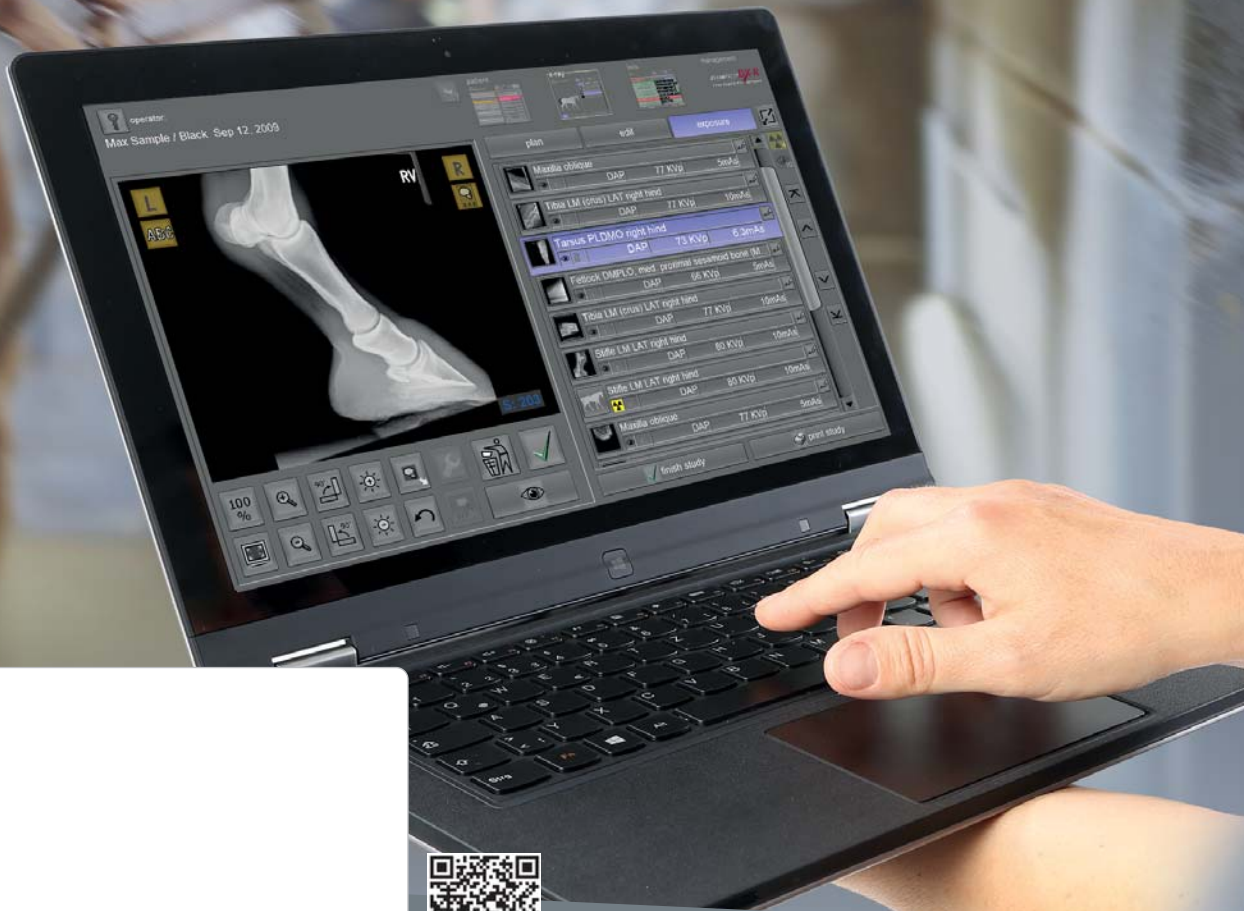
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Further information about  
OR Technology is available: