

# **Digitec**

Providing software solutions and developing radiological image processing since 1985

presents



TIRESYA is our intelligence, our innovative future. It holds our know-how, our experience our software solutions. Tiresya represents our **expertise**, **knowledge** and our **outlook** on the **ticated AI algorithms**.

approach to radiology. It is the pulsing heart of in the field, as well as the most innovative features in digital radiology and the most sophis-

**TIRESYA** is the core of our products











#### DIGITAL RADIOGRAPHY **ACQUISITION SOFTWARE**



## **Modality:**







STATIONARY SYSTEM

MOBILE SYSTEM

TABLET



# **Our Plus**

#### **WORKSTATION** CONSOLE

Our stand-alone software can be supplied on medical or consumer PC (already configured)

# MULTI DETECTOR SYSTEM Compatible with the main static and hybrid detectors on the market X-RAY DEVICES INTEGRATION Generators, accessories and 3rd party systems

#### **SMART** USABILITY

User-friendly interface, touch oriented,multi resolution format, multi language support, customizable UI (on request)

#### **DICOM 3.0** COMPLIANCE

Store, Storage Commitment, Query/ Retrieve, Worklist, MPPS, Print, CD/DVD/USB, Verify, Dose SR

# PROPRIETARY ADVANCED PROCESSING ALGORITHMS

FOR IMAGE QUALITY

Grid Suppression, Software Grid, Stitching, Dual Energy, Tomosynthesis, Boost Lines, Bone Suppression



# Our strength is in details

## **Grid Suppression**

Identifies the presence of the typical disturbance caused by an anti-scatter grid and eliminate the artefact.



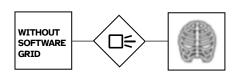


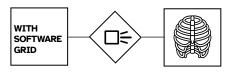
WITHOUT GRID SUPPRESSION

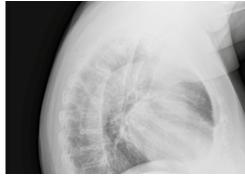
WITH GRID SUPPRESSION

## Software Grid

Estimates and removes scatter from images acquired without physical grid enhancing contrast









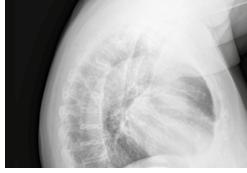
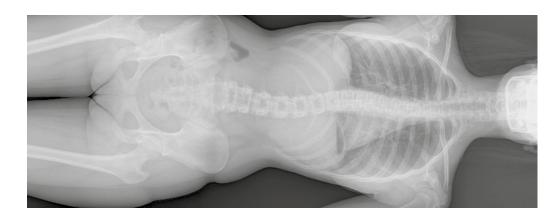


Image **WITHOUT**Software Grid

Image **WITH** Software Grid

## **Stitching**

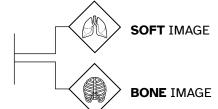
Stitches automatically a series of exposures into a full optimized body image

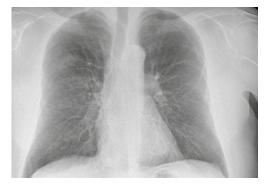


## **Dual Energy**

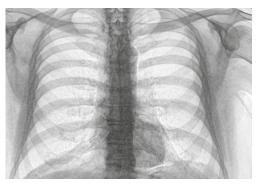
Allows to separate soft tissue and bones in different images obtained from double chest x-ray exposure







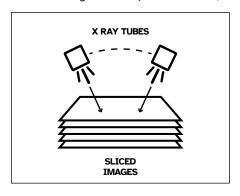
**SOFT** IMAGE soft tissue component



**BONE** IMAGE hard tissue component

# Tomosynthesis and Iterative Tomosynthesis

Tomosynthesis is an x-ray imaging modality technique that provides volumetric information about anatomical structures. The iterative approach is a novel reconstruction, where the algorithm operates in a recursive fashion, updating the estimates of the object volume until it converges to an optimal solution, so that the reconstructed image has less noise.





## **Boost Lines**

Boost Lines is an image-processing algorithm to enhance the visibility of tubes and catheters in chest x-ray images, giving a better information about their positions and placement.







CHEST X-RAY IMAGE WITH BOOST LINES



# **Our future**\*

# Anatomical Artificial Intelligence

Artificial Intelligence algorithm that classifies image regions into anatomical parts, shutters, direct irradiations and metal objects



Artificial Intelligence algorithm that automatically removes bones from single shot chest x-ray images

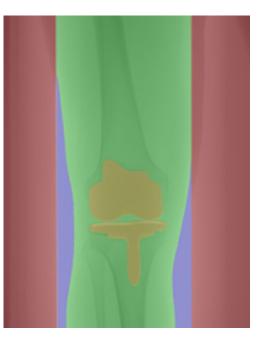


CHEST X-RAY IMAGE WITHOUT BONE SUPPRESSION



CHEST X-RAY IMAGE WITH BONE SUPPRESSION





## **Auto rotate**

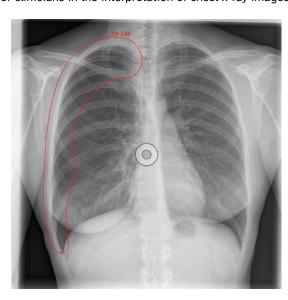
Artificial Intelligence algorithm that automatically rotates the image in the standardized direction for diagnosis





# **CAD Algorithms**

Artificial Intelligence solution to detect abnormal findings and assist radiologists or clinicians in the interpretation of chest x-ray images.



## Camera 3D

Integrated in our acquisition software, it allows:

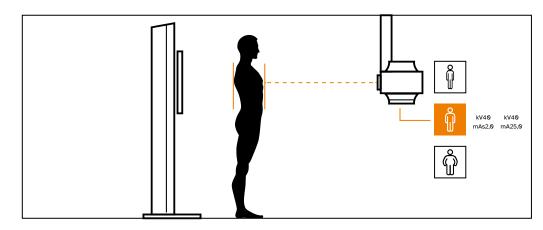
Patient positioning support

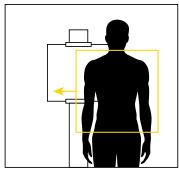
Patient size suggestion

Simplification of the acquisition workflow

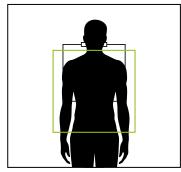
Reduction of errors and repeats

Radiation dose optimization









**READY** FOR X-RAY





# Image quality

High quality images with automated processing based on anatomy and projection



# Easy of use

Intuitive user interface and simplicity of use



# Time saving

Optimized workflows to streamline procedures and reduce time



# **Increased Productivity**

Accurate and timely diagnosis thanks to the reduction of inaccuracies and the elimination of repeated examinations





TIRESYA: not only a software platform, but it is also a concept, a work method, a philosophy. What does this mean in real terms?

- A look and feel interface for all our software
- User-friendly interface
- Touch-oriented mode
- High quality images

- Automatic image processing
- Easy reading of the images
- Optimized radiation dose
- Supports radiographers and x-ray technicians



### TIRESYA is the core of our products

ctions are applied across the entire sectors in which we operate: human, range of our products, thus extending

All of Tiresya's properties and fun- our know-how to all the application dental and veterinary.



# From radiography to artificial intelligence



Ver. 2023 Rev. 4