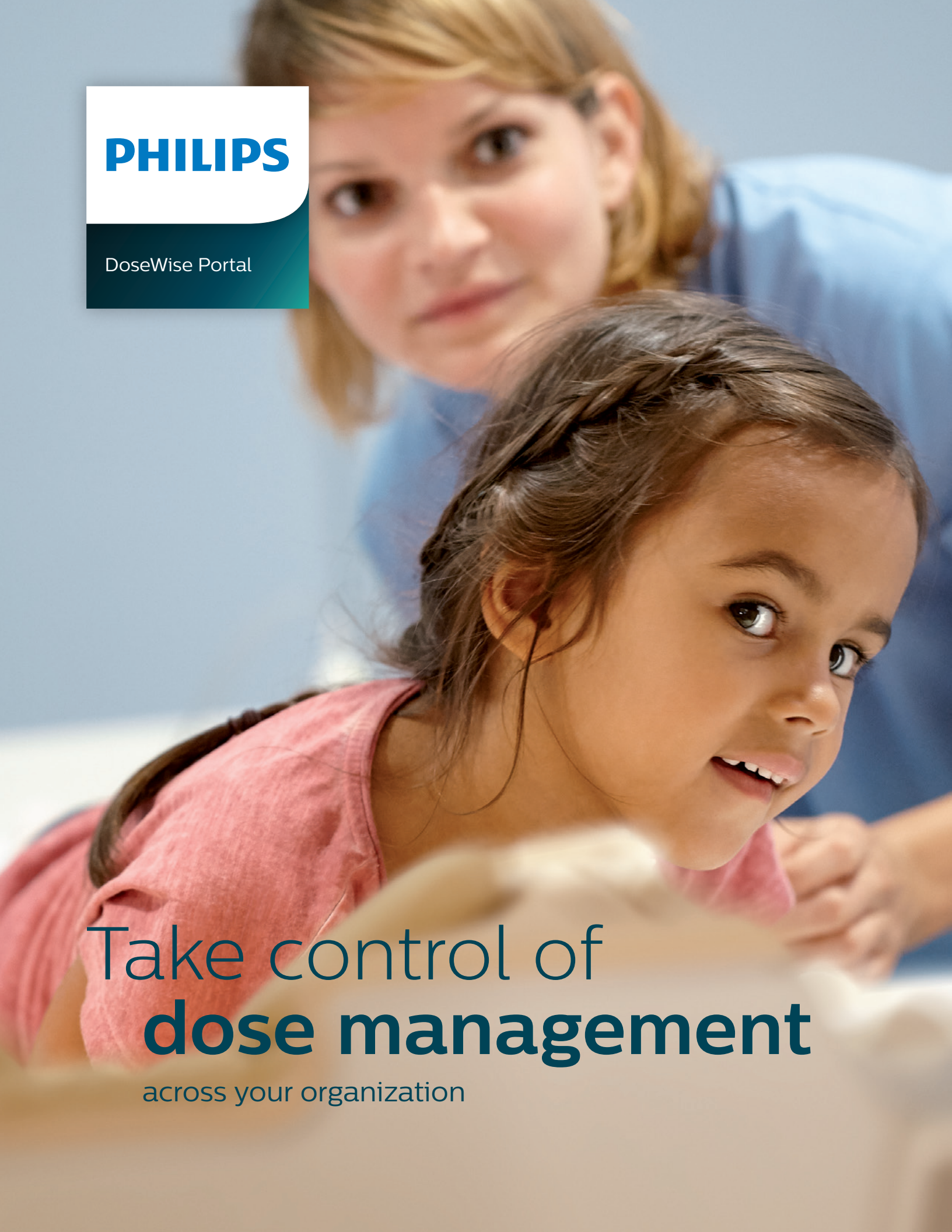


PHILIPS

DoseWise Portal

Take control of **dose management**

across your organization

Key benefits

- Make data-informed decisions to improve patient care with support from dose tracking and advanced analytics
- Enhance efficiency and system utilization through an understanding of staff and equipment performance
- Demonstrate a commitment to quality, satisfaction, patient and staff safety with increased transparency

Enable dose management across your organization

Take control with DoseWise Portal

Hospitals and health systems are discovering new and more effective ways to provide high-quality, cost-effective care and improve patient and staff satisfaction. A critical component is strong radiation control and management.

Industry organizations have come forward to reinforce their commitment to reducing radiation exposure. The new Joint Commission Standards (for USA) require more from hospitals concerning new insights into imaging radiology dose data. Effective July 1st, 2015, hospitals must track, record, and improve dose performance against external benchmarks. In Europe, new regulations are expected to be in place by 2018.

The Philips DoseWise Portal solution is the only turnkey dose management solution that gives you control over patient dose and staff occupational dose. It increases transparency across the entire enterprise and enables you to make data-driven decisions concerning quality initiatives and radiation management.

Table of contents

Reduce radiation risk 4

Make data-informed decisions 6

Enhance efficiency and system utilization 8

Demonstrate a commitment to patient and staff safety 10

Connect your organization 12

DoseWise Portal key capabilities 15

Reduce

radiation risk

Healthcare professionals commit to new industry standards

No doubt you've considered the growing importance dose tracking and dose optimization holds for your patients and staff. You've made the reasonable decision to act aggressively to establish a dose management program. You are not alone.

Professional associations including European Society of Radiology, American College of Radiology, and Radiological Society of North America, have formed steering committees to detail guidelines for improved radiation safety at hospitals. They are helping to define the parameters.

ALARA and good dose management
While the risk of radiation exposure through imaging scans is thought to be low and the diagnostic rewards generally high, any excess radiation is unacceptable. The principle of ALARA (As Low As Reasonably Achievable) is an acknowledged mandate followed by all imaging professionals. It is with this in mind that you strive to provide your patients with the best care possible at low dose. To accomplish this and adhere to ALARA, all radiation emitting imaging systems in your department/hospital/enterprise must be optimized and dose to patients justified.

An innovative solution
Integrating every system into one radiation dose management program is not an easy task. Diverse manufacturers, multiple modalities, and various models make this difficult. Philips steps up to the challenge by developing a single portal through which you can manage all of your X-ray modalities. Regardless of type, age, or manufacturer, any system can be linked to DoseWise Portal as long as some basic data elements are available.

This cohesive integration gives you access to dose data, in a patient-centric, or staff-centric view that may have been unavailable before. Acting as the core component in your radiation dose management program, DoseWise Portal provides actionable information in the form of tailored reports, alerts, and advanced analytics.

Prepared for regulatory compliance
A strong dose management program can help you achieve compliance with new regulatory standards and reduce risk. DoseWise Portal is uniquely positioned to assist, as it collects, measures, analyzes, and reports patient radiation exposure across your organization. And it is the only solution that combines real-time staff radiation exposure with patient data in the interventional setting in combination with DoseAware Xtend.

Are you ready for the new standards?

The Joint Commission's revised requirements for diagnostic imaging services (USA) expect each hospital to:

- [ ] Document radiation dose index by exam and by machine
- [ ] Review and analyze dose data
- [ ] Identify and review dose metrics that exceed expected ranges
- [ ] Compare data with external benchmarks for each X-ray machine
- [ ] Review and keep CT imaging protocols current with accepted standards

Make data-informed decisions

Optimize patient dose through exam protocol management

Collecting, managing, and analyzing relevant dose information offers you the ability to improve the quality of patient care through informed decision-making.

When real-time and historical patient dose data from across imaging modalities is centrally managed, you are empowered to standardize protocols throughout your enterprise. In this way, you optimize radiation dose for your patients. By continually reviewing and refining best practices, you identify opportunities to implement improvement initiatives.

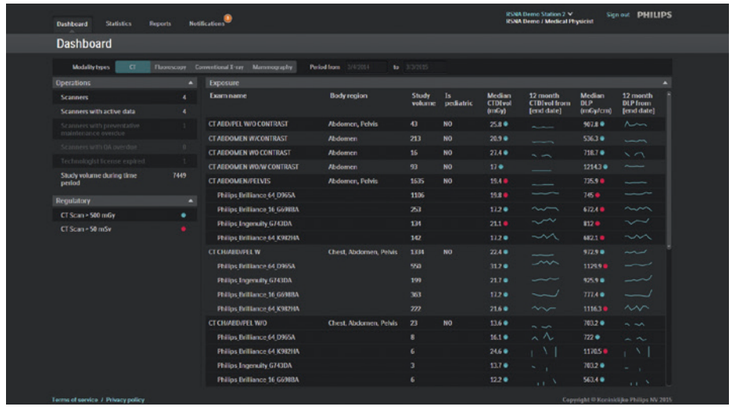
Intuitive data analysis
DoseWise Portal provides advanced analytic tools such as customizable dashboards and drill-downs for multi-vendor/multi-modality imaging systems. Aggregated data can be reviewed in multiple ways. Use the interactive charting tools to create bar charts, scatter plots, box plots, and tables that display key dose metrics. To refer to specific graphs and charts in the future, just pin them to your dashboard where they will automatically refresh with live data.

Options for analysis are broad. For example, you can compare study dose metrics for all X-ray modalities, stratified by site, device, study description, and patient age range. You can analyze dose based on exam type, body part, technologist, or imaging unit. Additionally, you can configure custom dose alert levels and thresholds, set by exam and by site, with optional email notifications.

Versatile data sharing
All of this information can be accessed via role-based user accounts (such as medical physicist, site administrator, and radiologist), allowing each staff member the ability to view reports that are suited to their particular need.

DoseWise Portal receives data directly from the modality, or from your PACS. Individualized dashboards can be exported as PDF and sent via email to compare results with colleagues from around your institution or around the world.

By simplifying implementation of best dose management practices, DoseWise Portal can help you establish a stronger quality system for patient care.



- Comprehensive view of exams and equipment across your organization
- Receive alerts of items requiring your immediate attention

- Track dose utilization through standard charts or customize dashboards to meet your organization needs
- Create your own dashboard of graphs and charts that are useful to you
- Data analysis and statistical details easily within reach

- Within a few clicks retrieve individual patient views with cumulative dose histories
- Email notification of patients exceeding alert values of your choosing

Enhance efficiency and system utilization

Manage cost by understanding staff and equipment performance

With coordinated radiation control comes efficiency and performance. Based on a better understanding of staff and machine performance, you can improve department efficiency and system utilization.

Designed to connect multi-vendor systems, DoseWise Portal helps your organization define patterns and initiate improvement – improvement that not only impacts the patient experience, but that of your staff as well.

System utilization
Using the DoseWise Portal dashboards, you can easily see when certain systems are underutilized or have begun to show undesirable trends related to radiation dose. Once identified, you can further investigate to determine the root cause and make a plan to drive improved efficiency.

Real-time staff measurement
DoseWise Portal is the only dose management solution that combines real-time staff radiation exposure and patient data via a proprietary interface with Philips DoseAware Xtend* (part of the DoseAware family of radiation monitoring devices.)

Real-time staff dosimetry drives awareness and promotes a culture of radiation safety among your interventional staff. As associated behavior becomes the norm, standardization, and efficiency gains can be realized. With DoseWise Portal, staff dose data is now quantitative and easily accessed. A permanent radiation safety threshold can be established.

* DoseAware Xtend is not a legal dosimeter and does not replace a TLD or film badge

DoseAware Xtend – Detailed procedure-based feedback

DoseAware Xtend monitors radiation exposure to your staff in the highest exposure environment in the hospital – the interventional suite. Immediate feedback on scatter dose during the procedure allows the team to take real-time action and move toward reducing exposure. Post-procedure, retrospective analysis can simultaneously analyze staff and patient dose and give insights to the root causes of radiation events.

Demonstrate a commitment to patient and staff safety

Dedication to satisfaction and quality

With increased transparency, you can establish a point of differentiation from other caregivers based on your commitment to quality, satisfaction and safety.

DoseWise Portal serves as an evidence-based foundation to make continuous dose management process improvements. As the only dose management solution that includes real-time staff radiation exposure, it advances your ability to promote workplace safety and increase staff satisfaction. It also helps facilitate regulatory compliance using intuitive software that securely integrates with medical information systems, such as PACS, RIS, and dictation systems.

All information exports to the American College of Radiation (ACR) Dose Index Registry (DIR) and can report cumulative patient dose. Dose information can be added to the dictation report to assist in fulfilling regulatory requirements.

A patient-centric approach
DoseWise Portal is part of DoseWise Solutions, our patient-centric approach to promoting radiation safety throughout the continuum of care. By integrating tools, training, and advanced product technologies, you can achieve diagnostic image quality at low dose.

Take control of patient care, staff safety, and regulatory compliance with Philips DoseWise Portal. Experience its exceptional benefits as the core component in your radiation dose management program.

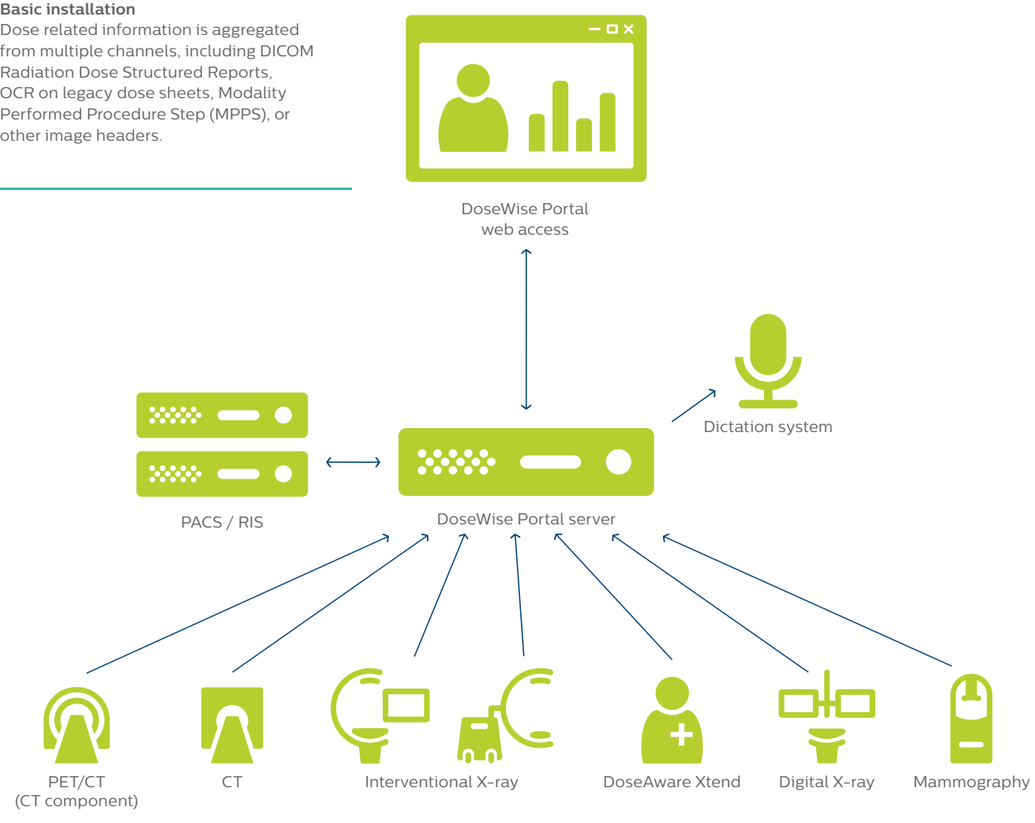
Philips, a radiology innovator with over 100 years of X-ray experience

From the first Rotalix X-ray tube which promised a breakthrough in the fight against tuberculosis, to DoseWise Portal that gives healthcare providers more control over dose management, Philips remains committed to delivering innovative technology and services to improve patient health across the continuum of care. We've got 100 years experience – you've got a future-proof dose management system.

Connect
your organization

Installation of Philips DoseWise Portal is via a local server (virtual or physical) and can be configured for department-wide, hospital-wide, or enterprise-wide service.

Basic installation
Dose related information is aggregated from multiple channels, including DICOM Radiation Dose Structured Reports, OCR on legacy dose sheets, Modality Performed Procedure Step (MPPS), or other image headers.



Information control
DoseWise Portal integrates with all X-ray modalities including CT, fluoroscopy/angiography, DR/CR radiography, and mammography systems. Efficiencies are realized through the ease with which dose information can be organized and system utilization maximized.

As an example, the CT overview screen shows the median CTDI (dose index), SSDE (Water Equivalent Diameter) and DLP (dose length product), exposure trends, and threshold alerts – by exam and for individual scanners. Information presentation is customizable, configurable between scanner names and institutional lexicons. Comprehensive integration into your established processes informs best practices.

A scalable solution
This dose-tracking solution is scalable from just a few connections to enterprise healthcare systems with multiple locations, all with role-based log in via a standard web browser.

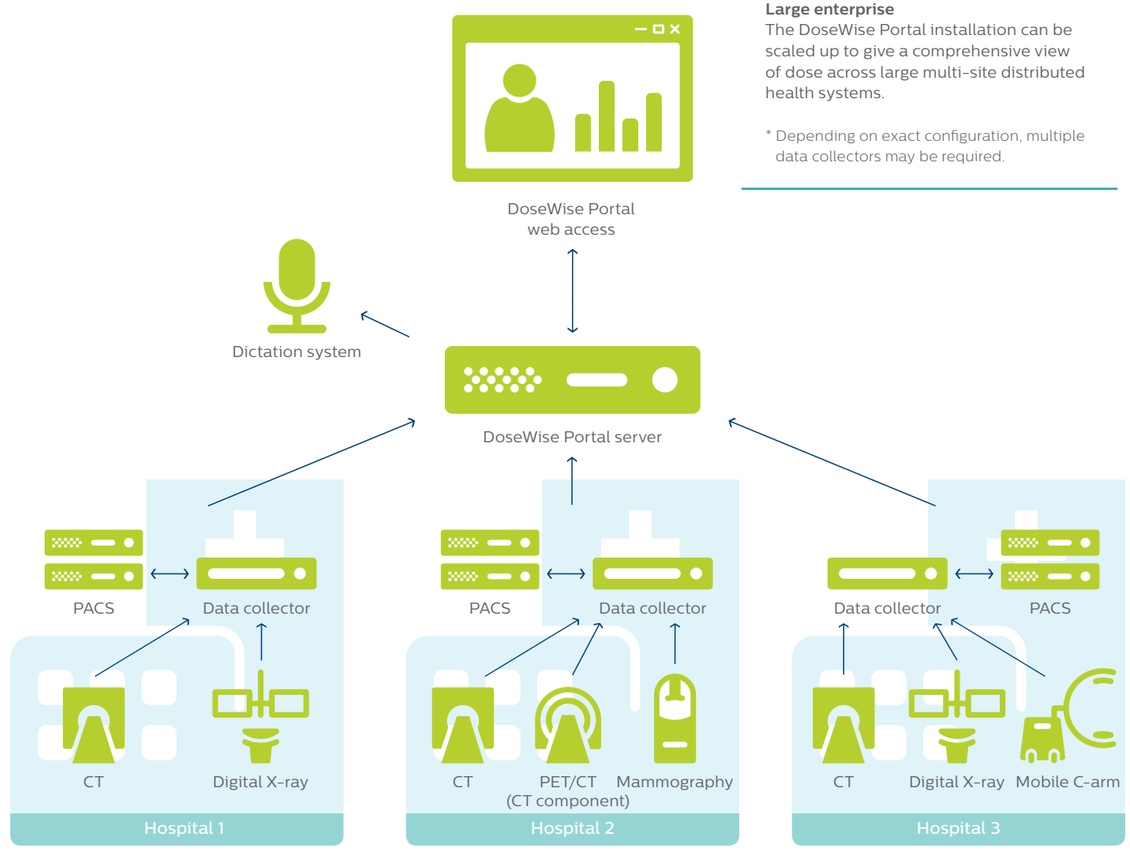
Basic IT/server requirements for local server*

- Quad-core 2.8GHz
- 8GB RAM
- (2) 500GB 7.2K RPM SATA 3Gbps 3.5i/RAID1
- Gigabit Ethernet OS: Windows Server 2012R2
- DoseWise Portal is accessible via any compatible web browser (Chrome, IE, Safari)

* Requirements for very large multi-site customers may differ

Large enterprise
The DoseWise Portal installation can be scaled up to give a comprehensive view of dose across large multi-site distributed health systems.

* Depending on exact configuration, multiple data collectors may be required.



DoseWise Portal
key capabilities

Intuitive interface and advanced analytics

- Overview page per modality containing full range of data attributes
- Simple, interactive and customizable graphing tools to create patient data charts
- Single dashboard overview of your custom created graphs and charts
- Advanced dosimetry metrics such as CT Size Specific Dose Estimates (SSDE)
- Historical patient dose data across imaging modalities

Customized configurations

- Role-based user accounts (medical physicist, site administrator, radiologist)
- Data can be filtered by site, department and modality
- Dose alert levels and thresholds set by exam with optional email notifications
- Protocol standardization capability
- Calibration correction factor capability for fluoroscopy

Interoperability and infrastructure

- Works with all X-ray modalities: CT, fluoroscopy / angiography, CR/DR, mammography
- Extraction of dose data from DICOM-SR, DICOM-SC (for OCR), MPPS, image headers
- May receive data directly from the modality or from PACS
- Reconciliation of patient information through DICOM Modality Worklist (MWL)
- Staff exposure from interventional procedures through proprietary interface with Philips DoseAware Xtend
- Ability to export text about procedure dose into dictation text through integration with leading dictation vendors
- Ability to export DICOM-SR to ACR Dose Index Registry
- Conformance with IHE REM profile
- External data access via OData
- Data storage through secure local cloud environment
- Remote installation and service (through Philips Remote Service network VPN)

© 2015 Koninklijke Philips N.V. All rights reserved. Specifications are subject to change without notice. Trademarks are the property of Koninklijke Philips N.V. (Royal Philips) or their respective owners.

4522 991 10501 * APRIL 2015

www.philips.com/dosewise