



American College
of Radiology[™]

Dose Index Registry (DIR®) Training Webinar Series

Monitoring Performance with the DIR CT Administrative Aggregate Report

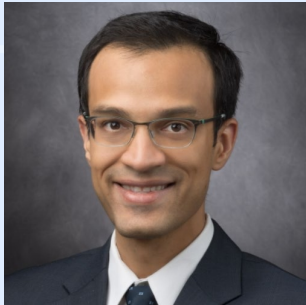
February 6, 2024

Presenters and Panelists



Maryam Bostani, PhD, DABR

Diagnostic Medical Physicist, Associate Clinical Professor,
University of California, Los Angeles



Moiz Ahmad, PhD

Associate Professor of Imaging Physics, MD Anderson Cancer
Center

Presenters and Panelists



Tom Fruscello, MBA

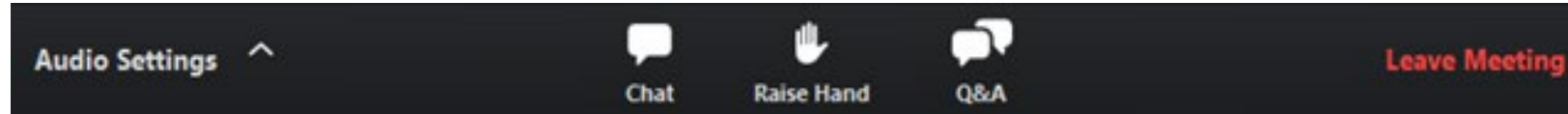
NRDR Tableau Report Developer, ACR



Sarah McKenney, PhD, DABR

Division Chief, Radiology Physics, Associate Professor, Division of Medical Physics, Department of Radiology, UC Davis Medical Center

Attendee Zoom Interface



Q&A

You asked: 18:03
What happens when I raise my hand?

Molly Parker answered: 18:04
I can take you off of mute.

Please input your question

☐ Send Anonymously

Type a question in Q&A (only seen by organizers)

Type a comment in the chat (only seen by organizers)

Questions can be entered in the Q&A field



Dose Index Registry (DIR®) Training Webinar Series



This webinar is the second and final in this series:

- Jan. 31 | Dose Optimization Using the DIR CT Facility Comparison Report
- **Feb. 6 | Monitoring Performance with the DIR CT Administrative Aggregate Report**

The webinars will be recorded and distributed afterwards.

- Recordings will be posted on <https://nrdrsupport.acr.org/support/solutions/articles/11000114744-dir-training-webinar-series>

Webinar Agenda



1. CT Administrative Aggregate Report Overview
 - a. Access and Navigation
 - b. New Report Structure as of December 2023
 - c. Functionality
 - a. Aggregate Comparisons, Trend Data, Short Name Lookups, Registry Statistics
2. CT Administrative Aggregate Report Use Cases
 - a. CT QC Program – Protocol Review and Dose Optimization
 - b. Implementation of a New Protocol – from Start to Finish
3. Recent DIR Improvements
 - a. New Modality-Specific Registry Administrator Profiles
 - b. New RPID/Text Search in Exam Name Mapping Tool
 - c. Exam Name Mapping to Trauma Cases
4. Q&A
5. Wrap-up

CT Administrative Aggregate Report - Overview



American College
of Radiology™

DIR CT Administrative A ▶ te Report

December 2023

Presenter: Tom Fruscello, MBA



8:44

acr.org



Knowledge Base Articles



<https://nrdrsupport.acr.org>



NRDR Support Home › Knowledge Base › NRDR - Release Notes and Announcements

DIR CT Report Changes 2023

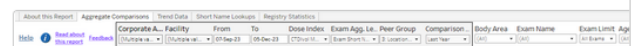
Modified on: Wed, 13 Dec, 2023 at 11:32 AM

Introduction

This article provides an overview of DIR CT report updates and new functionality that went into effect in December 2023 to make it more intuitive for you to review your facility's performance and opportunities for dose optimization. The changes also reduce the redundancy of information. Updates will occur in three phases as described below.

Phase 1: A New CT Administrative Aggregate Report Consolidates the Corporate Excel Report and Adds New Features

- Timeline: December 20, 2023.
- User access: All [NRDR user profiles](#) have access to the report
- Major changes:
 - The *CT Administrative Aggregate Report* replaces the *Corporate Excel Report* and provides new features, including:
 - Functionality to compare a single facility to a selected peer group and multiple peer groups
 - More flexible filter for selecting report timeframe
 - Filters to select the top 10 exams performed and comparison statistics.



Expanded filter options available in the *CT Administrative Aggregate Report*

- Report access: The **CT Aggregate Report** link is available in two locations in the NR



NRDR Support Home › Knowledge Base › NRDR - Understanding Your Reports › DIR Reports

DIR CT Administrative Aggregate Report

Modified on: Mon, 8 Jan, 2024 at 2:42 PM

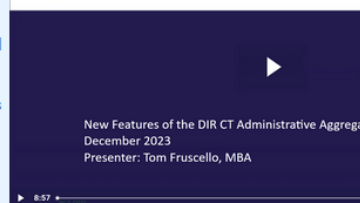
Report Purpose

The *CT Administrative Aggregate Report* enables users to analyze performance and drive improvement. The report provides insights about:

- How a facility's performance compares with the entire registry and with various peer groups, by location type, and census division
- Establishing site-specific radiation dose targets
- Opportunities for performance improvement
- Performance results after implementing changes.

The report is specially formatted for viewing and downloading aggregated dose performance data for report sharing.

Note: The *DIR CT Administrative Aggregate Report* released in December 2023 combines and replaces the *CT Corporate Excel Report* and *CT Facility Excel Report* plus adds new filters and functionality. View the video to learn what's new.



For information about other DIR CT report updates see the [DIR CT Report Changes](#) article.

How to Access

Log into the [NRDR Portal](#) and access the *CT Administrative Aggregate Report* in one of two ways:



NRDR Support Home › Knowledge Base › NRDR - Understanding Your Reports › DIR Reports

DIR Available Reports

Modified on: Thu, 18 Jan, 2024 at 1:00 PM

The following types of reports are available for the DIR:

- [DIR CT Published Aggregate Reports](#)
- [DIR CT Operational Reports](#)
- [DIR CT Interactive Reports](#)
- [DIR Fluoroscopy Interactive Reports](#)
- [DIR Digital Radiography Interactive Reports](#)

- To learn about navigating DIR report filters, parameters and other features, view the Knowledge Base [article](#) or [video demos](#).
- Click the link in the Report column to access a Knowledge Base article with more report details and examples.

DIR CT Published Aggregate Reports

Report	What does the Report Show?	Frequency	Users
DIR Executive Summary Report and QCDR Preview	Aggregated statistics for adult and pediatric exams for facility compared to the entire registry, for selected high-volume exams. A sample Facility report is available here . A sample Corporate report is available here .	Quarterly	All

CT Administrative Aggregate Report



Combined from two previously existing reports

- Corporate Excel Report
- Facility Excel report

Intended Users

- Administrative staff (Managers and Lead CT QC Technologists)

Minimal download capabilities

- Individual exams CANNOT be downloaded

Navigating to the CT Administrative Aggregate Report



Accessible via the NRDR webpage and DIR menu

American College of Radiology
NRDR
National Radiology Data Registry

National Radiology Data Registry

ACR NRDR Homepage

Super Corporate Account Information

Corporate Account Management Financial

Corporate Account Management Operational

Facility Management

Aggregate Reports

Facility Information

Link Exam to Facility

Merge Patients Upload

Manage User Accounts

Manage User Profiles

Quality Improvement Registries

DIR

GRID

LCSR

MIPS Participation Portal

NMD

3D Printing

Portal Management

User: Lisa Gunderman | Facility: 100000 - 100000: ACR Test

Filter

Published Aggregate Reports

Registry	Report Category	File Name
LCSR	Corporate Account	LCSR_100000_CorporateAccount_2022Q1.xlsx
LCSR	Corporate Account	LCSR_100000_CorporateAccount_2021Q4.xlsx
LCSR	Corporate Account	LCSR_100000_CorporateAccount_2021Q3.xlsx
LCSR	Corporate Account	LCSR_100000_CorporateAccount_2021Q3.xlsx
LCSR	Corporate Account	LCSR_100000_CorporateAccount_2021Q2.xlsx
LCSR	Corporate Account	LCSR_100000_CorporateAccount_2021Q1.xlsx
LCSR	Corporate Account	LCSR_100000_CorporateAccount_2020Q4.xlsx
DIR	Facility	DIR_100000_Q3Q4_2020_Executive_Summary_Report.pdf
LCSR	Corporate Account	LCSR_100000_CorporateAccount_2020Q3.xlsx
LCSR	Corporate Account	LCSR_100000_CorporateAccount_2020Q2.xlsx

1 2 3 4 5 ... 23 >

Interactive Aggregate Reports

Registry	Report Category	Report Name
DIR	Corporate Account	Administrative Aggregate Report
DIR	Facility	Leapfrog report

OR

American College of Radiology
NRDR
National Radiology Data Registry

Dose Index Registry

Corporate Account - Facility 100000 - 100000: ACR T

Aggregate Reports

Registry	Report Category	Report Type	Action
DIR	Corporate Account	Administrative Aggregate Report	Open
DIR	Facility	Leapfrog Report	Open

ACR NRDR Homepage

DIR

Data Management

Exam Name Mapping

Exam Name Mapping Settings

Manage Device Profiles

Fluoro Skin Reaction Assessments

Reports

Operational Reports

Exam Detail

Interactive Reports

Aggregate Reports

CT

Use Case: CT QC Program – Protocol Review and Dose Optimization



As part of the CT QC program, the CT committee periodically reviews protocols and identifies dose reduction opportunities.

Opportunities are evaluated and changes are approved and implemented.

After implementation, dose is tracked over time to illustrate and present dose reduction efforts back to the committee.



Part 1

One aspect of protocol review is to compare your routine CT protocols' median CTDI_{vol} values to DIR and ACR CTAP Reference Values.

Use Case: CT QC Program – Protocol Review and Dose Optimization



Examination	Reference Value CTDI _{vol} (mGy)	Pass/Fail Criteria CTDI _{vol} (mGy)
Adult Head	75	80
Adult Abdomen	25	30
Pediatric Head (1-year-old)	35	40
Pediatric Abdomen (40-50 lb.) - 16 cm phantom	15	20
Pediatric Abdomen (40-50 lb.) - 32 cm phantom	7.5	10

Use Case: CT QC Program – Protocol Review and Dose Optimization



About this Report

Aggregate Comparisons

Trend Data

Short Name Lookups

Registry Statistics

Read about this report

Feedback

Table: CTDIvol Max across Scans

Age Group(s): None

Scanner(s): None

Facility Data Time Period: 20-Oct-23 thru 17-Jan-24

Comparison Data Time Period: 2022 Q1 - Q4

Corporate Account

Facility

From

To

Dose Index

Exam Agg. Level

Comparison Data

Peer Group

Body Area

Exam Short Name

Exam Limit

Age Group

Scanner

Statistics

Comparison Standing

(None)

(None)

10/20/2023

17-Jan-24

CTDIvol Ma...

Exam Sho...

3: Location...

All Exams

(None)

All

From

To

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October 2023

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31

1

2

3

4

Today: 1/18/2024

Comparison Data

Last Year

Last Quarter

Year-to-Date

Dose Index

CTDIvol Ma...

CTDIvol Max across Scans

CTDIvol Total for Exam

DLP Max across Scans

DLP Total for Exam

SSDE Max across Scans

SSDE Total for Exam

3: Location Type

4: Census Division

5: Facility Category

6: Trauma Center Level

7: Children's Hospital

Exam Limit

All Exams

Top 10 Exams

All Exams

Statistics

(Multiple val...

☐ (All)

☒ DIR Standing

☐ DIR - 5th Percentile

☐ DIR - 10th Percentile

☐ DIR - 90th Percentile

☐ DIR - 95th Percentile

☒ Facility Exam Count

☐ Facility - 5th Percentile

☐ Facility - 10th Percentile

☒ Facility - 25th Percentile

☒ Facility - Median

☒ Facility - 75th Percentile

☐ Facility - 90th Percentile

☐ Facility - 95th Percentile

☒ Peer Exam Count

☒ Peer Group Standing

☐ Peer Group - 5th Percentile

☐ Peer Group - 10th Percentile

☒ Peer Group - 25th Percentile

☒ Peer Group - Median

Comparison St...

All

Above 75th Percentile

Between 25th and 75th Percentiles

Below 25th Percentile

Insufficient Data

Cancel

Apply

Use Case: CT QC Program – Protocol Review and Dose Optimization



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Peer Group

Body Area

Exam Short Name

Exam Limit

Age Group

Scanner

Statistics

Comparison Standing

25-Oct-22

22-Jan-24

CTDIvol M...

Exam Short Na...

Last Year

3: Location...

(Multiple...

(Multiple values)

All Exams

Adult (Ove...

(All)

(Multiple val...

All

Table: CTDIvol Max across Scans

Age Group(s): Adult (Over 18)

Scanner(s): All

Facility Data Time Period: 25-Oct-22 thru 22-Jan-24

Comparison Data Time Period: 2022 Q1 - Q4

Body Area	Exam Short Name	Age Group	DIR Exam Count	DIR - 25th Percentile	DIR - Median	DIR - 75th Percentile	Peer Group = Location type Metropolitan (> 100,000)									
							DIR Standing	Facility Exam Count	Facility - 25th Percentile	Facility - Median	Facility - 75th Percentile	Peer Exam Count	Peer Group Standing	Peer Group - 25th Percentile	Peer Group - Median	Peer Group - 75th Percentile
ABDOMEN PELVIS	CT ABDOMEN PELVIS W IVCON	Adult (Over 18)	3,031,421	9.4	11.7	14.4	50	7,329	8.5	11.2	14.8	1,628,006	50	9.4	11.7	14.4
HEAD	CT HEAD BRAIN WO IVCON	Adult (Over 18)	4,383,884	41.6	48.1	54.7	50	10,005	45.6	49.8	55.7	2,393,926	50	41.5	48.0	54.1



Part 1 Summary

- Aggregate Comparison dashboard can be used to review the performance of a particular protocol and age group based on a user-selected dose index.
 - Performance can be compared with the entire DIR or a selected peer group.
- Both protocols have a comparison standing of 50, i.e., median dose index is between both the DIR and peer group's 25th and 75th percentile values.
- Median dose indices for both protocols are below the ACR CTAP Reference Values of 25 and 75mGy for routine abdomen/pelvis and head, respectively.



Part 2

The committee frequently reviews exams above the 75th percentile as part of the CT QC Program.

Based on this review, the committee decides if dose reduction opportunities are feasible.

Use Case: CT QC Program – Protocol Review and Dose Optimization



<div> About this Report Aggregate Comparisons Trend Data Short Name Lookups Registry Statistics </div>																
<div> <div> Help Read about this report Feedback </div> <div> <div>Corporate Account</div> <div>Facility</div> <div>From</div> <div>To</div> <div>Dose Index</div> <div>Exam Agg. Level</div> <div>Comparison Data</div> </div> <div> <div>Peer Group</div> <div>Body Area</div> <div>Exam Short Name</div> <div>Exam Limit</div> <div>Age Group</div> <div>Scanner</div> <div>Statistics</div> <div>Comparison Standing</div> </div> </div>																
<div> <div>Table: CTDIvol Max across Scans</div> <div>Age Group(s): Adult (Over 18)</div> <div>Scanner(s): All</div> <div>Facility Data Time Period: 01-Mar-21 thru 21-Jan-24</div> <div>Comparison Data Time Period: 2022 Q1 - Q4</div> </div>																
Body Area	Exam Short Name	Age Group	DIR Exam Count	DIR - 25th Percentile	DIR - Median	DIR - 75th Percentile	DIR Standing	Peer Group = Location type Metropolitan (> 100,000)								
								Facility Exam Count	Facility - 25th Percentile	Facility - Median	Facility - 75th Percentile	Peer Exam Count	Peer Group Standing	Peer Group - 25th Percentile	Peer Group - Median	Peer Group - 75th Percentile
ABDOMEN	CT ABDOMEN BIOPSY GUIDANCE W..	Adult (Over 18)	650	8.6	12.8	15.4	75	1,042	12.6	19.4	25.2	650	75	8.6	12.8	15.4
ABDOMEN PELVIS	CT ABDOMEN PELVIS ENTERO W IVC..	Adult (Over 18)	14,206	8.2	10.1	12.9	75	465	10.6	13.8	18.2	8,800	50	8.2	10.9	14.1
CERVICAL SPINE	CT C SPINE WO IVCON	Adult (Over 18)	820,617	15.8	20.2	28.6	75	9,658	43.9	49.4	54.5	421,399	75	15.1	19.4	27.4
CHEST	CT CHEST	Adult (Over 18)	268,282	2.2	3.3	8.9	75	5,285	10.4	13.5	17.3	123,723	75	2.2	3.1	9.7
	CT CHEST HEART ANGIO WO THEN ..	Adult (Over 18)	71,618	11.3	24.3	40.8	75	1,386	36.5	62.9	79.2	35,809	75	15.5	27.2	43.2
	CT CHEST LUNG BIOPSY GUIDANCE	Adult (Over 18)	7,909	8.9	12.8	18.7	75	920	6.8	21.0	25.1	5,982	75	8.8	12.5	16.1
	CT CHEST W IVCON	Adult (Over 18)	741,751	7.3	9.4	12.0	75	18,899	10.5	13.5	17.3	414,103	75	7.3	9.6	11.8
	CT CHEST WO IVCON	Adult (Over 18)	1,624,217	5.4	7.9	10.6	75	18,762	11.2	14.3	18.2	807,447	75	5.5	8.0	10.7
FACE	CT FACE WO IVCON	Adult (Over 18)	123,601	14.3	25.2	37.4	75	2,436	40.3	50.2	57.7	62,880	75	15.1	25.9	38.6
NECK	CT NECK W IVCON	Adult (Over 18)	257,477	10.1	12.9	16.5	75	3,679	16.0	17.5	18.8	144,652	75	10.4	13.5	16.9



Part 2 Summary

The Aggregate Comparison dashboard can be used to identify opportunities for performance improvement using the Exam Limit filter and Comparison Standing filter (above 95th percentile will be added).

Chest Wo and Chest W were identified as high-volume protocols that can be presented to the committee as dose optimization opportunities.



Part 3

High-dose exams and dose reduction opportunities were identified.

The committee approved protocol changes and a new protocol was implemented.

The committee is now asked to present data on its dose optimization efforts.

Use Case: CT QC Program – Protocol Review and Dose Optimization



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Dose Index

Exam Agg. Level

58300076: CA 626

58300076: Facility 49

CTDIvol M...

Exam Short Na...

Time Periods

Body Area

Exam Short Name

Age Group

Scanner

Statistics

Quarterly

(All)

(Multiple values)

Adult (Ove...

(All)

(Multiple valu...

Display Exams with N >=

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5,465

Table:CTDIvol Max across Scans

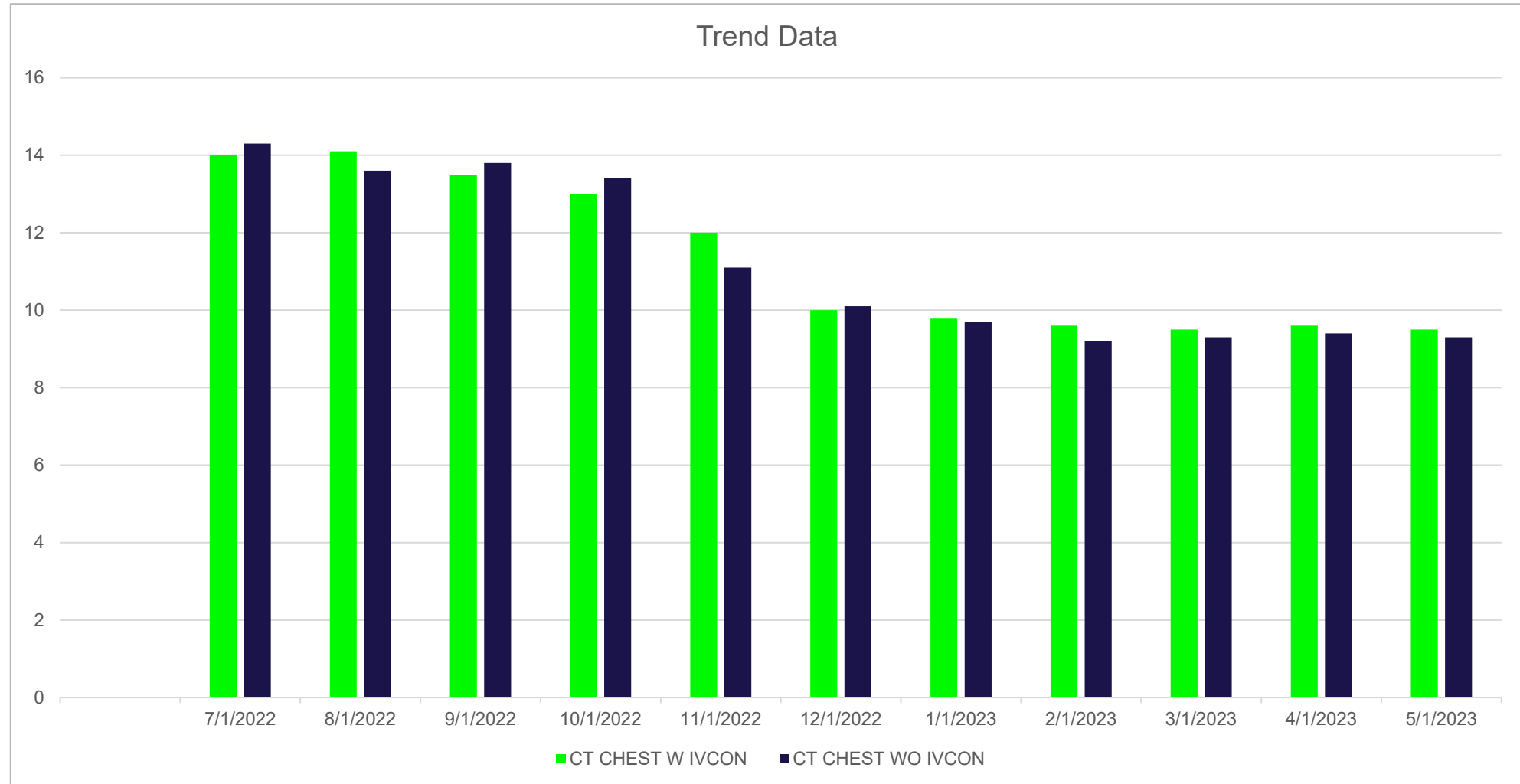
Facility: 58300076: Facility 49

Age Group(s): All

Scanner(s): All

		Study Year / Time Period														
Body Area	Exam Short Name	Age Group	Facility - Median	Facility - 75th Percentile	Q4				Q3				2022			
					Facility Exam Count	Facility - 25th Percentile	Facility - Median	Facility - 75th Percentile	Facility Exam Count	Facility - 25th Percentile	Facility - Median	Facility - 75th Percentile	Facility Exam Count	Facility - 25th Percentile	Facility - Median	Facility - 75th Percentile
CHEST	CT CHEST W IVCON	Adult (Over 18)	9.5	16.8	698	6.9	10.5	17.3	476	6.6	10.6	19.6	389	7.3	11.5	19.5
	CT CHEST WO IVCON	Adult (Over 18)	9.3	13.1	1,961	6.2	9.5	13.5	1,975	5.8	9.0	13.1	983	7.3	10.8	14.1

Use Case: CT QC Program – Protocol Review and Dose Optimization



Use Case: CT QC Program – Protocol Review and Dose Optimization



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Facility

From

To

Dose Index

Exam Agg. Level

Comparison Data

58300076: CA 626

58300076: F...

01-Jan-23

31-Mar-23

CTDIvol M...

Exam Short Na...

Last Year

Peer Group

Body Area

Exam Short Name

Exam Limit

Age Group

Scanner

Statistics

Comparison Standing

3: Location...

(All)

(Multiple values)

All Exams

Adult (Ove...

(All)

(Multiple val...

All

Table: CTDIvol Max across Scans

Age Group(s): Adult (Over 18)

Scanner(s): All

Facility Data Time Period: 01-Jan-23 thru 31-Mar-23

Comparison Data Time Period: 2022 Q1 - Q4

								58300076: Facility 49 Peer Group = Location type Suburban/Small (50,000-100,000)								
Body Area	Exam Short Name	Age Group	DIR Exam Count	DIR - 25th Percentile	DIR - Median	DIR - 75th Percentile	DIR Standing	Facility Exam Count	Facility - 25th Percentile	Facility - Median	Facility - 75th Percentile	Peer Exam Count	Peer Group Standing	Peer Group - 25th Percentile	Peer Group - Median	Peer Group - 75th Percentile
CHEST	CT CHEST W IVCON	Adult (Over 18)	739,691	7.3	9.4	12.1	50	243	6.8	9.5	16.8	232,362	50	7.2	9.2	12.0
	CT CHEST WO IVCON	Adult (Over 18)	1,620,632	5.5	7.9	10.6	50	606	6.3	9.3	13.1	610,788	50	5.5	7.6	10.3



Part 3 Summary

The Trend Data dashboard can be used to monitor performance over time after implementing changes.

Data can be downloaded for users to create their own trend charts.

Changes to Chest Wo and Chest W protocols resulted in the facility's DIR Standing going down to 50 from 75.

Use Case: Implementation of a New Protocol – from Start to Finish



Part 1

Your institution has a new Liver Transplant program.

The leading physician has asked Radiology to create a CT multiphase liver protocol.

The CT QC Committee wants to know if ACR DIR has any dose index data on this protocol to help implement it at their facility.

Use Case: Implementation of a New Protocol – from Start to Finish



[About this Report](#) [Aggregate Comparisons](#) [Trend Data](#) [Short Name Lookups](#) **Registry Statistics**

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Exam Agg. Level

Exam Short Name

Comparison Data

Last Year

DIR CT Registry Statistics

Using Exams from 1-Jan-2022 to 31-Dec-2022

To download data:

- click on the row(s) desired, using the Index column
- right click on the highlighted row(s)
- select Export, then the desired format, e.g. Excel

Use Case: Implementation of a New Protocol – from Start to Finish



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Exam Agg. Level

Comparison Data

Exam Short Name

Last Year

To download data:
- click on the row(s) desired, using the Index column
- right click on the highlighted row(s)
- select Export, then the desired format, e.g. Excel

DIR CT Registry Statistics
Using Exams from 1-Jan-2022 to 31-Dec-2022

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Exam Agg. Level

Comparison Data

Exam Short Name

Last Year

Body Area

Exam Short Name

To download data:
- click on the row(s) desired, using the Index column
- right click on the highlighted row(s)
- select Export, then the desired format, e.g. Excel

DIR CT Registry Statistics
Using Exams from 1-Jan-2022 to 31-Dec-2022

<input type="checkbox"/> Comparison Time Period	Body Area ▾	Exam Short Name	Age Group	Dose Index	Exams	Facilities	DIR 25th Percentile	DIR Median	DIR 75th Percentile	DIR 95th Percentile
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	ABDOMEN ▾	CT ABDOMEN ▾	Adult (Over 18) ▾	CTDIvol Max across Scans ▾	32,713 ▾	125 ▾	10.5 ▾	13.1 ▾	17.3 ▾	24.06 ▾
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	ABDOMEN	CT ABDOMEN	Adult (Over 18)	CTDIvol Total for Exam	32,713	125	11.7	15.5	21.4	69.48
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	ABDOMEN	CT ABDOMEN	Adult (Over 18)	DLP Max across Scans	32,713	125	326.1	438.4	582.5	916.55
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	ABDOMEN	CT ABDOMEN	Adult (Over 18)	DLP Total for Exam	32,713	125	386.8	540.9	705.6	1,134.24
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	ABDOMEN	CT ABDOMEN	Adult (Over 18)	SSDE Max across Scans	7,699	76	11.0	13.5	17.5	20.50
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	ABDOMEN	CT ABDOMEN	Adult (Over 18)	SSDE Total for Exam	7,699	76	11.8	14.8	20.3	51.80
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	ABDOMEN	CT ABDOMEN	15 - 18y	CTDIvol Max across Scans	355	7	7.0	7.3	11.7	14.53
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	ABDOMEN	CT ABDOMEN	15 - 18y	CTDIvol Total for Exam	355	7	7.1	7.5	11.8	14.74
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	ABDOMEN	CT ABDOMEN	15 - 18y	DLP Max across Scans	355	7	338.5	346.8	555.2	718.22
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	ABDOMEN	CT ABDOMEN	15 - 18y	DLP Total for Exam	355	7	345.8	353.7	562.8	737.19
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	ABDOMEN	CT ABDOMEN ANGIO	Adult (Over 18)	CTDIvol Max across Scans	519	15	6.4	7.8	13.7	17.45
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	ABDOMEN	CT ABDOMEN ANGIO	Adult (Over 18)	CTDIvol Total for Exam	519	15	10.0	17.1	27.9	35.55
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	ABDOMEN	CT ABDOMEN ANGIO	Adult (Over 18)	DLP Max across Scans	519	15	229.8	414.4	533.9	1,010.97
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	ABDOMEN	CT ABDOMEN ANGIO	Adult (Over 18)	DLP Total for Exam	519	15	424.0	789.7	1,267.2	1,496.94
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	ABDOMEN	CT ABDOMEN ANGIO	Adult (Over 18)	SSDE Max across Scans	207	6	7.9	9.0	13.2	16.70
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	ABDOMEN	CT ABDOMEN ANGIO	Adult (Over 18)	SSDE Total for Exam	207	6	11.4	14.5	17.3	27.47

Use Case: Implementation of a New Protocol – from Start to Finish



<input type="checkbox"/> Comparison Time Period	Body Area	Exam Short Name	Age Group	Dose Index	Exams	Facilities	DIR 25th Percentile	DIR Median	DIR 75th Percentile	DIR 95th Percentile
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

<input type="checkbox"/> Comparison Time Period	Body Area	Exam Short Name
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	IA	IA
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	IA	IA
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	IA	IA
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	(unspecified)	CT TRAUMA
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	(unspecified)	CT TRAUMA

Contains

Contains

Not contains

Equals

Not equal

Starts with

Ends with

Blank

Not blank

Age Group	Dose Index
<input type="text"/>	<input type="text"/>
Adult (Over 18)	Search...
Adult (Over 18)	<input checked="" type="checkbox"/> Select All
Adult (Over 18)	<input checked="" type="checkbox"/> 0 - 2y
Adult (Over 18)	<input checked="" type="checkbox"/> 11 - 14y
Adult (Over 18)	<input checked="" type="checkbox"/> 15 - 18y
Adult (Over 18)	<input checked="" type="checkbox"/> 3 - 6y
Adult (Over 18)	<input checked="" type="checkbox"/> 7 - 10y
15 - 18y	
15 - 18y	

Dose Index	Exams	Facilities
Age Group	<input type="text"/>	<input type="text"/>
CTDIvol Max across Scans	Search...	
CTDIvol Total for Exam	<input checked="" type="checkbox"/> Select All	
DLP Max across Scans	<input checked="" type="checkbox"/> CTDIvol Max across Scans	
DLP Total for Exam	<input checked="" type="checkbox"/> CTDIvol Total for Exam	
SSDE Max across Scans	<input checked="" type="checkbox"/> DLP Max across Scans	
SSDE Total for Exam	<input checked="" type="checkbox"/> DLP Total for Exam	
CTDIvol Max across Scans	<input checked="" type="checkbox"/> SSDE Max across Scans	
CTDIvol Total for Exam		

Use Case: Implementation of a New Protocol – from Start to Finish



Exam Short Name ▾	Age Group	Dose Index
Liver AND Multiph		
CT ABDOMEN LIVER		Max a
ANGIO MULTIPHASE		
THEN W IVCON		
CT ABDOMEN LIVER		Total
ANGIO MULTIPHASE		
THEN W IVCON		
CT ABDOMEN LIVER	Adult (Over 10)	DLP Max across
ANGIO MULTIPHASE WO		

Contains ▾

Liver

☒ AND ☐ OR

Contains ▾

Multiphase wo

Clear

Dose Index ▾	Exams	Facilities
(1) CTDIvol Max across		
CTDIvol Max across Scan		6
CTDIvol Max across Scan		9
CTDIvol Max across Scan		4

Search...

☐ Select All

☒ CTDIvol Max across Scans

☐ CTDIvol Total for Exam

☐ DLP Max across Scans

☐ DLP Total for Exam

☐ SSDE Max across Scans

Clear

Exams ▾	Facilities	DIR 25th Percentile
1000		
14		
4		
4,320		10

Greater than ▾

1000

☒ AND ☐ OR

Equals ▾

Filter...

Clear

Use Case: Implementation of a New Protocol – from Start to Finish



DIR CT Registry Statistics
Using Exams from 1-Jan-2022 to 31-Dec-2022

<input type="checkbox"/> Comparison Time Period	Body Area	Exam Short Name ▾	Age Group	Dose Index ▾	Exams ▾	Facilities	DIR 25th Percentile	DIR Median	DIR 75th Percentile	DIR 95th Percentile	Columns
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	ABDOMEN	CT ABDOMEN LIVER MULTIPHASE WO THEN W IVCON	Adult (Over 18)	CTDIvol Max across Scans	14,776	189	10.7	13.7	17.4	21.51	
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	ABDOMEN PELVIS	CT ABDOMEN PELVIS LIVER MULTIPHASE WO THEN W IVCON	Adult (Over 18)	CTDIvol Max across Scans	4,890	24	13.7	15.6	17.4	24.81	
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	CHEST ABDOMEN PELVIS	CT CHEST ABDOMEN PELVIS LIVER MULTIPHASE WO THEN W IVCON	Adult (Over 18)	CTDIvol Max across Scans	4,326	10	13.9	17.9	22.1	26.65	

DIR CT Registry Statistics
Using Exams from 1-Jan-2022 to 31-Dec-2022

<input type="checkbox"/> Comparison Time Period	Body Area	Exam Short Name ▾	Age Group	Dose Index ▾	Exams ▾	Facilities	DIR 25th Percentile	DIR Median	DIR 75th Percentile	DIR 95th Percentile	Columns
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	ABDOMEN	CT ABDOMEN LIVER MULTIPHASE WO THEN W IVCON	Adult (Over 18)	DLP Total for Exam	14,776	189	956.1	1,448.4	1,882.1	2,655.06	
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	ABDOMEN PELVIS	CT ABDOMEN PELVIS LIVER MULTIPHASE WO THEN W IVCON	Adult (Over 18)	DLP Total for Exam	4,890	24	1,334.6	1,812.8	2,448.8	3,070.72	
<input type="checkbox"/> 1-Jan-2022 to 31-Dec-2022	CHEST ABDOMEN PELVIS	CT CHEST ABDOMEN PELVIS LIVER MULTIPHASE WO THEN W IVCON	Adult (Over 18)	DLP Total for Exam	4,326	10	1,626.8	2,102.2	2,445.7	3,325.25	



Part 1 Summary

The Registry Statistics dashboard provides facilities with dose index target values for new CT protocols.

These target values can be used as a starting point to craft new protocols and modify them as needed.



Part 2

Based on clinical requirements and ACR DIR data, the CT QC Committee created and implemented a multiphase liver CT protocol.

A few months after implementation, the committee wants to ensure mapping of this new protocol to the appropriate RPID.

Use Case: Implementation of a New Protocol – from Start to Finish



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[Help](#) [Read about this report](#) [Feedback](#)

Corporate Account

Facility

From

To

...

...

25-Oct-22

22-Jan-24

Body Area

Exam Short Name

Age Group

RPID used for Facility

Facility Study Desc.

(Multiple v...

CT ABDOMEN LIVER MU...

Adult (Ove...

(All)

(All)

Short Name-to-RPID-to-Study Description Lookup

Facility RPID Mappings

Hover over a check mark for detailed explanation of the mapping for that exam and facility.

Body Area	Short name to look for in report	Age Group	RPIDs used for Facility's statistics	Facility RadLex Name	Facility Study Description	RPIDs used for Comparison statistics	Facility ID	
							Comparison RPID Short Name	Facility 1
ABDOMEN	CT ABDOMEN LIVER MULTIPHASE WO THEN W IVCON	Adult (Over 18)	RPID406	CT ABD MULTIPH LIVER WO & W IVCON	1Triple_Phase_Liver(Adult)	RPID401	CT ABD MULTIPH LIVER POSTOP WO & W IVCON	✓
						RPID406	CT ABD MULTIPH LIVER WO & W IVCON	✓
						RPID1091	CT ABD MULTIPH LIVER DUAL ENG CT WO & W IVCON	✓
					Abdomen^1Triple_Phase_Liver (Adult)	RPID401	CT ABD MULTIPH LIVER POSTOP WO & W IVCON	✓
						RPID406	CT ABD MULTIPH LIVER WO & W IVCON	✓
						RPID1091	CT ABD MULTIPH LIVER DUAL ENG CT WO & W IVCON	✓

Facility 1

Study Description 1Triple_Phase_Liver(Adult) is mapped to RPID406 - CT ABD MULTIPH LIVER WO & W IVCON for this facility and appears in the report as Exam Short Name CT ABDOMEN LIVER MULTIPHASE WO THEN W IVCON.

The following RPIDs are used for comparison peer group statistics for CT ABDOMEN LIVER MULTIPHASE WO THEN W IVCON, Adult (Over 18).

RPID401	CT ABD MULTIPH LIVER POSTOP WO & W IVCON
RPID406	CT ABD MULTIPH LIVER WO & W IVCON
RPID1091	CT ABD MULTIPH LIVER DUAL ENG CT WO & W IVCON



Part 2 Summary

Mapping can be verified using the Short Name Lookups dashboard.

For a selected Facility Study Description, the RPID used to map to the study can be verified.

For multi-facility accounts, it can be verified if mapping is consistent across facilities.



Part 3

A year after the implementation of the multiphase liver protocol, the CT QC Committee wants to review dose indices and compare their facility's performance with the DIR.

Use Case: Implementation of a New Protocol – from Start to Finish



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Facility

From

To

Dose Index

Exam Agg. Level

Comparison Data

Peer Group

Body Area

Exam Short Name

Exam Limit

Age Group

Scanner

Statistics

Comparison Standing

Table: CTDIvol Max across Scans

Age Group(s): Adult (Over 18)

Scanner(s): All

Facility Data Time Period: 25-Oct-22 thru 22-Jan-24

Comparison Data Time Period: 2022 Q1 - Q4

							Peer Group = Location type Metropolitan (> 100,000)									
Body Area	Exam Short Name	Age Group	DIR Exam Count	DIR - 25th Percentile	DIR - Median	DIR - 75th Percentile	DIR Standing	Facility Exam Count	Facility - 25th Percentile	Facility - Median	Facility - 75th Percentile	Peer Exam Count	Peer Group Standing	Peer Group - 25th Percentile	Peer Group - Median	Peer Group - 75th Percentile
ABDOMEN	CT ABDOMEN LIVER MULTIPHASE W..	Adult (Over 18)	14,816	10.7	13.8	17.4	50	551	11.0	15.3	19.9	10,997	50	10.3	13.4	17.1

Part 3 Summary

The Aggregate Comparison dashboard can be used to evaluate performance.

As compared to DIR and the selected peer group, the facility's standing for the newly implemented multiphase liver is at 50, i.e., median dose index is between both the DIR and Peer Group's 25th and 75th percentiles values.

New Modality-Specific Registry Administrator Profiles



TIN/NPI Summary Report	Add New User View History	
Facility Management		
Aggregate Reports		
Facility Information		
Link Exam to Facility		
Merge Patients Upload		
Manage User Accounts		
Manage User Profiles		
Quality Improvement Registries		
CTC		
DIR		
GRID		
LCSR		
MIPS Participation Portal		
NMD		
3D Printing		
Portal Management		
Account Balance Report		
Aggregate Reports Upload		
Aggregate Reports Backend Upload History		
Application Completed Worklist		
Broadcast Message		
Comments		
Data Upload Applications		

User Account	New User
Status	Active
User Type	Registry Administrator
First Name	
Last Name	
Facility ID	100853
E-mail	
Office phone	
Registries	<input checked="" type="checkbox"/> NRDR <input type="checkbox"/> 3D Printing <input type="checkbox"/> Assess-AI <input type="checkbox"/> CDSR <input type="checkbox"/> CTC <input type="checkbox"/> DIR <input type="checkbox"/> GRID <input type="checkbox"/> LCSR <input type="checkbox"/> LI-RADS <input type="checkbox"/> MIPS <input type="checkbox"/> NMD
DIR Modality	<input checked="" type="checkbox"/> CT <input type="checkbox"/> Fluoro <input type="checkbox"/> DR <input type="checkbox"/> NM

Add **Cancel**

Step 1: select "Registry Administrator" for User Type

Step 2: select "DIR" for Registries

Step 3: select desired DIR Modalities

New RPID/Text Search in Exam Name Mapping Tool



Search RPID

Search RPID

Population

select

▼

Laterality

select

▼

Body Region

Select options

▼

Reason for Exam

select

▼

Modality Modifier

select

▼

Technique

select

▼

Procedure Modifier

select

▼

IV Contrast

select

▼

PlayBook Type

select

▼

Modality

select

▼

Anatomic Focus

select

▼

RPIDCode/Shortname

Search

Clear

	RPIDcode	Short Name
<input type="radio"/>	RPID1	CT ABD PELVIS LE ANGIO WO & W IVCON
<input type="radio"/>	RPID10	CT LE ANGIO RT WO & W IVCON
<input type="radio"/>	RPID100	CT CHST ANGIO HEART CONG DX WO & W IVCON
<input type="radio"/>	RPID101	CT CHST COR ARTS CALC SCORE WO IVCON
<input type="radio"/>	RPID102	CT CHST ANGIO HEART STRUCT MORPH WO & W IVCON
<input type="radio"/>	RPID103	CT RECON BILAT PREOP
<input type="radio"/>	RPID104	CT RECON BILAT POSTOP
<input type="radio"/>	RPID105	CT HEAD SELLA W IVCON
<input type="radio"/>	RPID106	CT HEAD SELLA WO IVCON
<input type="radio"/>	RPID107	CT UE WO & W IVCON
<input type="radio"/>	RPID108	CT UE W IVCON

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Assign RPID

Exam Name Mapping to Trauma Cases



The highest-level trauma IDs are below. The complete list of trauma IDs is available in the NRDR Knowledge Base Mapping Guide.

- Radlex Playbook ID: RPID1261 – Short Name: CT Trauma
- ACR Common ID: 4012963 – Name: RAD, trauma series, unspecified

Search Exam

Exam: trauma

	Exams
<input type="checkbox"/>	Abdomen^TRAUMA_ABDOMEN_PELVIS
<input checked="" type="checkbox"/>	Head^TRAUMA_HEAD
<input type="checkbox"/>	Thorax^TRAUMA_
<input type="checkbox"/>	Thorax^TRAUMA_CAP_W_SPINE

Note: You can tag the selected exams by :
1) assigning an RPID using the 'Search RPID' button

Search RPID

Population: select Laterality: select

Body Region: Select options Reason for Exam: select

Modality Modifier: select Technique: select

Procedure Modifier: select IV Contrast: select

PlayBook Type: select Modality: select

Anatomic Focus: select

RPIDCode/Shortname: trauma Search Clear

	RPIDcode	Short Name
<input type="radio"/>	RPID405	CT CEST ABD PELVIS TRAUMA W IVCON
<input type="radio"/>	RPID1010	CT ABD SPINE TRAUMA WO IVCON
<input type="radio"/>	RPID1198	CT LE TRAUMA WO IVCON
<input type="radio"/>	RPID1212	CT CHST ABD PELVIS RECON TRAUMA W IVCON
<input type="radio"/>	RPID1261	CT TRAUMA
<input type="radio"/>	RPID1263	CT UE SHLDER TRAUMA WO IVCON
<input type="radio"/>	RPID1313	CT CHST ABD T SPINE PELVIS TRAUMA WO IVCON
<input type="radio"/>	RPID1333	CT CHST ABD PELVIS ANGIO TRAUMA WO & W IVCON
<input type="radio"/>	RPID1464	CT HEAD 3D IMAGE FACL BNS TRAUMA WO IVCON
<input checked="" type="radio"/>	RPID1807	CT HEAD TRAUMA WO IVCON
<input type="radio"/>	RPID1813	CT HEAD NECK C SPINE FACE CHST MULTI PLAN REF TRAUMA

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Assign RPID

Q&A





Webinar Recordings and Slides



View recordings and slides for the Jan 31 and Feb 6 webinars here:



<https://nrdrsupport.acr.org/support/solutions/articles/11000114744-dir-training-webinar-series>



The Jan 31 webinar is available on demand now. Today's webinar will be available later this week.



WHEN YOU GET TO THE
END OF YOUR ROPE

- **Email:** NRDRSupport@acr.org
- **Phone:** 1-800-227-5463 x3535
- **Web:** <https://nrdrsupport.acr.org>