



# Technology deployments

Boost your capabilities with new technology deployments every year

Yearly SmartPACK+ technology deployments provide the right software and clinical training to enhance your team's capabilities

Your SmartPACK+ technology deployments include:



Scanner connectivity\*



Data-driven insights



Automated documentation\*



Personalized protocols\*

**medRAD® Stellant**  
CT Injection System

\* Initial deployment.

**SmartPACK+**  
Reliability. Technology. Access.



# Scanner connectivity

An interface that allows communication between your scanners and the MEDRAD® Stellant CT Injection System



Enhances clinical capabilities by ensuring appropriate scan timing and simplifying workflows.



- 🎯 Provides precision scanning techniques and improved contrast bolus timing
- ⌚ Saves time by starting the procedure from the control room
- ↔ Limits the amount of back and forth attention between injector and scanner controls
- ↗ Allows the flexibility to remain at your patient's side

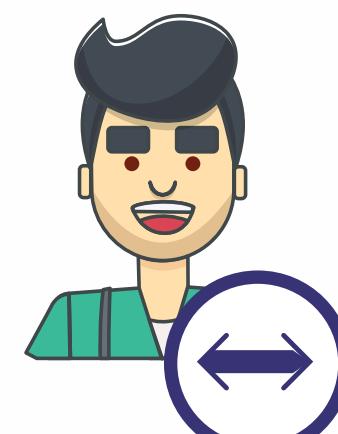


# Scanner connectivity

Use one button to simultaneously trigger the scanner and the injector



New process



Technologist stays by patient's side and monitors patient during initial injection

One button on either the scanner or the injector can initiate both the injection and scanner protocol

Current process



Technologist sets up patient and injector protocol

Technologist walks to scan room



Technologist sets up scanner protocol

Technologist walks back to control room

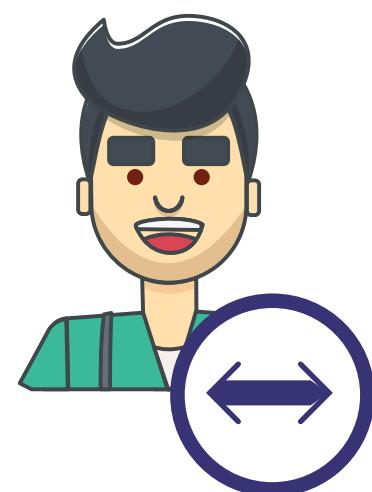


# Scanner connectivity

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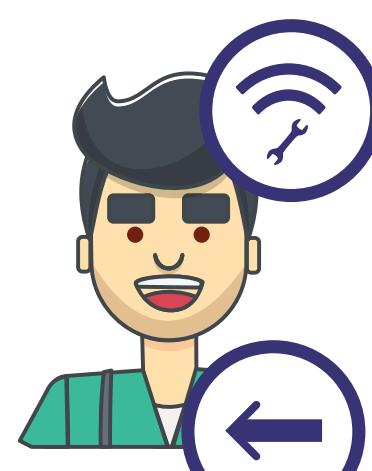
One button on either the scanner or the injector can initiate both the injection and scanner protocol

Current process



Technologist sets up patient and injector protocol

Technologist walks to scan room



Technologist sets up scanner protocol

Technologist walks back to control room



Technologist walks back to control room



# Automated documentation

Software designed to automatically capture and distribute key data for contrast enhanced procedures



Allows radiology teams to reduce administrative rework and multiply efficiencies.

- ↑ Import patient and procedure details to Modality Worklist
- Aa Auto-populate individual contrast injection records into PACS, RIS and Speech Recognition
- 🎯 Improve reporting accuracy and traceability
- 🕒 Reduce dictation and rework time for Radiologists



See how Automated Documentation reduces administrative tasks

## Automated documentation

Select patient directly from Modality Worklist/Patient Worklist

Patient Worklist v1.4

	Patient Name	DOB	ID	Time & Date	Accession Number	Study Description	▲
(i)	SEXTON, EMMANUEL	05/06/2007	ID-00000...	13:48 PM 09/22/2011	SSS-000000000806	Study info goes here: 0806	
(i)	PECK, RUFUS	12/01/1990	ID-00000...	14:48 PM 09/22/2011	SSS-000000000061	Study info goes here: 0061	
(i)	ATKINS, LINO	01/05/1992	ID-00000...	14:48 PM 09/22/2011	SSS-000000000291	Study info goes here: 0291	
(i)	MORSE, ALPHONSE	09/05/1976	ID-00000...	14:48 PM 09/22/2011	SSS-000000000726	Study info goes here: 0726	
(i)	HARPER, RALEIGH	08/27/1993	ID-00000...	15:48 PM 09/22/2011	SSS-000000000164	Study info goes here: 0164	
(i)	MIDDLETON, BARTON	02/08/1993	ID-00000...	15:48 PM 09/22/2011	SSS-000000000984	Study info goes here: 0984	
(i)	MEJIA, STEPHAN	11/15/1955	ID-00000...	16:48 PM 09/22/2011	SSS-000000000055	Study info goes here: 0055	
(i)	MUNOZ, EMILE	08/19/1964	ID-00000...	16:48 PM 09/22/2011	SSS-000000000180	Study info goes here: 0180	
(i)	VANG, DALLAS	10/29/1920	ID-00000...	16:48 PM 09/22/2011	SSS-000000000478	Study info goes here: 0478	
(i)	SUMMERS, EDDIE	06/02/1979	ID-00000...	16:48 PM 09/22/2011	SSS-000000000529	Study info goes here: 0529	▼

Patient Name: Update Cancel

## Automated documentation

Enter and capture vital injection details directly into PACS

.....Administered 100.0 ml of 370 mg/ml "Contrast Brand"

Injection Start:	10-02-2012 11:48	Image Created:	10-02-2012 11:49
Accession Number:	CT10885-12	Patient Name:	John Doe
Patient ID:	0000000	Date of Birth:	22 June 1941
Patient Height:	68 inches	Patient Weight:	211.0 lb

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CARDIAC 370 Inputs:		Weight: 211.0 lb	Concentration: 370	Scan Delay: --				
Programmed		ml/s	ml	Actual	ml/s	ml		
1	B	5.8	58	1	B	5.5	57.9	
2	Hold			2	Hold			
3	A	5.8	93	3	A	5.7	92.7	
4	B	30%	5.8	4	B	32%	5.6	22.0
5	B	5.8	30	5	B	5.1	31.4	

---

Total Contrast (A):	100 ml	Total Contrast (A):	100.0 ml
Total Saline (B):	105 ml	Total Saline (B):	104.9 ml
Delay:	NONE		
Pressure Limit:	325 psi		

---

**Pressure Graph**

Pressure (psi)

Time (sec)

**Flow Graph**

Flow Rate (ml/s)

Time (sec)

---

Injection	Contrast	Saline	Fluid Usage	Contrast	Saline
Peak Pressure:	249 psi	195 psi	Loaded:	100.3 ml	133.5 ml
Peak Flow Rate:	6.0 ml/s	5.9 ml/s	Used:	100.0 ml	104.9 ml
Injection Completed:	YES		Remaining:	0.3 ml	28.63 ml
Transient Events:	NO		Total Fluid:	204.9 ml	
			Total Iodine:	37.0 g	

---

**Contrast**

Brand: "Contrast Brand"

Concentration: 370

Vial Volume: 100

Lot Number: 2C85341

Expiration Date: 03-02-2015

**Procedure**

Tech ID: 168

Injection Site: LeftForearm

Catheter Gauge: Gauge 18

Injector Name: STELLANT 33259

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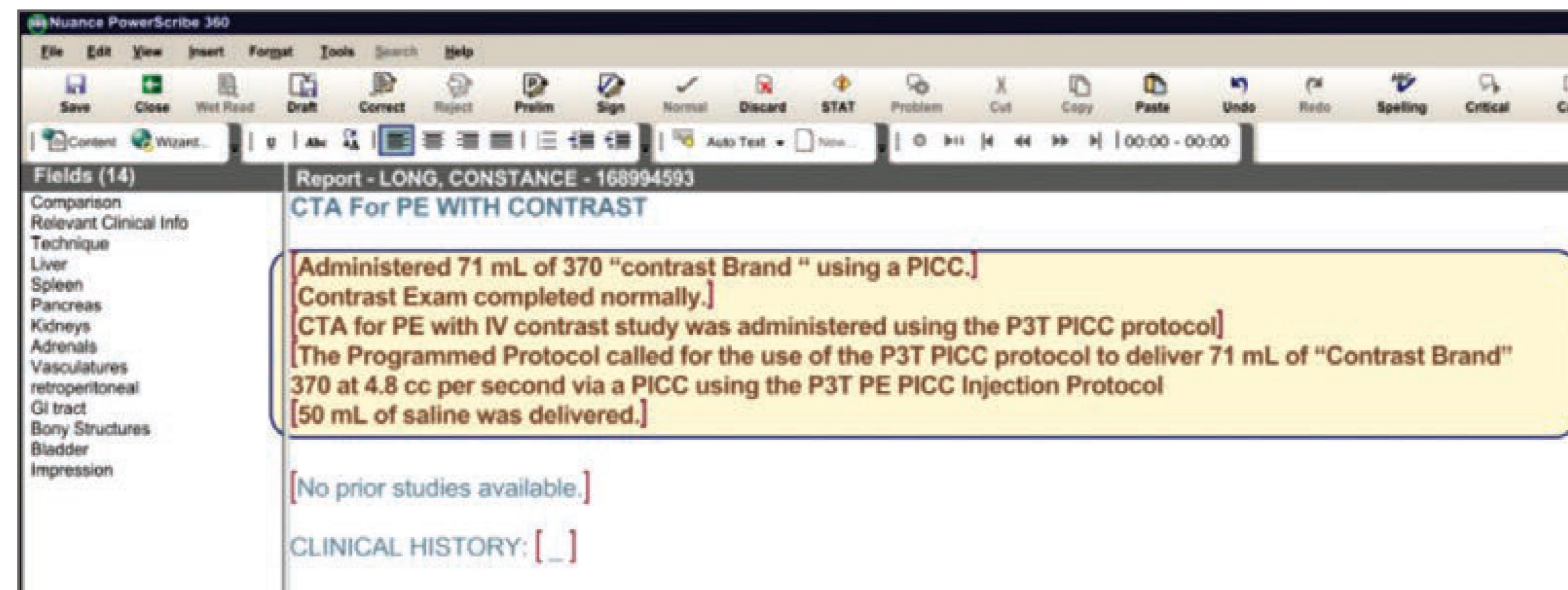
Notes

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## Automated documentation

Enter and capture vital injection details directly into Speech Recognition



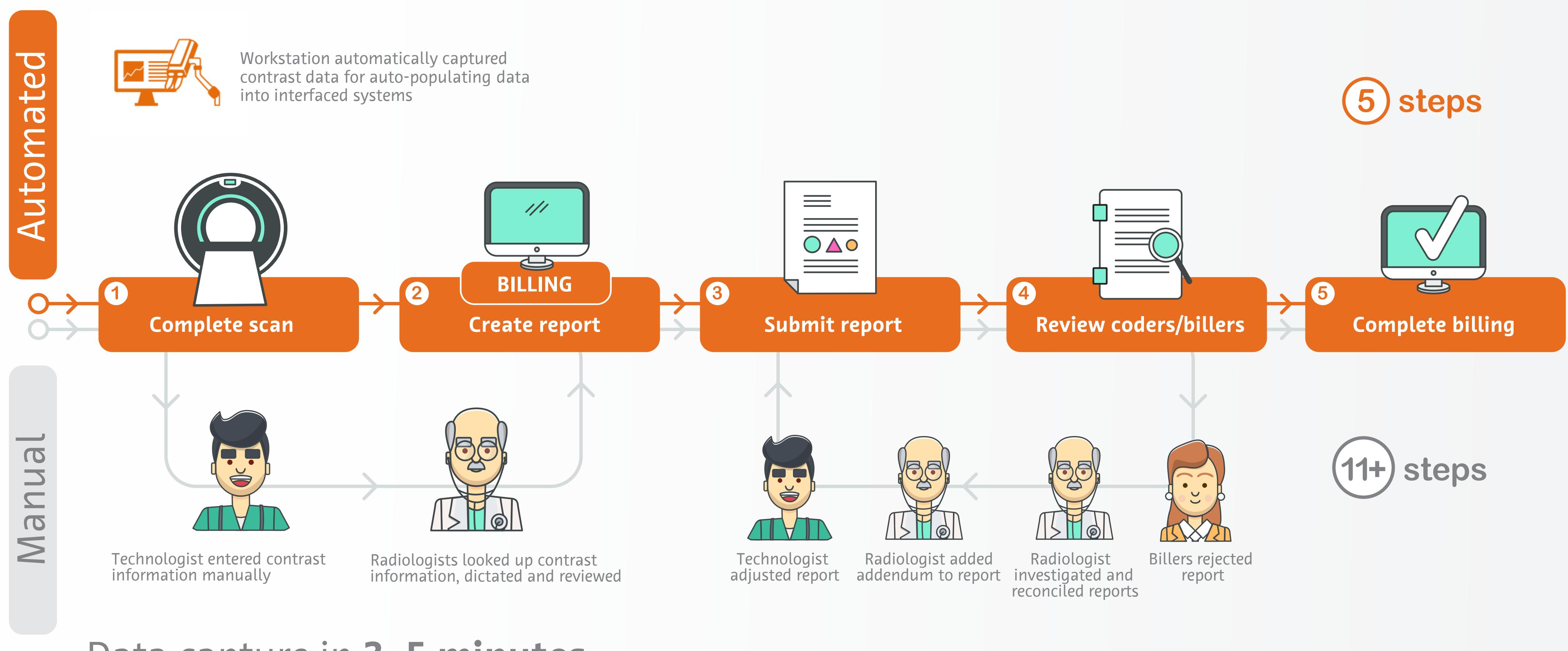


# Automated documentation

Complete the same data capture and reporting process in fewer steps



Data capture in **seconds**



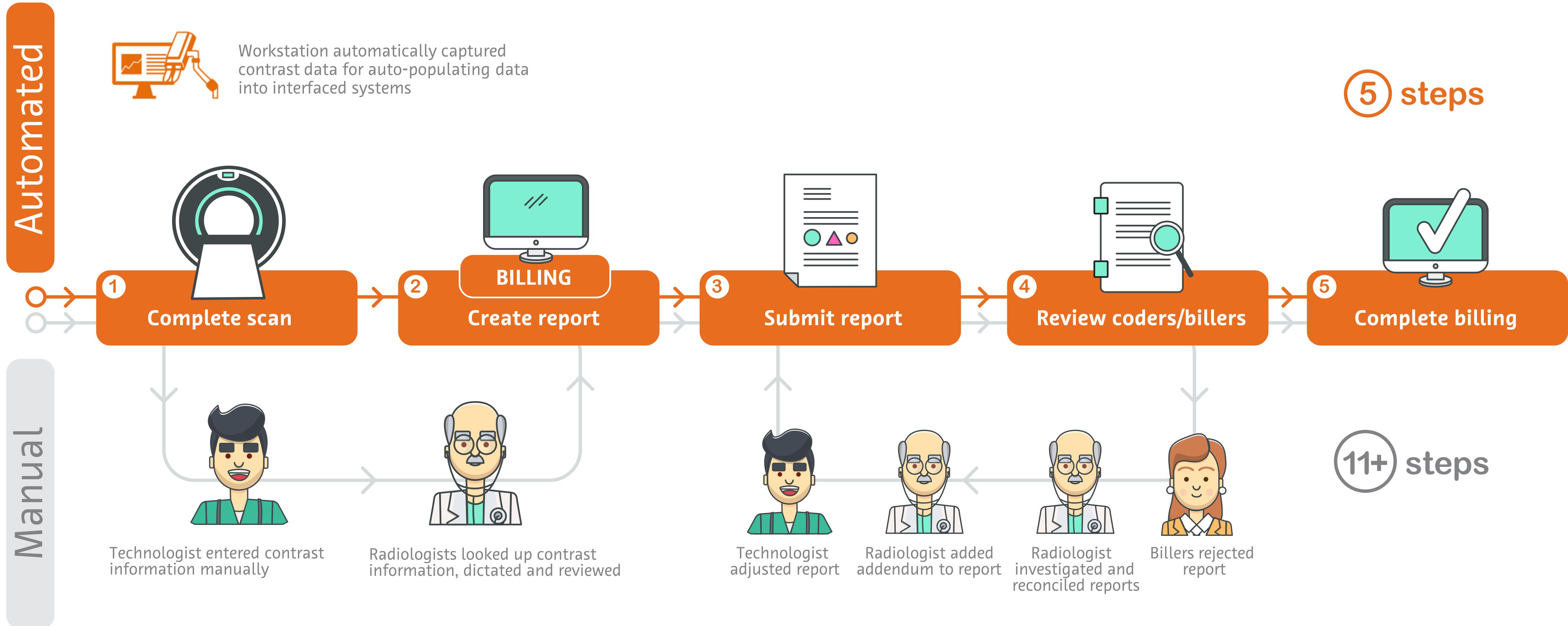


# Automated documentation

Complete the same data capture and reporting process



Data capture in **seconds**



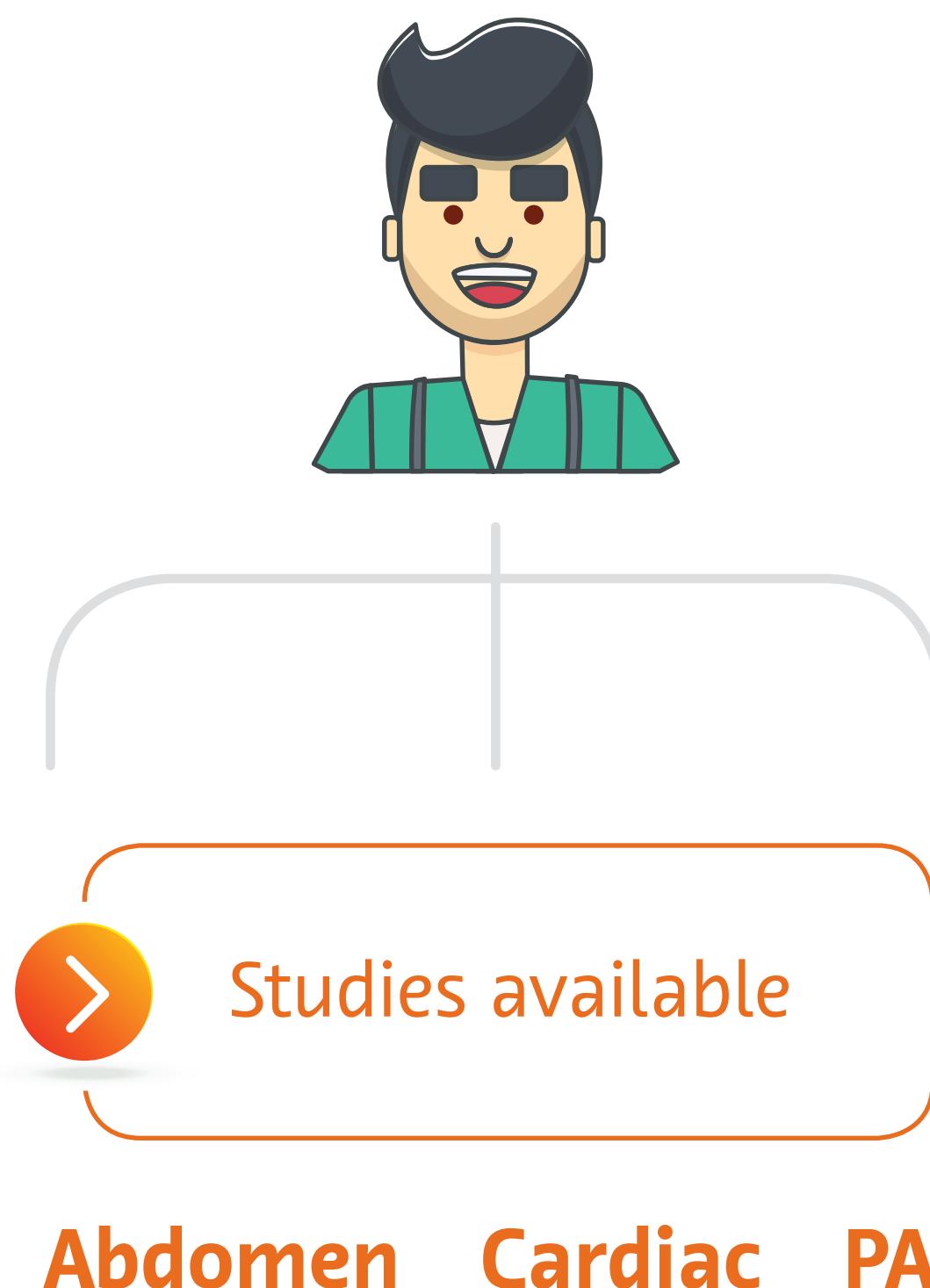


# Personalized protocols

An algorithm that allows technologists to personalize injection protocols and provide consistent image quality amongst clinicians



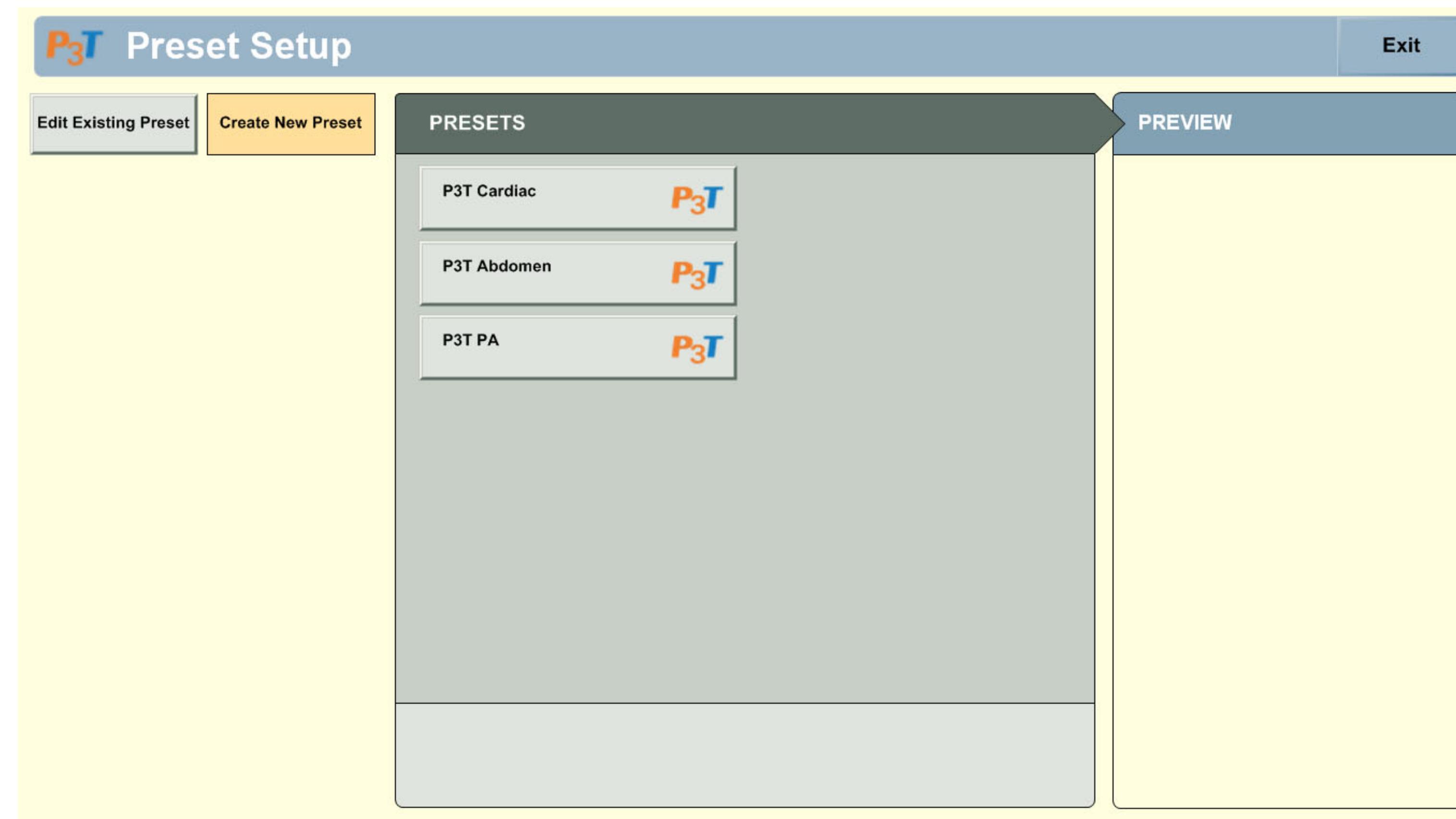
Allows technologists to account for unique patient and study variables.



- Adjust contrast media protocols automatically**
- Personalize the volume and flow rate for each patient**
- Improve image quality**
- Configure according to the workflow, policies and preferences of each facility**

## Personalized protocols

A clinically validated algorithm designed to improve image quality by managing personalized contrast delivery protocols with flexibility to incorporate pre-set Radiologist preferences for dosing, contrast concentrations and scan timing



## Cardiac studies

Manage cardiac-imaging complexity

Preset: P3T Cardiac

Review Preset values

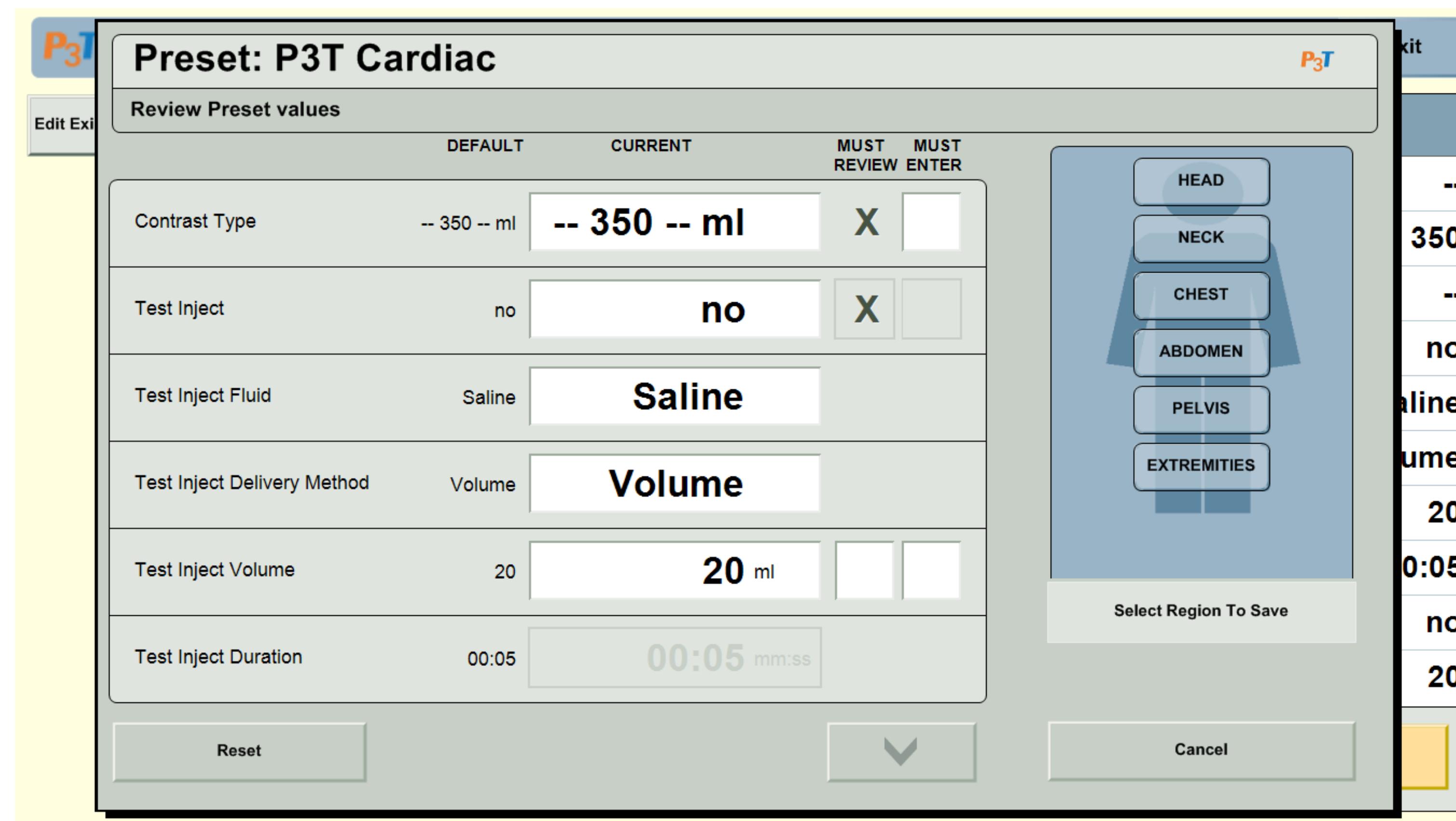
	DEFAULT	CURRENT	MUST REVIEW	MUST ENTER
Contrast Type	-- 350 -- ml	-- 350 -- ml	X	<input type="checkbox"/>
Test Inject	no	no	X	<input type="checkbox"/>
Test Inject Fluid	Saline	Saline		
Test Inject Delivery Method	Volume	Volume		
Test Inject Volume	20	20 ml	<input type="checkbox"/>	<input type="checkbox"/>
Test Inject Duration	00:05	00:05 mm:ss		

HEAD  
NECK  
CHEST  
ABDOMEN  
PELVIS  
EXTREMITIES

Select Region To Save

Cancel

Reset



## Abdomen studies

Facilitate implementation of multiple CT abdomen protocol strategies

**Preset: P3T Abdomen**

Review Preset values

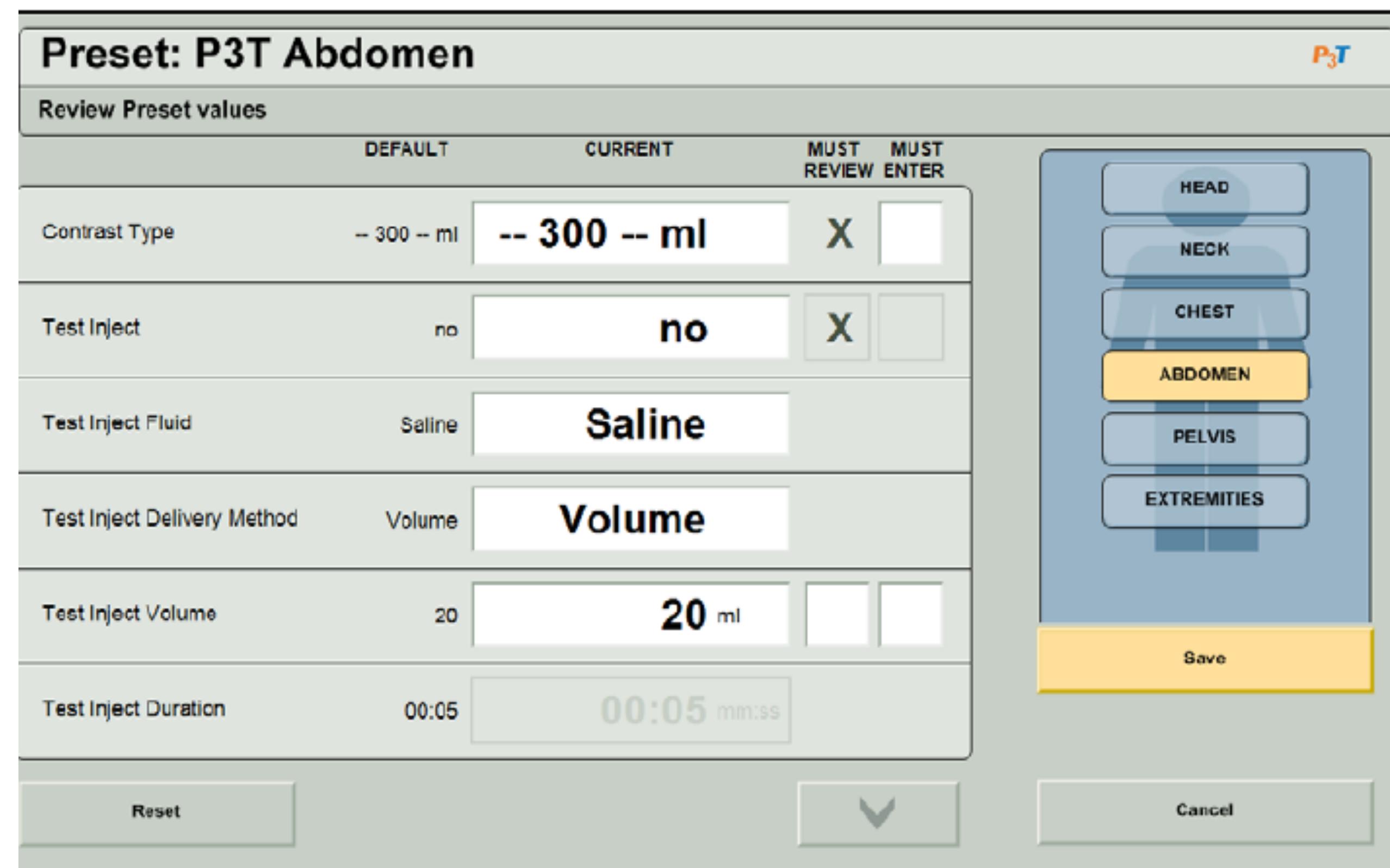
	DEFAULT	CURRENT	MUST REVIEW	MUST ENTER
Contrast Type	- 300 -- ml	-- 300 -- ml	X	<input type="text"/>
Test Inject	no	no	X	<input type="text"/>
Test Inject Fluid	Saline	Saline		
Test Inject Delivery Method	Volume	Volume		
Test Inject Volume	20	20 ml	<input type="text"/>	<input type="text"/>
Test Inject Duration	00:05	00:05 mm:ss		

HEAD  
NECK  
CHEST  
**ABDOMEN**  
PELVIS  
EXTREMITIES

Save

Reset

Cancel



## Pulmonary angiography studies

Reduce occurrences of suboptimal CT pulmonary angiograph studies

**Preset: PA**

**Review Preset values**

	DEFAULT	CURRENT	MUST REVIEW	MUST ENTER
Contrast Type	-- 350 -- ml	OMNIPACQUE 350 100 ml	X	
Test Inject	no	yes	X	
Test Inject Fluid	Saline	Saline		
Test Inject Delivery Method	Volume	Volume		
Test Inject Volume	20	20 ml		
Test Inject Duration	00:05	00:05 mm:ss		

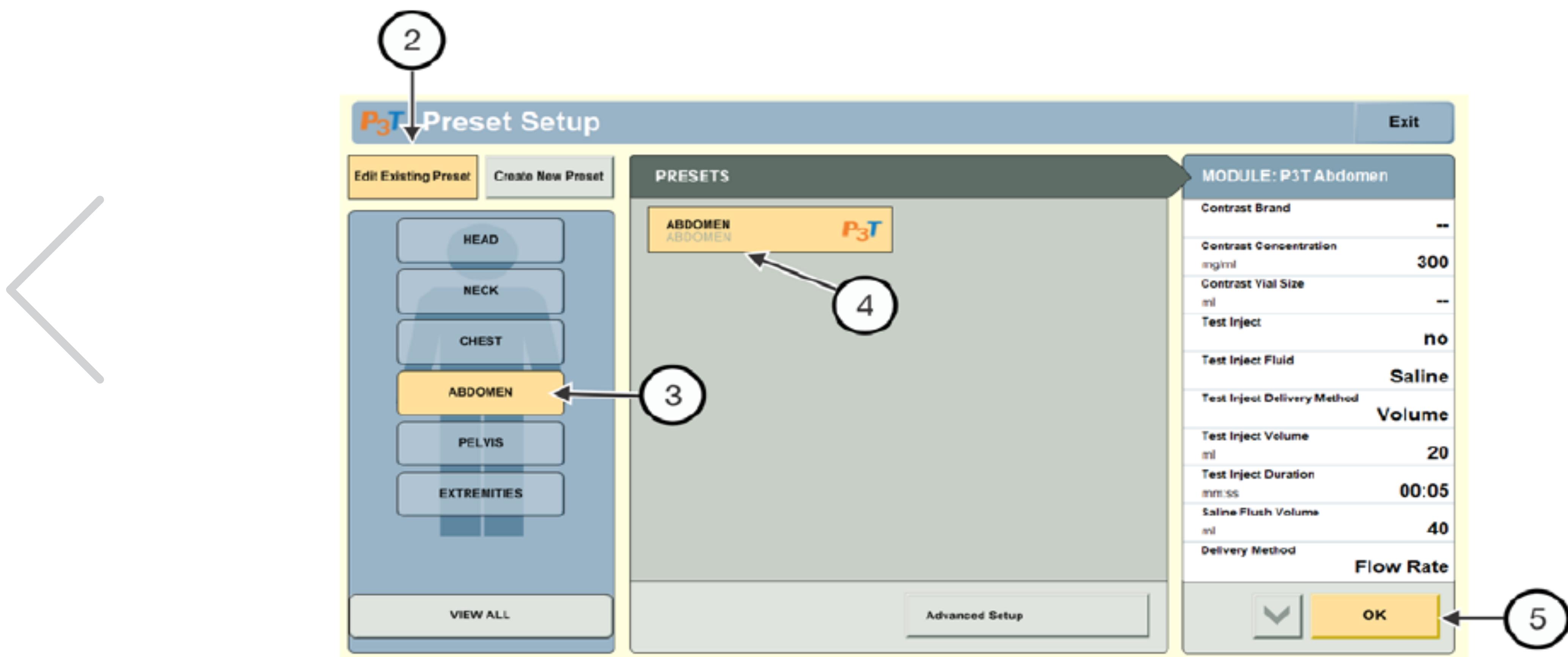
**Save** **Move**

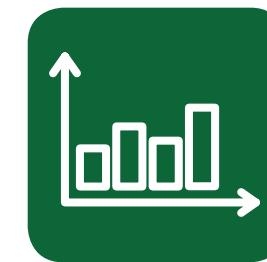
**Save As**

**Cancel**

## Personalized protocols

Edit an existing pre-set

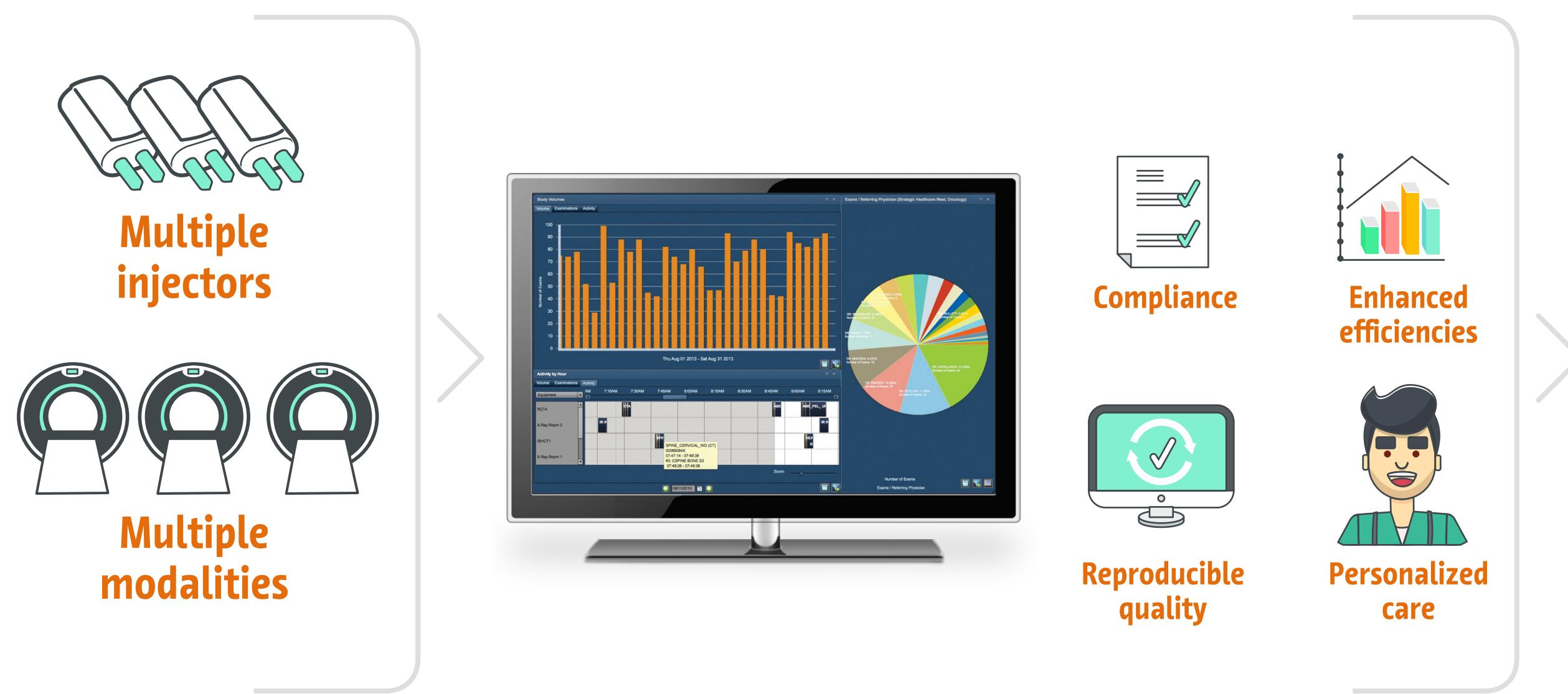




# Data-driven insights

A platform that connects contrast, injector and scan information to provide critical insights

Allows radiology practices to generate diagnostic quality images more safely, consistently and efficiently.



- vial icon **Easily track injection volumes, brand and vial size by injection protocol, device or across the enterprise**
- wavy line icon **Track injection protocol adherence to optimize appropriate injections**
- graph icon **Compare point-of-care data capture adherence across the enterprise for quality management**
- magnifying glass icon **Analyze scanner performance for contrast enhanced exams**

Anticipated 2019 technology deployment