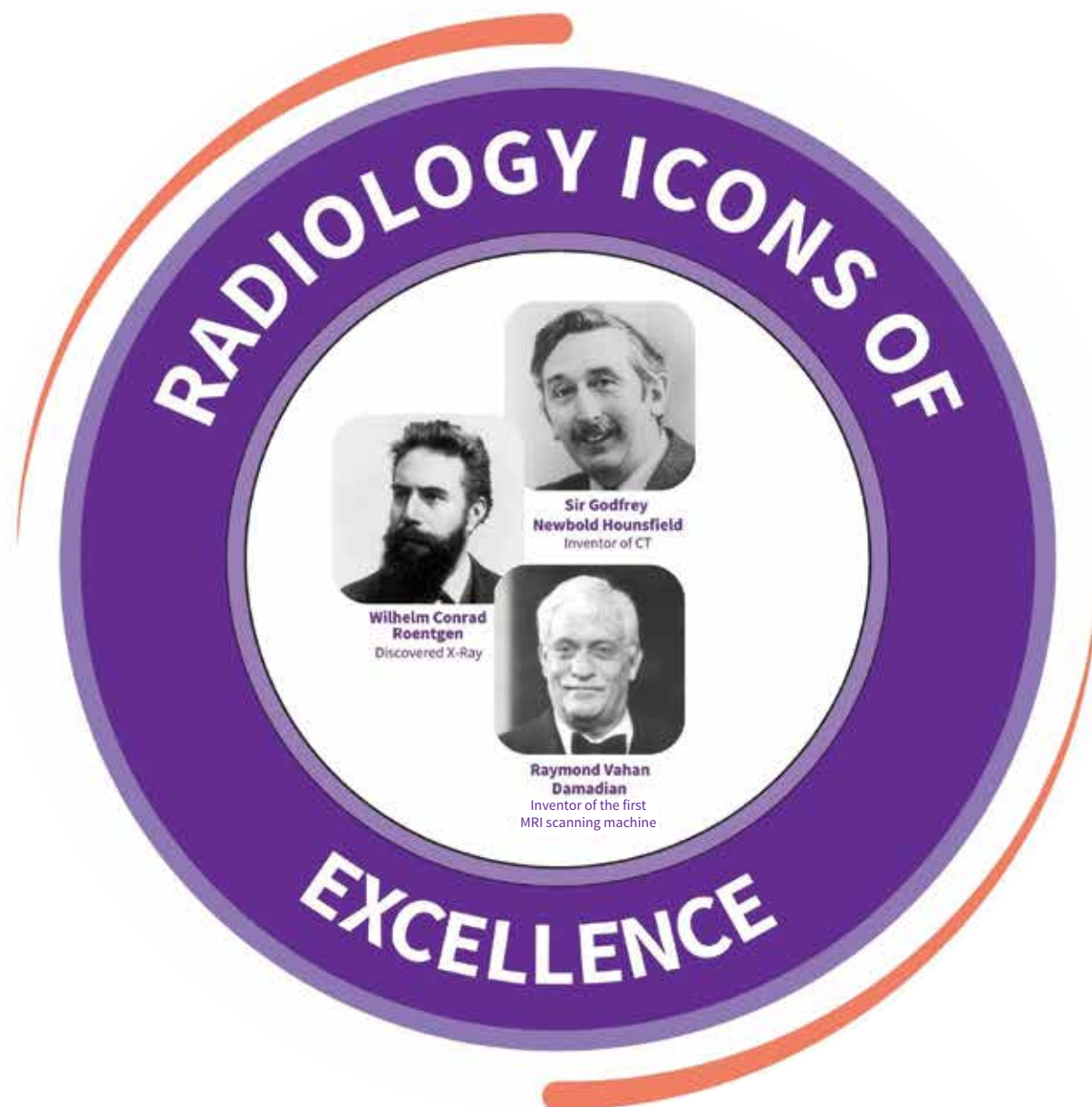


THE CONTRAST CHRONICLES

A story driven guide where contrast meets clarity - illuminating the radiographer's journey towards diagnostic excellence.







Dr. Ajaykumar Mishra
General Manager, South Asia, ANZ & ASEAN
Pharmaceutical Diagnostics

Greetings to the Radiology Community

This International Day of Radiology, journey into the fascinating world of diagnostic imaging through storytelling — where science meets imagination.

Introducing Series 1 of "The Contrast Chronicles in Imaging"— a collection of five immersive, visual narratives based on real situations in contrast-enhanced Scans. At GE HealthCare, we honour Wilhelm Conrad Roentgen's legacy — celebrating his groundbreaking discovery of X-rays in 1895 and advancing his vision. Through every story in **The Contrast Chronicles**, we strive to deliver clarity in contrast media handling and administration, supporting safe and quality practices in diagnostic imaging.

We extend our sincere thanks to the radiology community for your unwavering commitment to delivering precision care. We hope you find **The Contrast Chronicles** both engaging and insightful. We warmly invite **Heads of Radiology Departments** to use this resource for interactive educational sessions — bringing together radiologists, radiographers, technologists, nurses, and quality control teams to share experiences and foster collaborative learning in contrast media handling and administration.

Meet **Sam**, our fictional character — a sharp-eyed radiographer on a mission to solve diagnostic challenges with precision and care. Sam guides you through animated journeys where — quality meets care in every step. We look forward to hearing your own **Tales of Imaging**.

Sincerely,

Dr. Ajaykumar Mishra
General Manager, South Asia & ASEAN
Pharmaceutical Diagnostics

Five Immersive Situations



Patient
Screening

The Foundation
of Safety



Safe Handling
of Contrast Media

A Preventive
Approach



Safe Administration
of Contrast Media

Where Precision
meets Patient
Care

Five Immersive Situations



Injector Head
Cleaning &
Sterilization

The Clean
Connection

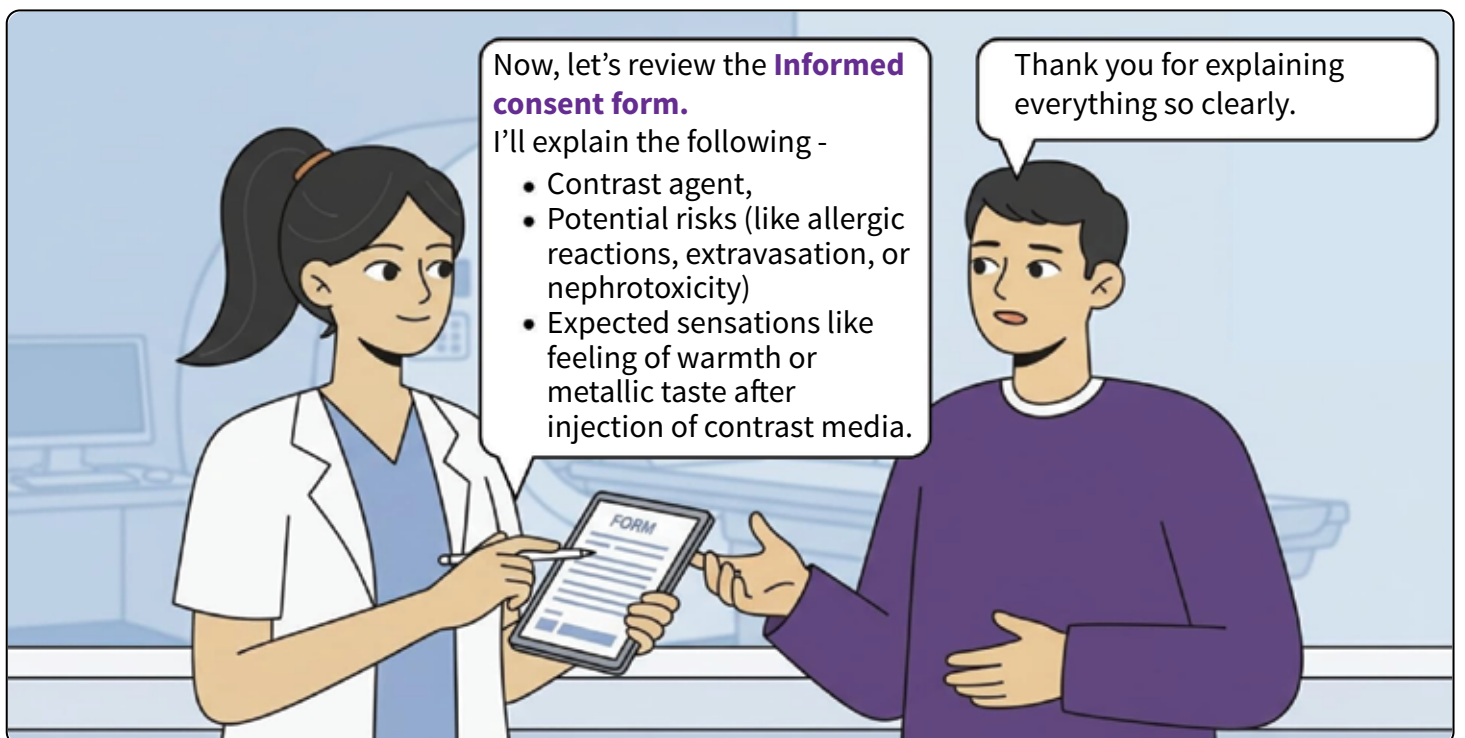
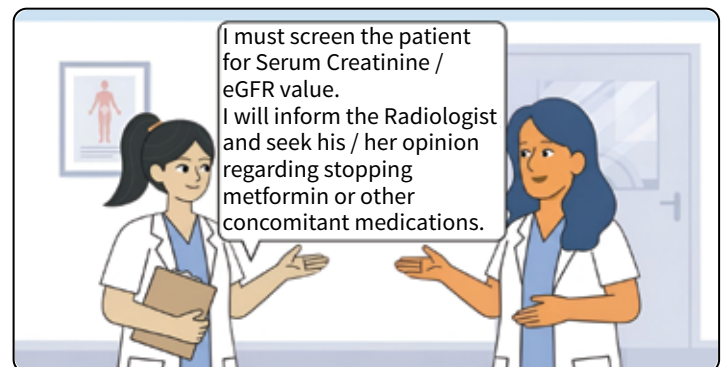
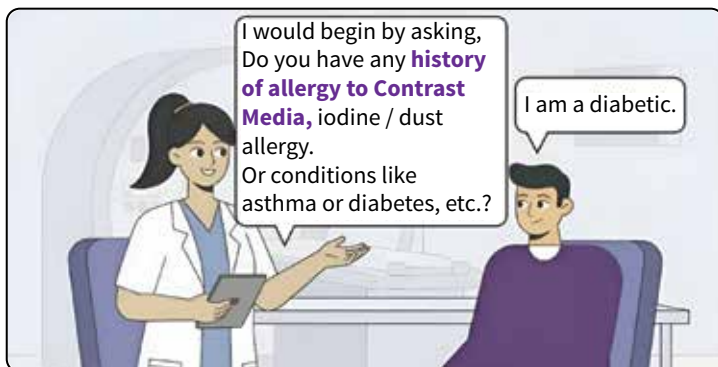


From injection
to intervention

The Critical Window
of Observation

Chapter 1

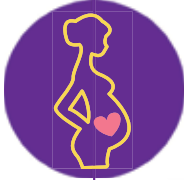
Patient Screening & Counselling The Foundation of Safety





Chapter 1

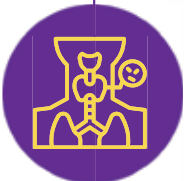
Points To Remember



Avoid CT scans for pregnant patients, especially during the first trimester. If the scan is deemed necessary, obtain a high-risk consent prior to the scan.^{2,7}



Screen for parameters like Serum Creatinine / eGFR Values.⁵



Understand history of renal impairment, severe asthma, cardiac conditions, thyroid, current medications like Metformin.^{5,6}



Check for allergies including different types of allergies.^{2,6}



Inform the Radiologist and obtain their opinion before discontinuing metformin or any other concomitant medications.⁸

Educational Resources:

GE HealthCare Patient Safety Cards or Posters are available as patient educational resources.

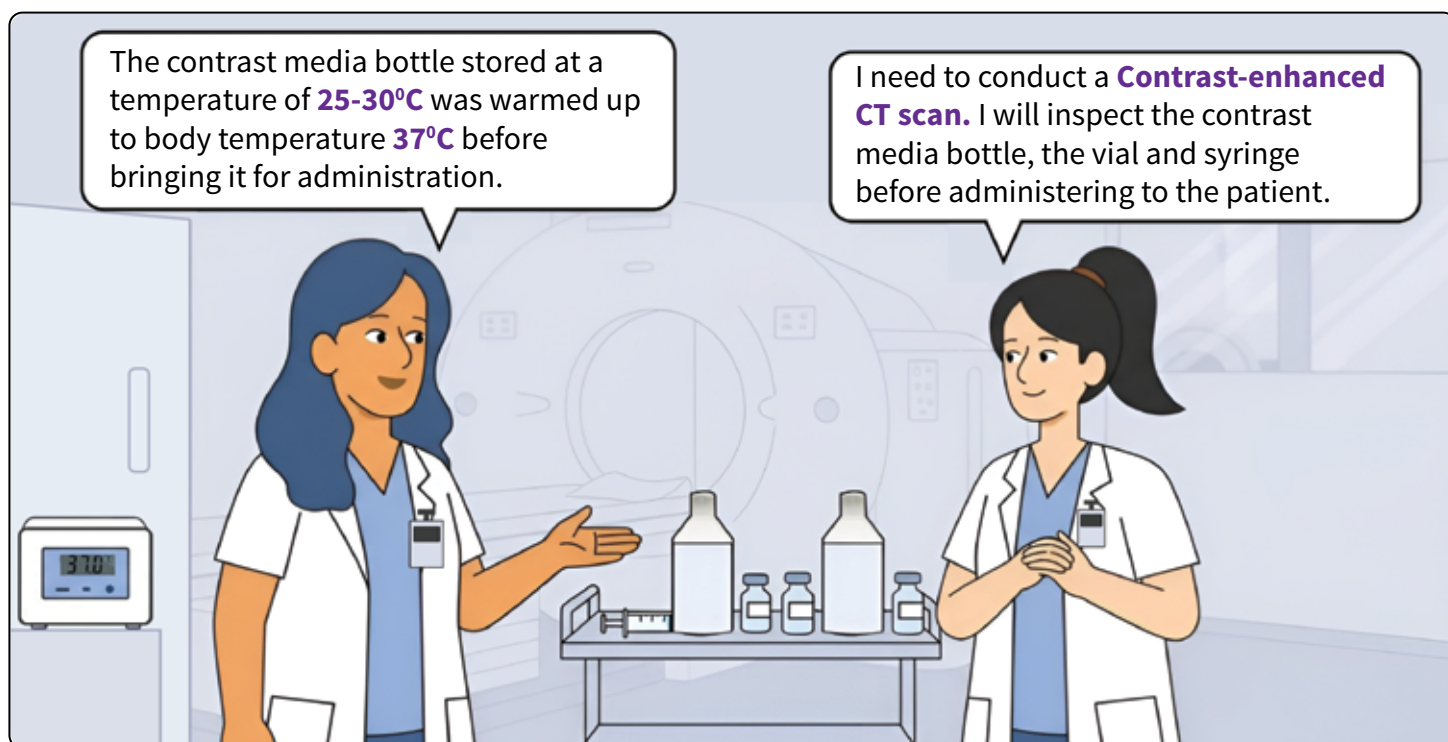
References:

1. CT scan: What It Is, Clevelandclinic.
2. CT Patient Safety and Care - StatPearls - NCBI Bookshelf.
3. CT scan - Mayo Clinic.
4. After Your CT scan, Stanfordhealthcare.
5. ESUR Guidelines v10, 2018.
6. ACR Manual of Contrast Media, 2025.
7. Albakri A. et al, Cureus, 2024.
8. Wang C. et al, Consensus Statement ACR 2025.

Chapter 2

Safe Handling of Contrast Media

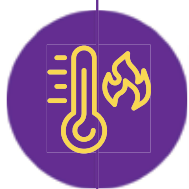
Why a Preventive Approach matters





Chapter 2

Points To Remember



Warm the contrast media to body temperature 37°C^{1,2}

- ✓ Improves flow
- ✓ Reduces the viscosity
- ✓ Reduces chances of extravasation
- ✓ Reduces injection pressure



Protect contrast-media during storage and usage from light & X-ray radiation.

Contrast media should be used within the stipulated time as per the prescribing information (PI).²



Always follow the instructions mentioned in the Product label regarding correct storage and handling instructions.

Educational Resources:

GE HealthCare Posters are available as educational resources.

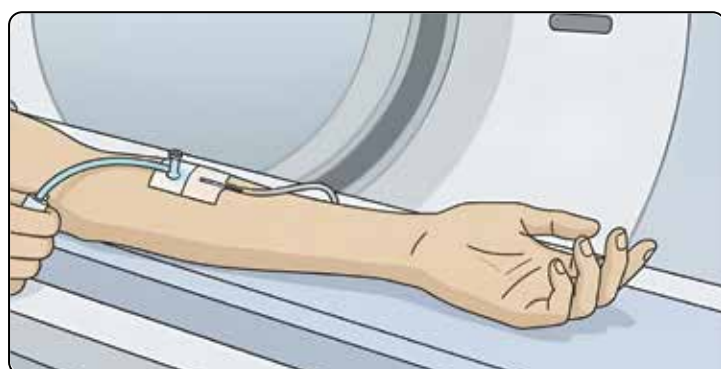
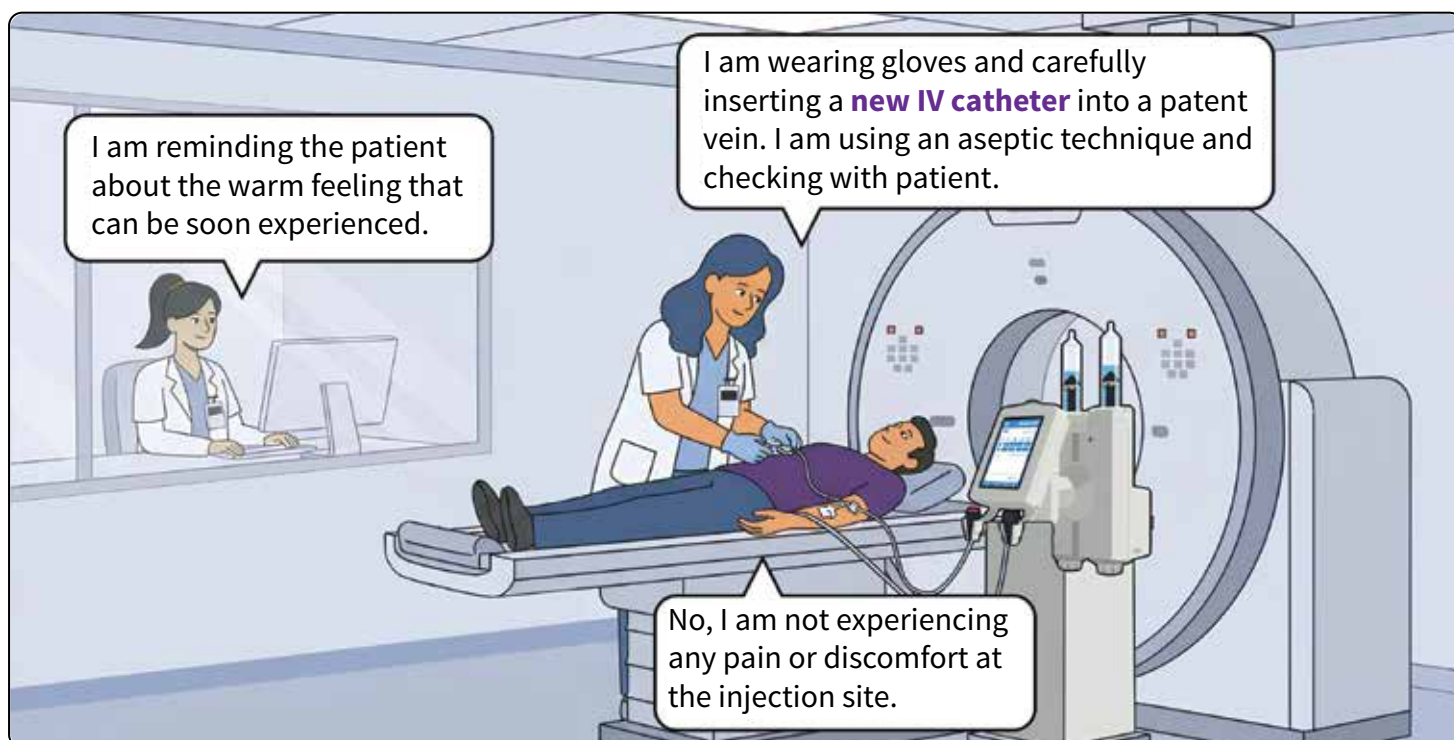
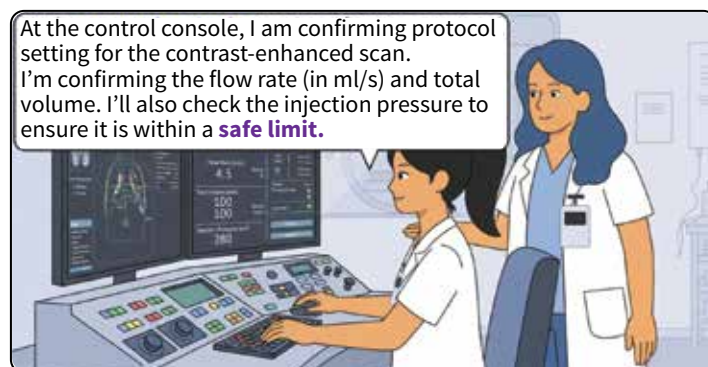
References:

1. Contrast Media Fundamentals & Clinical Applications, Springer 2022.
2. Omnipaque Product Prescribing Information.
3. ACR Manual of Contrast Media, 2025.

Note: The **ACR** recommends warming **high-viscosity iodinated contrast media** to body temperature when Using high-rate power injections, administering through small-calibre catheters, performing timed studies for peak enhancement.

Chapter 3

Safe Administration of Contrast Media where Precision meets Patient Care



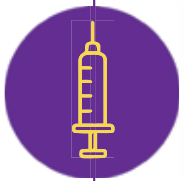


Chapter 3

Points To Remember



Pressure injector syringes can be used only once as per the recommendations; warming pads are useful in maintaining temperature of the loaded contrast.⁴



Avoid cleaning syringes using normal saline or hot water.



Do not remove the Cannula immediately after the scan is over.



Refer to manufacturer's instructions for usage of Y-connectors & tubing. It should be discarded after single usage. Do not re-use or re-sterile.²



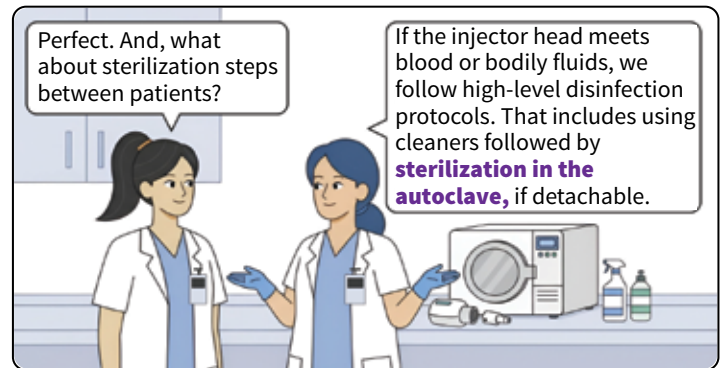
Apply principles of ALARA to minimize exposure to patient, self and others.¹

References:

1. The ASRT Practice Standards for Medical Imaging and Radiation Therapy, 2019.
2. Azevedo M. et al, Scientific Reports, 2020.
3. ACR Contrast Manual, 2025.
4. Guidance for Industry and FDA Staff, USFDA 2009.

Chapter 4

Injector Head Cleaning & Sterilization The Clean Connection





Chapter 4

Points To Remember



Always inspect and clean injector heads before and after use.^{1,4}



Use approved disinfectants.^{1,4}



Use only single-use syringes and check for expiry.⁴



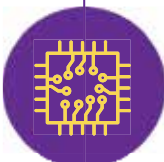
Collaborate across departments for consistent hygiene practices.



Flush the system with saline or sterile water.³



Wipe the injector head with a lint-free cloth.^{5,6}



Avoid submerging electronic components.⁵

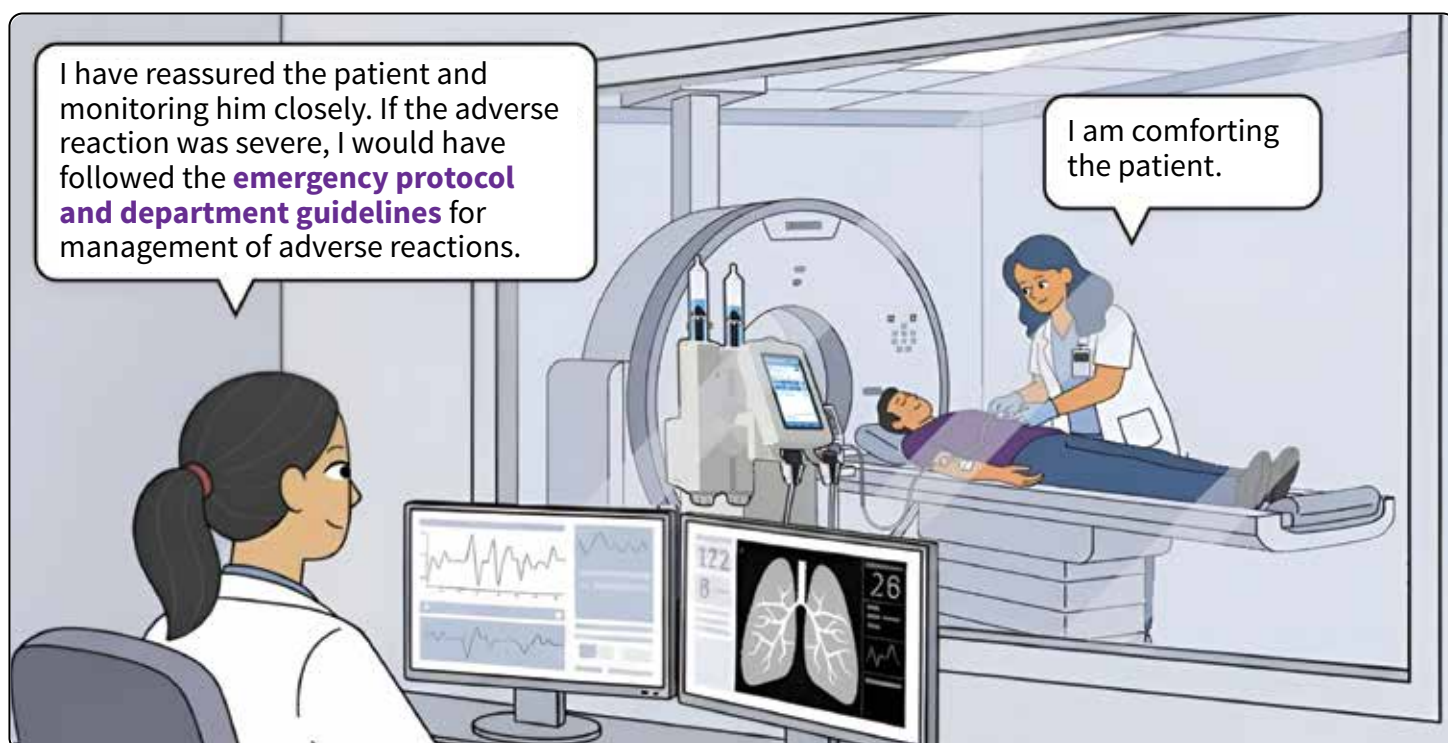
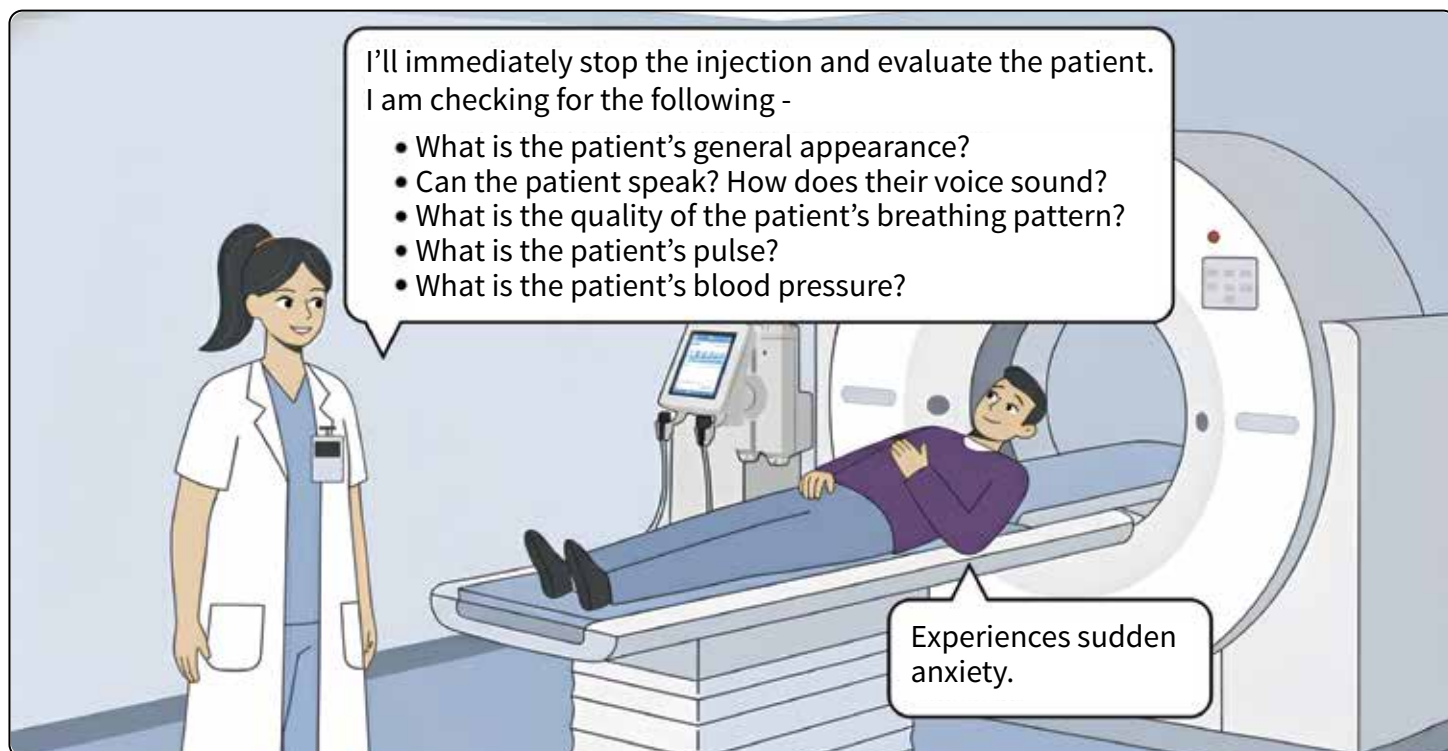
Note: Always follow the instructions mentioned in the Product Manual regarding correct usage.

References:

1.The ASRT Practice Standards for Medical Imaging and Radiation Therapy, 2019. 2.Azevedo M. et al, Scientific Reports, 2020. 3.ACR Contrast Manual, 2025. 4.Guidance for Industry and FDA Staff, USFDA 2009. 5.CDC Guidelines for Disinfection and Sterilization in Healthcare Facilities (2008). 6.Injector Manufacturer's Guidelines.

Chapter 5

From Injection to Intervention The Critical Window of Observation





Chapter 5

Points To Remember



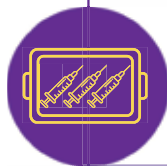
Observe the patient for at least 30 minutes after the scan is over.^{1,2,3}

Patient should be well-hydrated after the scan.³



Details such as the contrast batch, dose, and patient response should be logged.¹⁰

Inform on duty doctor and/or radiologist immediately.^{11,12,13}



Maintain an emergency tray with all medicines ready.

Stabilize patient's vital parameters like breathing and circulation.^{8,9}



Start emergency medical management based on department/hospital policy.^{8,9}

In case of moderate to severe reactions, plan to shift patient immediately to specialized medical care facility.^{8,9}



References:

1. CT Scan: What It Is, clevelandclinic. 2. CT Patient Safety and Care - StatPearls - NCBI Bookshelf . 3. CT Scan - Mayo Clinic . 4. After Your CT Scan, stanfordhealthcare. 5. McLendon K, Sternard BT. Anaphylaxis. [Updated 2023 Jan 26]. In: StatPearls [Internet]. 6. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: 7. <https://www.ncbi.nlm.nih.gov/books/NBK482124/>. CM Adverse Reactions | ESUR Guidelines v10, 2018. 8. ESUR Guidelines v10, 2018. 9. Omnipaque Product Prescribing Information. 10. McLendon K, Sternard BT. Anaphylaxis. [Updated 2023 Jan 26]. In: StatPearls [Internet]. 11. Treasure Island (FL): StatPearls Publishing; 2024 Jan. 12. McLendon NIH, 2023. 13. ESUR Guidelines v10, 2018.



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GE HealthCare

Notes

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View our Educational Resources



Adverse reactions should be reported according to local regulation. Adverse reactions should also be reported to GE HealthCare at IndiaAdverse.events@gehealthcare.com

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