Patient Safety in Radiation Therapy: An RTT Perspective

SLIDE 1 – Title Slide (30 seconds)

"Good morning respected faculty, colleagues, and friends.
I'm Prakash Umbarkar, and today I'll be speaking on *Patient Safety in Radiation Therapy*—from a **Radiation Therapist's perspective**."

Punch line:" Because patient safety does not begin with a machine—it begins with us."

SLIDE 2–3 – Complexity of Radiotherapy (1 min)

"Radiotherapy is one of the most complex treatments in modern medicine.
Multiple steps, multiple professionals, multiple handovers—every day."

"Wherever complexity exists, the **risk of error increases**."

Pause & look at audience: "And that is why patient safety must be intentional—not accidental."

SLIDE 4–5 – Why Errors Happen (1 min)

"Errors in radiotherapy are rarely due to one person.
They usually occur due to **workflow gaps, communication failures, or assumptions**."

"Most serious incidents happen not during planning—but **during execution**."

SLIDE 6 – Bottom Line (30 seconds)

Script (slow & clear):

"Quality in radiotherapy depends on **constant verification at every step**."

Pause

"Not once. Not sometimes.
At *every step*."

SLIDE 7–8 – Evidence & Wrong Events (1.5 min)

"Radiotherapy errors include wrong patient, wrong site, and over- or under-exposure."

"These are not theoretical problems—they are **real, reported events**."

Emphasize:

"The good news is—most of these errors are **preventable**."

SLIDE 9–10 – Dry Run Concept (1.5 min)

"A dry run is not a rehearsal—it is a **safety checkpoint**."

"It allows the team to verify setup, parameters, and identify risks **before beam-on**."

Punch line: "Dry runs reduce anxiety, reduce errors, and protect patients."

SLIDE 11 – Final Quality Check (30 sec)

"Think of a dry run as the **last safety mirror** before treatment begins."

SLIDE 12–14 – Checklists (AVIATION → HEALTHCARE) (2 min)

"Modern checklists were first developed in aviation in 1935—after an accident."

"Pilots realized that even experts can miss steps in complex systems."

"Healthcare adopted checklists for the same reason—**to make safety reliable**."

Punch line: "Checklists don't replace thinking—they **support it**."

SLIDE 15 – Patient Identification (1 min)

"Patient verification is the **first and most critical safety step**."

"We ask the patient to state their date of birth and match it with the electronic record."

Firm line:"If there is any mismatch—we stop."

SLIDE 16 – Treatment Setup (1 min)

"Setup errors are silent errors."

"That's why one therapist reads the setup notes—and another verifies."

Punch line: "Verbal cross-checks are our strongest defense against silent mistakes."

SLIDE 17 – Pre-Treatment Verification (1 min)

"Verification is not a formality—it's a responsibility."

"One RTT speaks, another confirms, and the system listens."

SLIDE 18–19 – Digital Workflow & Care Path (1 min)

"Electronic charts improve efficiency—but only when used correctly."

"Technology supports us, but it cannot replace **professional vigilance**."

In radiotherapy, one size does not fit all — every patient is different."

SLIDE 20 – Learning From Errors (1 min)

"Here is a real example."

"A technical error led to one extra fraction."

Pause "What matters is not blame—but **learning and system correction**."

SLIDE 21–22 – Changing Room Location (1 min)

"Earlier, patients changed inside treatment rooms."

"Today, changing rooms are outside—for privacy and radiation safety."

Message: "Small changes can make a big safety difference."

SLIDE 23 – LMO Switch (1 min)

"The Last Man Out switch ensures radiation starts **only when the room is empty**."

Short & clear: “It protects patients.
It protects staff.
It prevents accidental exposure.”

SLIDE 24–25 – ARIA Alerts & Collision (1 min)

“Collision alerts are warnings—but only if we respect them.”

“Alerts must be **documented, reviewed, and communicated**.”

Punch line: “An ignored alert is a missed opportunity for safety.”

SLIDE 26 – Incidents & Actions Taken (1 min)

“Every reported incident in our department led to an improvement.”

“This is what a **positive safety culture** looks like.”

SLIDE 27–28 – Daily Tips (1 min)

“Safety is built in daily habits—patient support, imaging choices, observation.”

“Patient safety is not an event—it’s a **daily practice**.”

SLIDE 29 – AUDIENCE INTERACTION (IMPORTANT) (30 sec)

Ask clearly and pause:

“In your opinion—who is the last person ensuring patient safety before radiation is delivered?”

Let audience respond.

SLIDE 30 – WHO IS MOST IMPORTANT? (Reveal) (1 min)

“Data shows that in 45% of cases—
it is the **Radiation Therapist** who detects the event.”

Powerful line (slow): “Radiation therapists are the **final safety barrier** in radiotherapy.”

SLIDE 31–34 – Professionalism & Learning (1 min)

“Safety improves when we learn together, report openly, and respect each role.”

SLIDE 35 – TAKE-HOME MESSAGE (1 min)

“Radiation therapists are at the frontline of radiation therapy.”

“Patient safety improves when the entire team values the therapist’s role and **adopts a safety-first culture**.”

“Safety is not a choice — it is a habit.”

FINAL SLIDE – CLOSING (1 min)

Say slowly, confidently:

“To improve patients’ quality of life, we must always prioritize safety and care.”

Final mantra (pause after):

‘Health Workers and Patients: Safer and Better—Together.’ ------Thank you.