


Impact of Reviewing Our Doses: Lessons Learned at the Massachusetts General Hospital

Rajiv Gupta, MD, PhD
Neuroradiology, Massachusetts General Hospital
Harvard Medical School



Radiation Fallout: Which Screenings Are Safe?

By Dr. Mehmet Oz

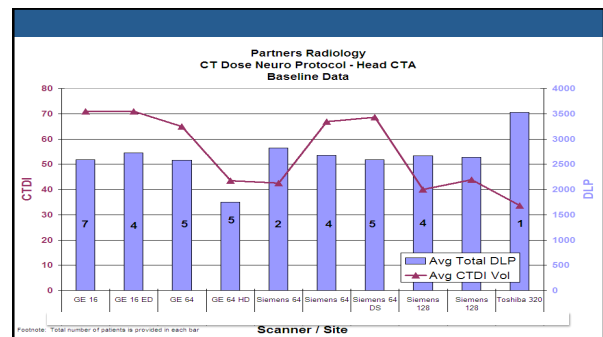
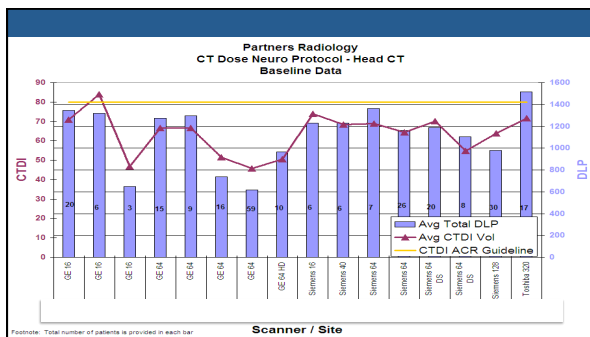


High-tech screenings could be exposing you to unnecessary radiation. Mehmet Oz, MD, explains how to dial down your dose.

Outline

- Partners Dose Survey
- Radiology Order Entry System
- Response and results

Partners CT Dose Survey 2009

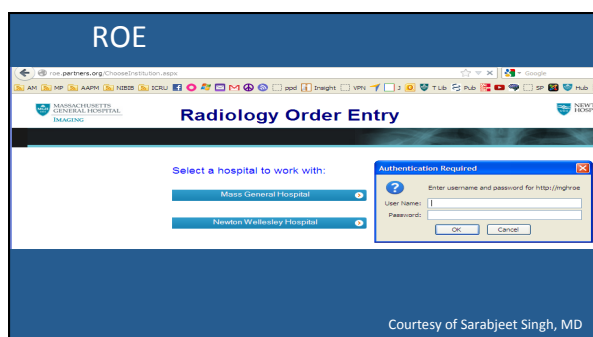


Conclusion of the Survey

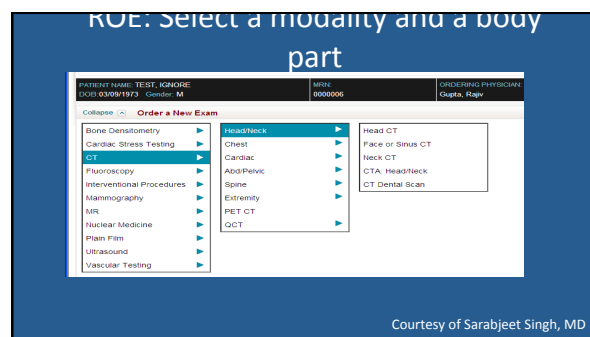
- Large variations exist among:
 - Sites
 - Scanners with in the same site
- Less used scanners and protocols are more prone to “dose” neglect
- Another finding: Many CT scans on the same patient
 - Brenner, NEJM 2008

Make Sure each Scan is Justified

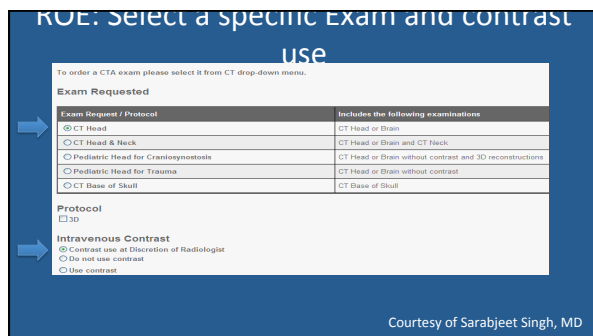
- Even a low-dose CT is too much dose when inappropriately ordered
- Check with physician if in doubt; Triage when appropriate
- About 1/3rd of CT are inappropriate!
 - Brenner, NEJM 2008



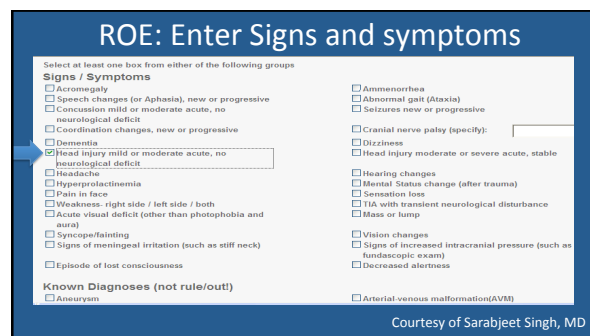
Courtesy of Sarabjeet Singh, MD



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ROE: Shows previous exams

Courtesy of Sarabjeet Singh, MD

Avoid Unintentional Repeats & INFORM

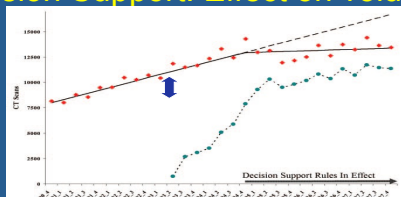
ROE: evidences-based appropriateness

Courtesy of Sarabjeet Singh, MD

Select Site and Schedule Exam

Courtesy of Sarabjeet Singh, MD

Decision Support: Effect on volume



Sistrom et al. Radiology 2009

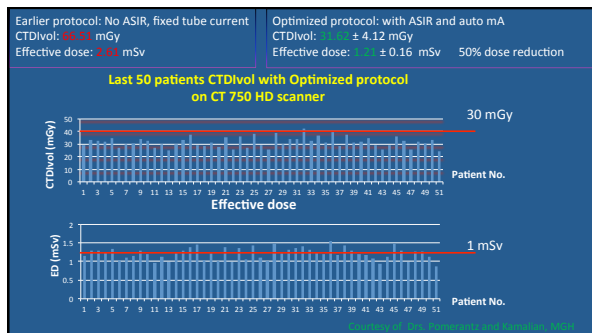
- Appropriateness for CT is not optional!
- Decision support and practice guidelines help.

Insight

"It's not the science, it's the process"

Changes

- Decision support via ROE:
 - Justify each scan
- Pay attention to the mechanics
- Minimize mA; use mA modulation
- Use Auto-kV when available
- Avoid protocol clutter
- Tailor protocol to clinical situation
- Special attention to pediatric scans
- Only one person in each division allowed to make changes to the protocol
- Minimize variability



Summary

- Science of radiation dose is important
- Process of how protocols are designed, instituted, and managed is equally important