



CLINICAL NEURORADIOLOGY

CORRELATING IN REAL-TIME

46th Annual Meeting Southeastern Neuroradiological Society
White Sulphur Springs, West Virginia

Rahul Singh
Sukhwinder J. S. Sandhu



DECLARATIONS

- This study received funding from Mayo Clinic as part of its Research Accelerator for Clinicians Engaged in Research (RACER) program. Mayo Clinic provided the study with \$15,000 in support and 10% academic time.

SUBOPTIMAL IMAGING

PROBLEM STATEMENT

- Suboptimal Imaging is Inappropriate/Unnecessary Imaging
- Over 20% of inpatient imaging (Bianco et al. 2019, Mendelson et al. 2010)
- Adverse Effects
 - Unanswered clinical questions
 - Delays Management
 - ↑ Length of Stay

METHOD

- Conducted at Mayo Clinic Hospital in Florida
- A board-certified neuroradiologist (S.J.S.S.) was embedded in patients' clinical care.
- Suboptimal Imaging defined by ACR Appropriateness Criteria, if applicable
 - If ACR Criteria not applicable, then by neuroradiologist

RESULTS

- 60 inpatients
- Neurology Team wished to place new imaging orders in 16 (27%) of these patients.
- 21 new imaging studies
 - 15 MR
 - 3 CT
 - 2 angiograms
 - 1 PET-CT

RESULTS (CONT'D)

- 21 new imaging studies

	New Imaging Studies	MRI/MRA	CT	DSA	PET-CT
Imaging Wishes of the Neurology Team	21	15	3	2	1
Imaging Neuroradiologist Found to be Suboptimal	14 (67%)	9 (60%)	3 (100%)	1 (50%)	1 (100%)

- +1 CT recommended

TAKE HOME MESSAGE

CLINICAL NEURORADIOLOGY

- An embedded neuroradiologist on clinical rounds improves appropriate imaging utilization.
 - ↓ suboptimal scans
- Additional studies are needed
 - ↓ Length of Stay?

References:

1. Bianco, A., Zucco, R., Lotito, F., & Pavia, M. (2018). To what extent do hospitalised patients receive appropriate CT and MRI scans? Results of a cross-sectional study in Southern Italy. *BMJ Open*, 8(2), e018125. <https://doi.org/10.1136/bmjopen-2017-018125>
2. Mendelson, R. M., & Bairstow, P. J. (2010). Inappropriate imaging: why it matters, why it happens, what can be done. *J Med Imaging Radiat Oncol*, 54(3), 173-177. <https://doi.org/10.1111/j.1754-9485.2010.02173.x>

THANK YOU!

QUESTIONS?



Full List of Authors:

Rahul Singh M.B.B.S., Ahmed K. Ahmed M.D. M.Sc, Benjamin H. Eidelman M.D., Amra Sakusic M.D., Amanda Porter, M.D., Kevin Barrett M.D., Dhairya Lakhani M.D., Lindsay N. Williams M.D., Stephen W. English M.D., Prasanna Vibhute M.D., Vivek Gupta M.D., Meghana G Reddy M.B.B.S., Sukhwinder J. S. Sandhu, M.D.