



# Duplication of Neurovascular Imaging in Stroke Work Up Protocol at an Academic Teaching Hospital



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## Introduction

- Multiple imaging guidelines for acute ischemic stroke and transient ischemic attack (TIA) have been published to direct clinicians towards effective imaging modalities and concurrently decrease potential overutilization of ineffective imaging studies.
- Though compliance of these guidelines has increased in recent years, a substantial rise in image utilization still remains widespread within the past decade.
- Our study seeks to assess the prevalence of redundant imaging during emergency department work-up of patients presenting with stroke-like and/or TIA symptoms.

## Methods

- A retrospective review of all patients presenting to the ED with stroke-like and/or TIA symptoms was collected from January 2020 to December 2022.
- Redundant imaging was defined as any duplicate cross-sectional brain, brain-vascular, or neck-vascular imaging in an ED encounter.

## Results

- Of the 24 patients presenting with stroke-like and/or TIA symptoms in the ED recorded, 70.8% were female, and 29.2% were male
- All patients recorded redundant imaging with CTA-MRI as the central combination followed by CTA-CT head/neck w/ and w/o contrast.

## Results

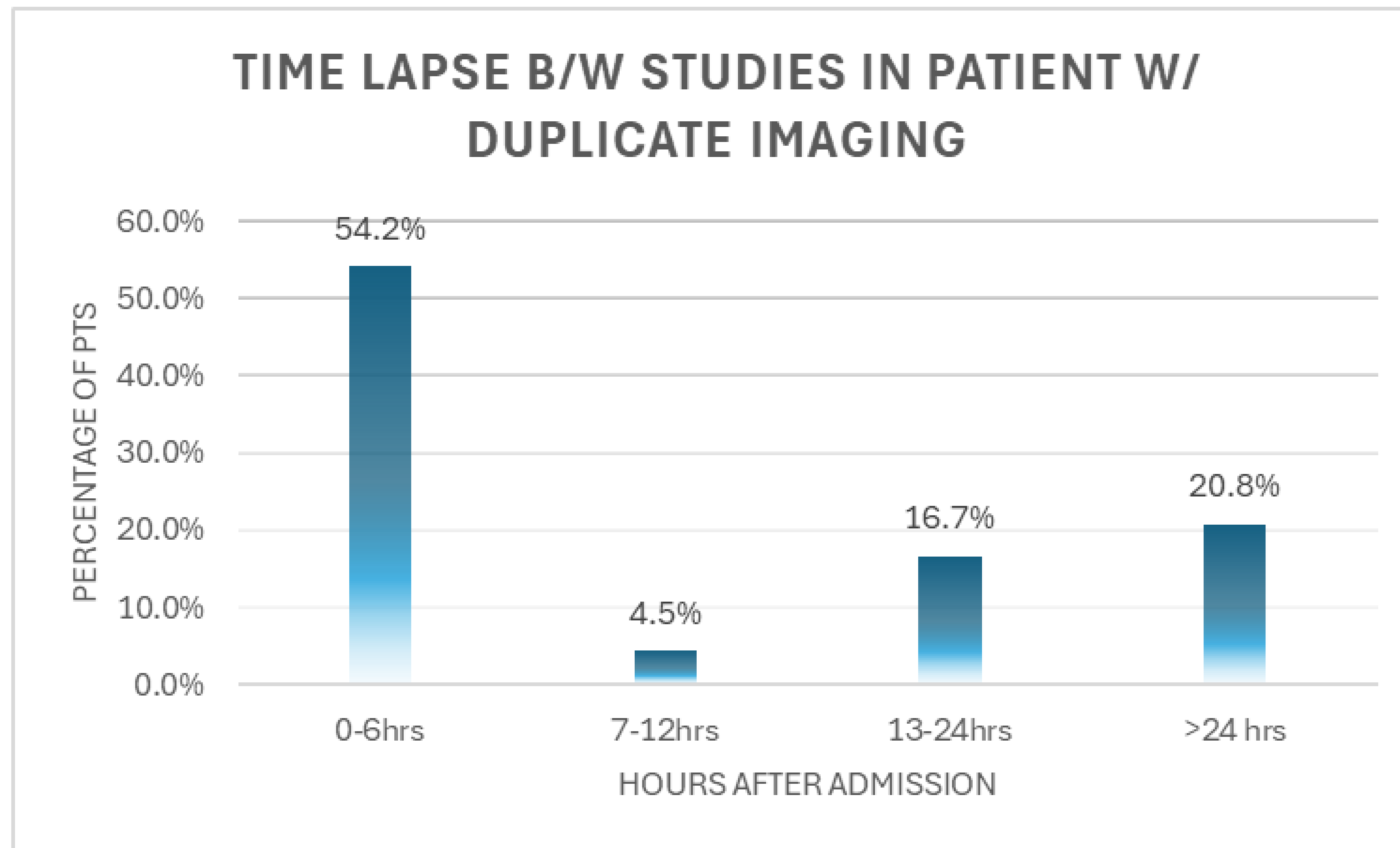


Figure 1: Represent time lapse between studies in patients with duplicate imaging

## Discussion

- Through analysis of our study, we found that increased imaging utilization for patients with TIA and/or stroke-like symptoms is associated with redundant imaging.
- Duplicative neurological studies on the same patients occur frequently, often show similar results, and are an additional cost source

## Conclusion

- Identifying recommendations for initial ER stroke evaluation and management is pertinent to attenuate excess hospital expenditure

## References

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Further Questions

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