

# Diagnostic evaluation of Headache in Emergency departments: are we doing enough?

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## Introduction

The aim of this study was to ascertain the adherence to the diagnostic algorithm for non-traumatic headaches in the Emergency Departments of the local health trust of Bologna in order to prove the efficacy of decision-making procedures in emergency in order to optimize the use of the limited resources available.

## Methods

We analyzed all patients attending EDs during July and August 2016 for non-traumatic headache as principal complaint. Physicians classified them according to the clinical scenario proposed in the algorithm. All scenarios were then revised by a neurologist expert in headache.

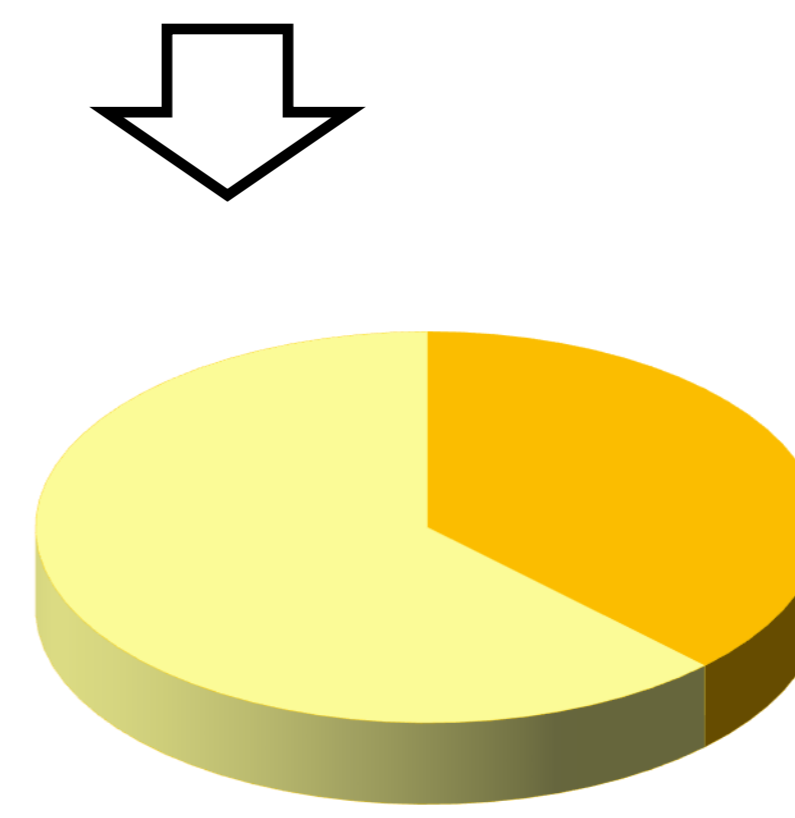
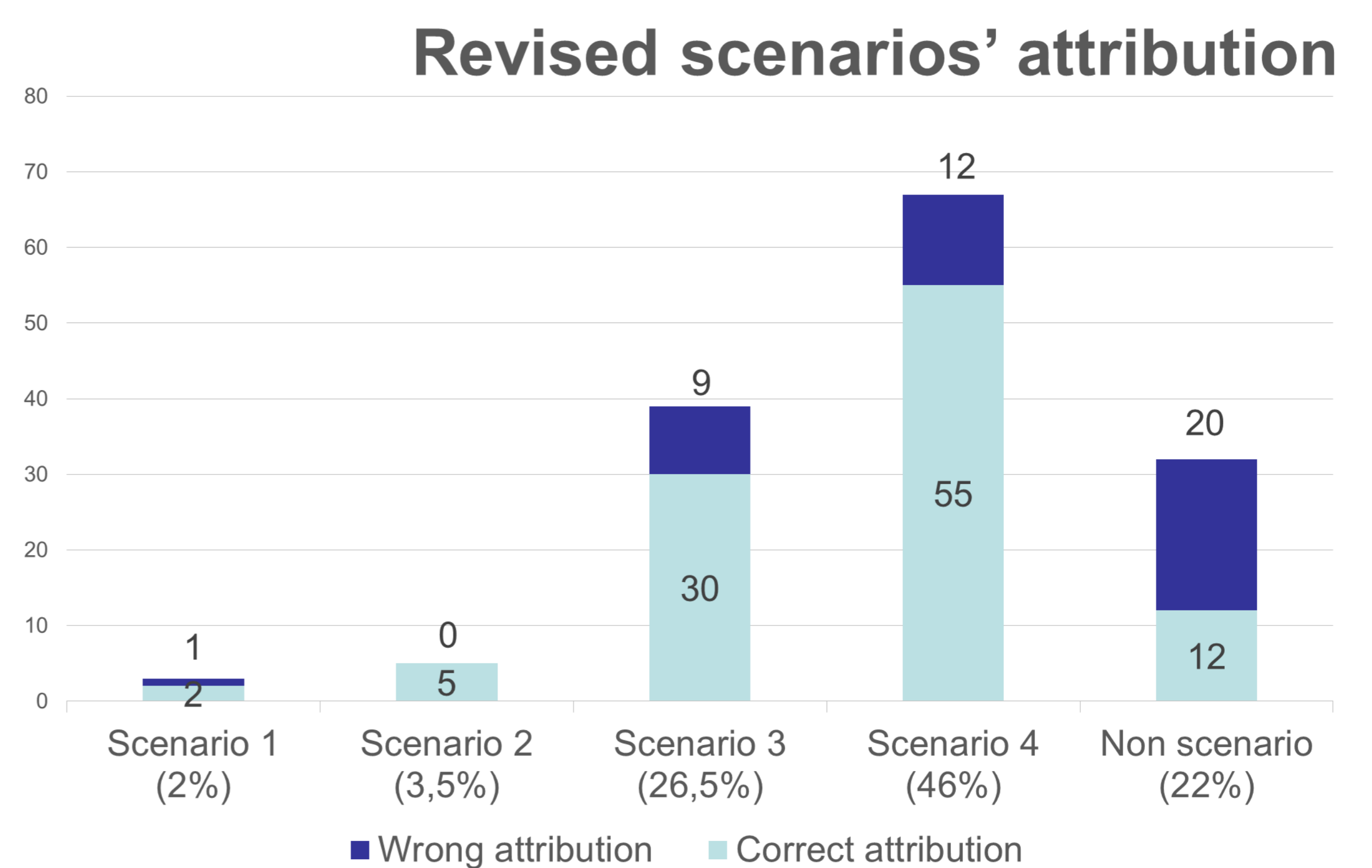
<b>Scenario 1</b>	severe headache, with acute onset or with neurological findings or with vomiting or syncope at the onset of headache	Head CT must be performed →if negative LP is indicated →if normal neurologist evaluation in 24h
<b>Scenario 2</b>	severe headache with fever and/or neck stiffness	Head CT and LP must be performed
<b>Scenario 3</b>	headache of recent onset, progressively worsening or persistent	Head CT and blood tests are indicated → if negative neurologist evaluation in 7 days
<b>Scenario 4</b>	patients with a history of headache who complained of headache very similar to previous attacks in terms of intensity, duration, and associated symptoms	blood tests and neurological follow up

## Conclusions

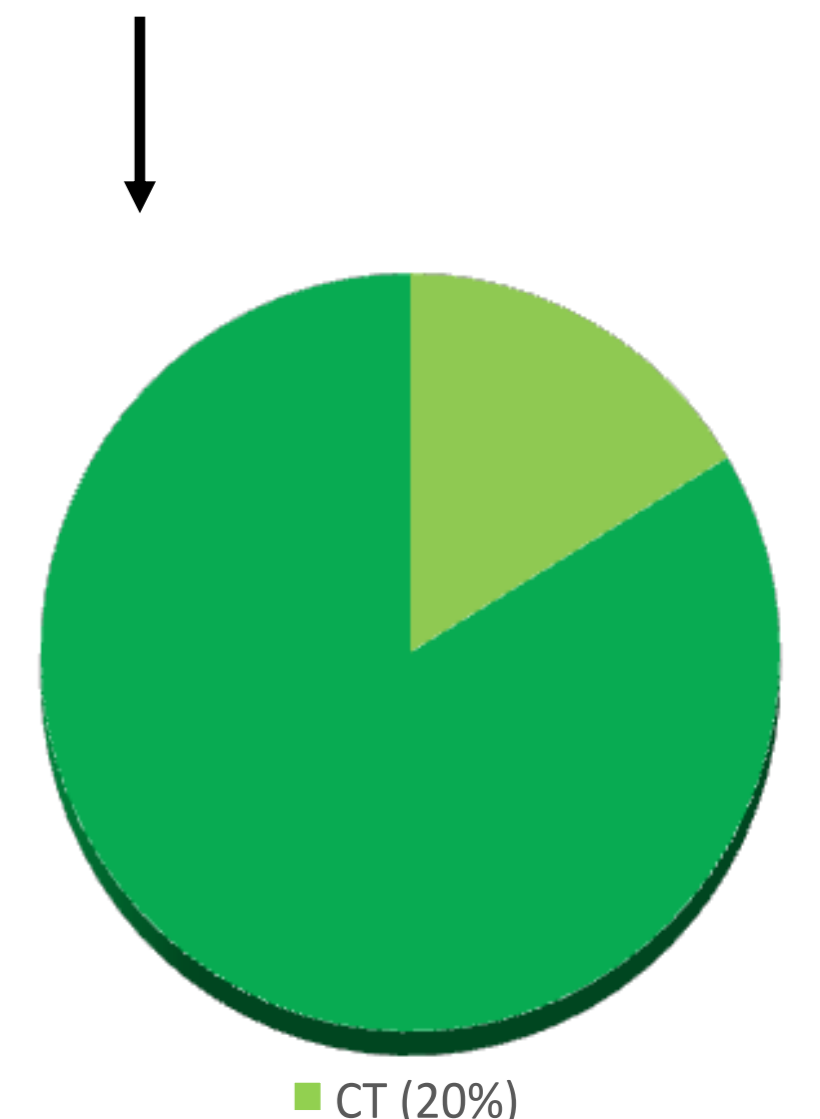
In order to optimize the use of diagnostic exams we underline the importance of a careful history taking and neurological examination.

This study demonstrates how appropriate education of physicians on these 4 simple scenarios led to avoid resource wasting, in particular head CT scans in EDs.

## Results



PL indicated but not performed



CT in scenario 4

Respecting the correct use of resources

Five cases who should have been included in Scenario 1 cohort were misclassified, but they nevertheless underwent the CT scan.

Two cases who should have been in Scenario 2 were not well attributed, they underwent CT scan, but none LP. All other misclassifications let patients undergo more exams than the necessary.

Clinical neurological evaluations were not requested in 37/42 (88%) of patients requiring them.

## Bibliography

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