

Ventilation/Perfusion Scans: Clinical Audit of Nondiagnostic Scans Following Wider Application of SPECT and Transition to Trinary Reporting

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Background

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- SPECT imaging, when possible, used for all ventilation/perfusion (V/Q) scans for pulmonary embolism (PE).
- Trinary reporting system (no PE, non-diagnostic or PE present) introduced.

Aim

- To assess how many studies are reported as non-diagnostic following wider application of SPECT and transition to trinary reporting.

Target

Less than 3.5% should be reported as non-diagnostic

Successful and Safe Implementation of a Trinary Interpretation and Reporting Strategy for V/Q Lung Scintigraphy

Joseph E. Glaser, Murthy Chamarthy, Linda B. Haramati, David Esses and Leonard M. Freeman

J Nucl Med. 2011;52:1508-1512.

Published online: July 29, 2011.

Doi: 10.2967/jnumed.111.090753

Methods

UAH V/Q interpretation:

In general, 2 mismatches are interpreted as positive for PE and 1 mismatch as non-diagnostic regardless of size.

Methods

Limitations of comparing our hospital to Glaser et al:

- Glaser et al used planar images only
- Glaser et al's study used criteria of single-segmental mismatches positive for pulmonary embolism

Successful and Safe Implementation of a Trinary Interpretation and Reporting Strategy for V/Q Lung Scintigraphy

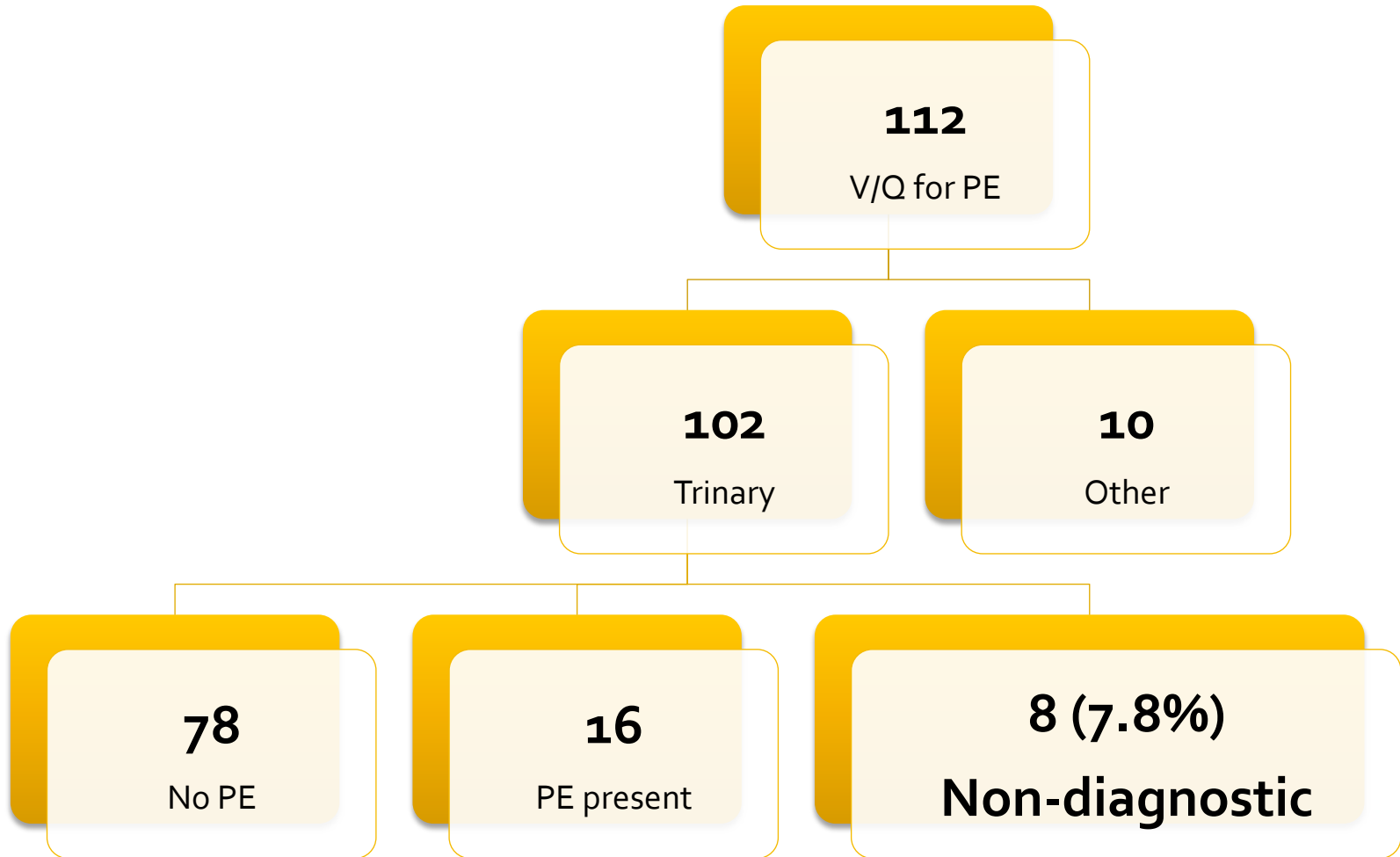
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Methods

- All V/Q scans for diagnosis of PE in adults performed at the University of Alberta Hospital between July 1 2013 and August 31 2013 were reviewed.

Results



Target Not Met

- 7.8% of studies were non-diagnostic, target 3.5%

Action

- Multidisciplinary review of the 8 non-diagnostic scans

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 - 2 studies misinterpreted
 - 3 studies had 1 mismatch (non-diagnostic by UAH interpretation but would be positive by Glaser et al)
 - 3 indeterminate studies

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 - 3 indeterminate studies

Summery

- 3/102 (2.9%) V/Q for PE non-diagnostic by both our hospital and Glaser et al's criteria.

References

- Successful and safe implementation of a trinary interpretation and reporting strategy for V/Q lung scintigraphy. Glaser JE, Chamorthy M, Haramati LB, Esses D, Freeman LM. J Nucl Med. 2011 Oct;52(10):1508-12.