Discovery of Incidental Nodules in Trauma: Should There Be a Standardized Approach?

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Background

- Patients brought into the emergency department due to a recent traumatic event may receive a thoracic or whole-body (WB) CT as part of their initial trauma evaluation.
- Incidental findings are often discovered in these patients, many of which are not properly followed-up following discharge.
- These patients could have potentially high-risk nodules or be at an increased risk of developing malignancies from these findings in the future.

Objective

To determine the prevalence of clinically significant lung, thyroid, liver, and adrenal nodules discovered during initial trauma evaluation and whether proper follow-up was received or initiated.

Methods

- Retrospective, single center chart review from January 1, 2016 – December 31, 2021, of adult trauma patients who presented as trauma activations.
- Data was gathered from patients who received a Thoracic or Whole Body CT as part of initial trauma evaluation.

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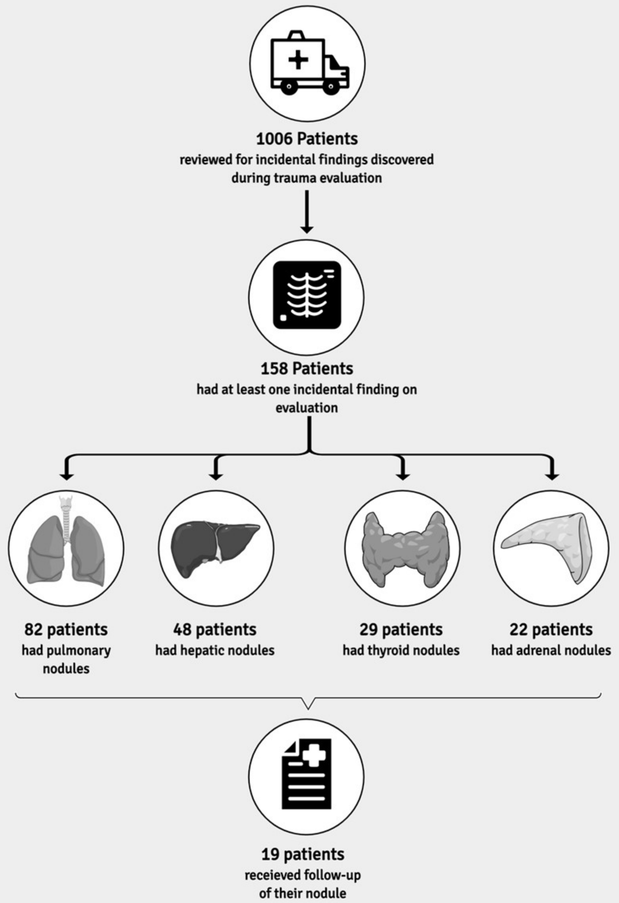
Figure 1: Incidental Findings in Trauma Patients



Results

- 1,006 patients were screened for incidental nodules. 158 patients (15.5%) were found to have at least one incidental finding on CT.
- The most common incidental finding was a pulmonary nodule (n=82/158, 51.9%), followed by hepatic lesion (n=48/158, 30.3%), thyroid nodule (n=29/158, 14%), and adrenal nodules (22/158, 14%).
- Only 11 of these patients (12%) received follow-up of their incidental finding.

Conclusion

- Incidental imaging findings in trauma patients is a developing phenomenon with potential significant complications.
- The results from this study indicate that inadequate follow-up for incidental imaging findings in this population exists.
- Future guidelines should focus on the development of appropriate patient education and follow-up to ensure favorable outcomes.

References

1.Mortani Barbosa EJ, Osuntokun O. Incidental findings in thoracic CTs performed in trauma patients: an underestimated problem. *Eur Radiol*. 2019;29(12):6772-6779. doi:10.1007/s00330-019-06313-6
2. Sharbidre KG, Lockhart ME, Tessler FN. Incidental Thyroid Nodules on Imaging. *Radiol Clin North Am*. 2021;59(4):525-533. doi:10.1016/j.rcl.2021.03.004
3. Bovio S, Cataldi A, Reimondo G, et al. Prevalence of adrenal incidentaloma in a contemporary computerized tomography series. *J Endocrinol Invest*. 2006;29(4):298-302. doi:10.1007/BF03344099
4. Boutros C, Katz SC, Espat NJ. Management of an Incidental Liver Mass. *Surg Clin North Am*. 2010;90(4):699-718. doi:10.1016/j.suc.2010.04.005
5. MacMahon H, Naidich DP, Goo JM, et al. Guidelines for Management of Incidental Pulmonary Nodules Detected on CT Images: From the Fleischner Society 2017. *Radiology*. 2017;284(1):228-243. doi:10.1148/radiol.2017161659