

"Adrenal Incidentalomas on ¹⁸F-FDG PET-CT: Prevalence Across Diverse Malignancies, A Single Center Experience"

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Introduction:

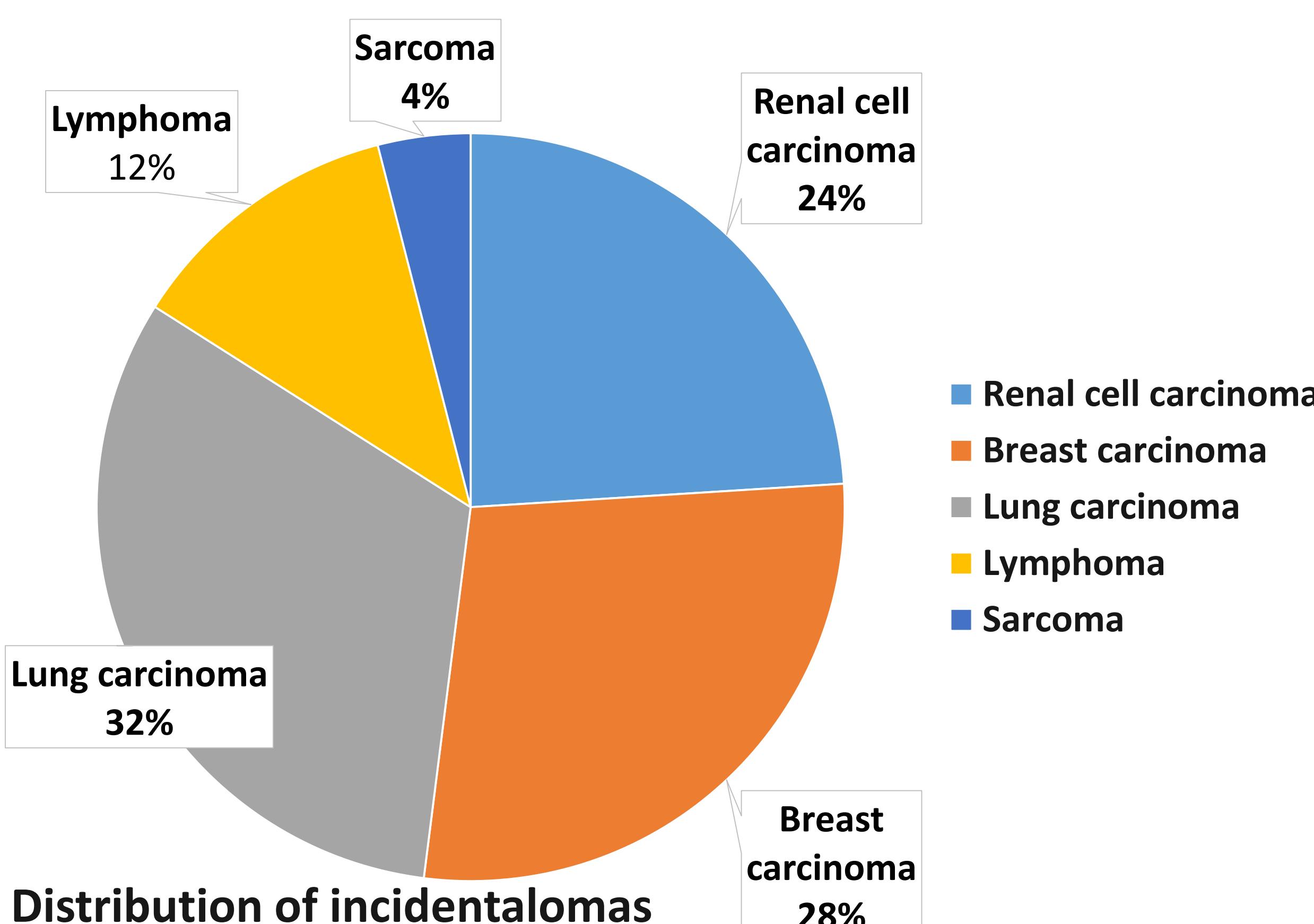
Adrenal incidentalomas are rare, with a reported prevalence of 3-13 % in the general healthy population, increasing notably among oncology patients. The widespread use of cross-sectional imaging, particularly CT, has led to increased detection of these lesions. However, limited data exist regarding the prevalence of adrenal incidentalomas on ¹⁸F-FDG PET-CT. The main objective of our study is to assess the prevalence of adrenal incidentalomas across a spectrum of extra-adrenal malignancies using ¹⁸F-FDG PET-CT.

Materials and Methods:

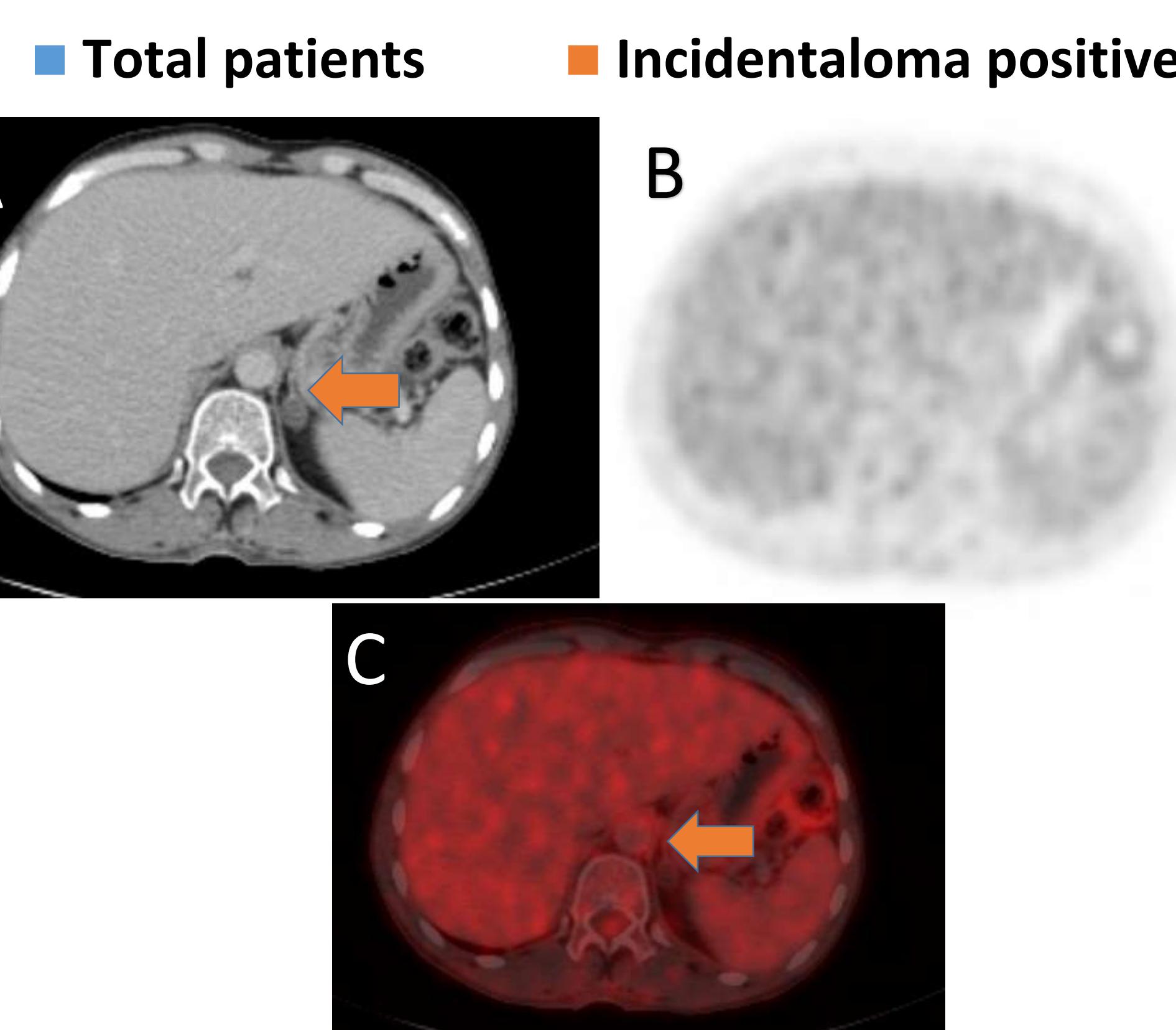
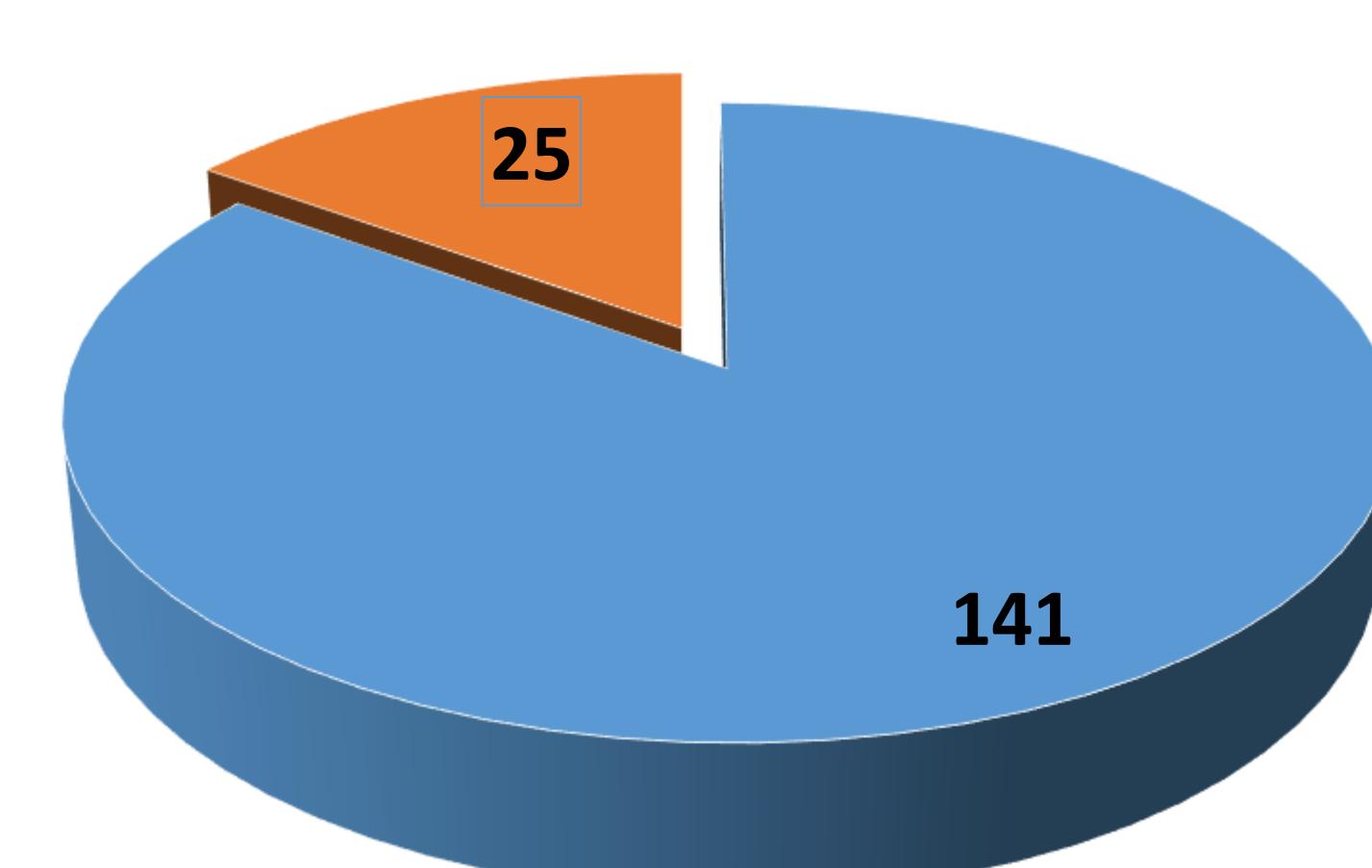
In this study we retrospectively analyzed the data of 141 patients having malignancies of different origin, who had ¹⁸F-FDG PET-CT scan from Jan, 2025 to Mar, 2025. Patients with known primary adrenal malignancy were excluded. Among various malignancies, frequency of adrenal incidentalomas were calculated.

Results:

Adrenal incidentalomas were found in 25 (17.7%) out of 141 patients. Out of 25 patients with adrenal incidentalomas, 8/34 (32%) in non-small cell lung carcinoma, 7/32 (28%) in invasive breast carcinoma, 6/34(24%) incidentalomas were found in renal cell carcinoma, 3/22(12%) in lymphoma and 1/19 (4%) in bone and soft tissue sarcoma patients.



Frequency Of Incidentalomas



Case 1:

47 year old male treated case of moderately differentiated carcinoma rectum. Surveillance PET-CT showed interval development of incidental hyperdense nodule in right adrenal gland on low dose CT (Fig: A) .It is FDG avid on both PET (Fig: B) and fused PET-CT images (Fig: C)

Case 2:

45 year old male diagnosed case of small cell lung carcinoma underwent baseline PET-CT scan which showed a hypodense nodule in left adrenal gland on low dose CT as the arrow indicate(Fig: a) which is FDG non avid on both PET (Fig: b) and fused PET-CT (Fig: c).

Conclusion:

This single-center study highlights a 17.7% prevalence of adrenal incidentalomas across a spectrum of malignancies on ¹⁸F-FDG PET-CT. In contrast to prior literature largely focused on CT-based detection, our study provides a unique perspective by evaluating the prevalence of adrenal incidentalomas using ¹⁸F-FDG PET-CT in an oncologic setting.

References:

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2. Romanisio M, Daffara T, Pitino R, Ferrero A, Pizzolitto F, Zavattaro M, Biello F, Gennari A, Volpe A, Sacchetti GM, Marzullo P, Aimaretti G, Prodam F, Caputo M. [18^F]FDG-PET/CT in adrenal lesions: diagnostic performance in different clinical settings. *Endocrine*. 2025 Jan;87(1):325-333. doi: 10.1007/s12020-024-04042-5.