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Clinical Relevance and Follow-Up of Incidental CT Imaging Findings for COVID-19 Diagnosis: A Retrospective Analysis

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Clinical Relevance and Follow-Up of Incidental CT Imaging Findings for COVID-19 Diagnosis: A Retrospective Analysis

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Abstract

Background/Objectives: To evaluate the prevalence of incidental findings in thoracic computed tomography (CT) performed because of COVID-19 and their potential impact on patient management. **Methods**: This retrospective analysis included 683 CT scans from 327 patients who underwent CT imaging of the thorax with or without the application of intravenous contrast-agents because of the primary indication of COVID-19. Radiological findings were categorized according to the COVID-19 Pneumonia Imaging Classification by 4 independent readers. Incidental findings were categorized according to a scale ranging from 0 (no patient impairment) to 3b (severe permanent impairment. **Results**: In the 683 CT-scans, typical COVID-19 findings were present in 273 scans (40.0%), atypical signs in 97 (14.2%), indeterminate findings in 40 (5.9%), and no signs of COVID-19 in 273 (40.0%). Incidental findings were reported in 93 out of 683 cases (13.6%), of which 63 (67.0%) were classified as category 0, 12 (12.8%) as category 1, 9 (9.6%) as category 2a, none (0.0%) as category 2b, 5 (5.3%) as category 3a, and 5 (5.3%) as category 3b. **Conclusions**: CT scans of the thorax for COVID-19 show a substantial proportion of incidental findings that require further investigation.

Keywords: incidental findings; COVID; CT

1. Introduction

On January 30, 2020, the World Health Organization (WHO) Director General declared that the COVID-19 outbreak constitutes a Public Health Emergency of International Concern (PHEIC), and subsequently, on March 11, 2020, it was declared a global pandemic [1]. The infectious disease, first identified in Wuhan, China, in December 2019, had a profound impact on public health, economies, and daily life. Healthcare systems worldwide were rapidly overwhelmed.

The most common COVID-19 symptoms are fever, cough, and dyspnea, and gastrointestinal symptoms are less common [2]. SARS-CoV-2 infection can lead to severe complications, such as acute respiratory distress syndrome (ARDS), systemic inflammatory response syndrome (SIRS), and shock [3]. The symptoms vary widely and can mimic other illnesses, thus making clinical presentation alone insufficient for a diagnosis. The World Health Organization recommends the use of respiratory specimens for nucleic acid amplification testing (NAAT) to detect SARS-CoV-2. The sensitivity of a nasopharyngeal swab Real-time Reverse Transcriptase Polymerase Chain Reaction (RT-PCR) is approximately <80% in most cases but decreases as the infection progresses from the upper to lower respiratory tract. For antibody detection, serology testing via Enzyme-Linked Immunosorbent Assay (ELISA) is used. The sensitivity and specificity can vary substantially. In one study evaluating the serologic response to a recombinant SARS-CoV-2 nucleocapsid antigen, IgM (85.4%) and IgA (92.7%) were detected 5 days after symptom onset, while IgG (77.9%) was detected 14 days after symptom onset. However, an active infection can only be ruled out with RT-PCR of respiratory secretions [2].

Radiology, particularly chest computed tomography (CT), plays a crucial role in diagnosing and monitoring COVID-19-associated pulmonary involvement [4–7]. Multiple studies have reported that chest CT scans show typical imaging findings in most patients infected with SARS-CoV-2 [8–10]. RT-PCR is a reliable standard for diagnosing COVID-19 but has limitations, such as false negatives in the early stages. Chest computed tomography (CT) scans are regularly used to evaluate pneumonia and constitute a helpful tool in diagnosing COVID-19 [6]. A study to evaluate the value of chest CT scans in the diagnosis of COVID-19 found that most patients had an initial positive chest CT scan before or within six days of the initial positive RT-PCR finding [11], whereas other studies found positive diagnoses of COVID-19 with chest CT scans were available 3 days earlier than RT-PCR assays for positive diagnoses of COVID-19 [6]. Another positive aspect is the accessibility of CT, especially in urban areas [12]. Chest computed tomography scans for diagnosing COVID-19 have a high sensitivity (98%) but a low specificity (25%) [6]. The low specificity is mostly due to the overlapping of CT findings shared by diseases caused by viruses from different families, for example adenovirus, and within the same family, such as SARS-CoV and MERS-CoV [13]. This may also explain why the American College of Radiology (ACR) advises against the use of chest computed tomography (CT) scans as a first-line investigation tool to diagnose COVID-19 [14].

Coronavirus disease 2019 (COVID-19) is associated with increased coagulation activity, which excessively increases the risk of venous thromboembolism (VTE), the most common manifestation being pulmonary embolism (PE), with a risk of approximately one in five hospitalized patients [3]. A prospective cohort study conducted in France reported that 16.7% of 150 patients with COVID-19 developed a PE despite receiving anticoagulant therapy. Diagnosis was confirmed via computed tomography pulmonary angiography (CTPA) with a median detection time of 5.5 days after hospital admission [15]. These findings have been affirmed by different studies with similar results [16,17]. Notably, in patients with confirmed PE, the incidence of deep vein thrombosis (DVT) is significantly lower in individuals with COVID-19 (6.9%-13.6%) than in the non-COVID-19 population (45%-70%). Moreover, patients with COVID-19 with PE frequently lack the traditional risk factors and comorbidities for PE, unlike non-COVID-19 patients [18]. The effective radiation dose of a chest computed tomography (CT) scan in adults is approximately 3.5 millisieverts (mSv), which corresponds to the amount of natural irradiation received over the course of one year [19].

As with all CT scans, those conducted on COVID-19 patients frequently revealed incidental findings; the observation or discovery of an unexpected and potentially clinically relevant pathology unrelated to the primary indication for imaging and which could not be directly anticipated based on the patient`s clinical presentation or condition [7,20–23]. As other studies have shown, these incidental findings can have significant clinical implications, presenting opportunities for the early detection of conditions.

This study aimed to (I) assess the prevalence of incidental findings in computed tomography (CT) scans performed for COVID-19 diagnosis, utilizing a large-scale dataset of almost two years (March 2020 - December 2022). Additionally, this study sought to (II) evaluate how radiologists and other medical specialties identify, manage, and follow-up on these incidental findings, with a focus on the resulting implications for clinical workflows and patient care.

2. Materials and Methods

2.1. Study Group

We analyzed all chest computed tomography scans, *blinded for peer review*, that were registered for the clarification of a suspected COVID-19 infection between March 16, 2020, and December 31, 2022. The initial dataset included 1,499 chest CT scans, some of which were combined with imaging of other anatomical regions. The incidental findings included in our study were not limited to the thoracic region, all incidental findings were analyzed, regardless of their anatomical location. Exclusion criteria were the absence of general patient consent for data usage or if the primary indication for the examination was not related to COVID-19. Following these exclusion criteria, a

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total of 683 chest CT scans were included in the final analysis (males n=406, females n=277; mean age males 60.7 ± 14.2 years, mean age females 57.0 ± 16.6 years) (Figure 1).

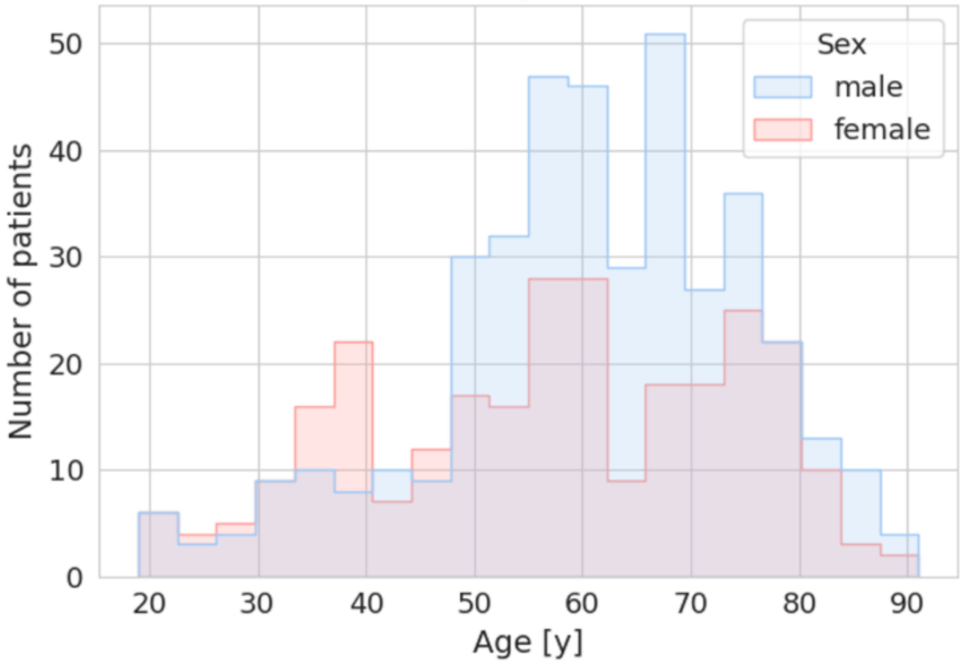

Figure 1. Graphical overview of the distribution of patient numbers and age for males and females in the study group. Age on the y-axis in years (y) and number of patients on the x-axis.

2.2. Imaging

CT scans were performed on three different CT-Scanners (SIEMENS SOMATOM Force, Siemens Healthineers SOMATOM X.cite and SIEMENS SOMATOM Edge Plus) with different protocols (with and without administration of contrast agent, arterial, arterio-venous or venous phase). A final readout was performed on a RIS/PACS-Workstation by a board-certified radiologist. Retrospective data analysis was performed by four radiology residents under the supervision of a board-certified radiologist.

2.3. Radiological Classification of the Imaging Findings

2.3.1. Classification

The radiologic findings were categorized according to the COVID-19 Pneumonia Imaging Classification [24] as follows:

- Typical appearance:
  - Peripheral, bilateral ground-glass opacities (GGO) with or without consolidation or visible intralobular lines ("crazy paving").
- Indeterminate appearance:
  - Includes one or more of the following features:
  - Multifocal GGO with a rounded morphology, with or without consolidation or visible intralobular lines ("crazy paving").
  - Reverse halo sign or other patterns suggestive of POP.
  - The absence of typical features, with the presence of multifocal, diffuse, perihilar, or unilateral GGO with or without consolidation lacking a specific distribution. Nonrounded or non-peripheral GGO, or very few small GGO with a non-rounded and non-peripheral distribution, are also included.
- Atypical appearance:

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Defined by the absence of typical or indeterminate features, accompanied by one or more of the following: Isolated or segmental consolidation without GGO, discrete small nodules (centrilobular, "tree-in-bud"), lung cavitation, and smooth interlobular septal thickening with pleural effusion.

- Negative for pneumonia:
  No radiologic features suggestive of pneumonia are present.

2.3.1. Relevance

The incidental findings were evaluated and categorized based on their clinical relevance as follows: 0, no patient impairment; 1, minimal impairment; 2, mild to moderate temporary impairment; 2, severe temporary impairment; 3, mild permanent impairment; and 3, severe permanent impairment.

2.4. Statistics

All analyses were performed using (SPSS, Version 29.0, Chicago, United States of America). Continuous data are expressed as median with the range or interquartile range (IQR). Categorical data are expressed as numbers and percentages. For the statistical analysis, the chi-square test and the analysis of variance test were used.

3. Results

An overview of the findings and results is presented in Table 1.

Table 1. Overview of the study results. NEG = negative for any type of pneumonia, TYP = typical Covid-findings, ATYP = atypical Covid-findings, IND = indifferent Covid-findings. CT = Computer Tomography, NoFC = no further clarification recommended, OTH = other, US = Ultrasound, MRI = Magnetic Resonance Imaging, NUC = nuclear medicine, BIO = biopsy, LAB = laboratory parameters. IGN = ignored, FI = further imaging done, OTH = other, BIO = biopsy, SUR = surgery, DRU = drugs, LAB = laboratory parameters. Category 0 = “no patient impairment,” 1 = “minimal impairment,” 2a = “mild to moderate temporary impairment,” 2b = “severe temporary impairment,” 3a = “mild permanent impairment,” and 3b = “severe permanent impairment.

Characteristic	Category	Value (n, %)
Initial and follow-up imaging	Initial imaging	323 (47.3%)
	Follow-up	360 (52.7%)
The contrast agent used	Yes	479 (70.1%)
	No	204 (29.9%)
Covid Test Result	Positive	327 (47.9%)
	Recovered	208 (30.5%)
	Negative	131 (19.2%)
	Not tested	17 (2.5%)
Radiological CT findings of COVID-19	NEG	273 (40.0%)
	TYP	273 (40.0%)
	ATYP	97 (14.2%)
	IND	40 (5.9%)
Incidental findings	No	589 (86.2%)
	Yes	94 (13.8%)
Recommended Follow-Up Modality	CT	30 (31.9%)
	NoFC	25 (26.6%)
	OTH	14 (14.9%)
	US	9 (9.6%)
	MRI	8 (8.5%)
	NUC	4 (4.3%)
	BIO	3 (3.2%)
	LAB	1 (1.1%)

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Follow-Up Consequence	IGN	45 (47.9%)
	FI	23 (24.5%)
	OTH	16 (17.0%)
	BIO	4 (4.3%)
	SUR	3 (3.2%)
	DRU	2 (2.1%)
	LAB	1 (1.1%)
Relevance of the Incidental Findings	0	63 (67.0%)
	1	12 (12.8%)
	2a	9 (9.6%)
	3a	5 (5.3%)
	3b	5 (5.3%)

3.1. Use of a Contrast Agent

We Among the 683 chest CT scans included in the analysis, 323 (47.3%) were initial examinations without any preceding (relevant) CT scan, while 360 (52.7%) were follow-up examinations. Contrast agent administration was utilized in 479 (70.1%) of the CT scans, employing various protocols, including arterial, arteriovenous, or venous phase imaging. 204 scans (29.9%) were performed without the use of a contrast agent.

3.2. COVID-Typical Findings

Of the study cohort, 327 patients (47.9%) tested positive for COVID-19, 208 patients (30.5%) had recovered from the infection, 131 patients (19.2%) tested negative for COVID-19, and 17 patients (2.5%) were not tested, with no specific reason provided.

Among the 683 chest CT scans, 273 (40.0%) were negative for COVID-19 pneumonia. Another 273 scans (40.0%) exhibited typical features of COVID-19 pneumonia. Additionally, 97 scans (14.2%) displayed atypical findings, and 40 scans (5.9%) scans were categorized as indeterminate for COVID-19 pneumonia (Figure 2).

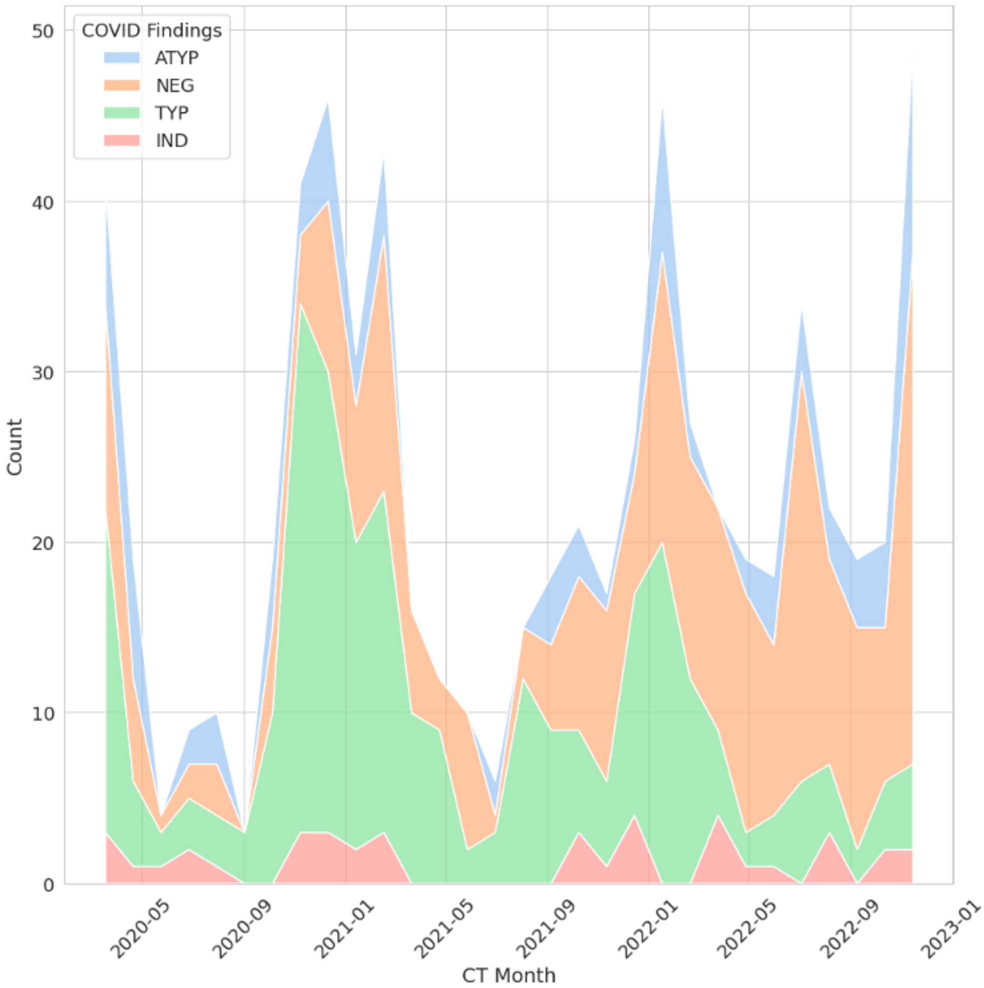

Figure 2. Radiologic COVID-19 findings across all CT examinations. The x-axis represents the month and year in which each examination was performed, and the y-axis represents the count. ATYP/blue = atypical Covid-findings, NEG/orange = negative for any pneumonia, TYP/green = typical Covid-findings, IND/red = indifferent Covid-findings.

3.3. Incidental Findings

Incidental findings were reported in 94 of 683 cases (13.8%) (Figure 3). Of these, no further evaluation was recommended in 25 cases (26.6%), predominantly due to benign morphological characteristics, although the reasons were unclear in rare instances and will be discussed subsequently. Further radiologic imaging was recommended for 51 patients (54.3%), using CT, MRI, ultrasound (US), or PET/CT (NUC). Biopsy was advised for 3 patients (3.2%), while laboratory parameter evaluation was suggested for 1 patient (1.1%). Fourteen patients (14.9%) were classified as "other," including cases requiring medication changes or initiation. For instance, a patient with an incidental finding of a left ventricular thrombus had their medication regimen adjusted accordingly. Of the findings, 63 (67.0%) were classified as category 0, 12 (12.8%) as category 1, 9 (9.6%) as category 2a, none (0.0%) as category 2b, 5 (5.3%) as category 3a, and 5 (5.3%) as category 3b. Figures 4, 5, and 6 present typical examples with relevant incidental findings.

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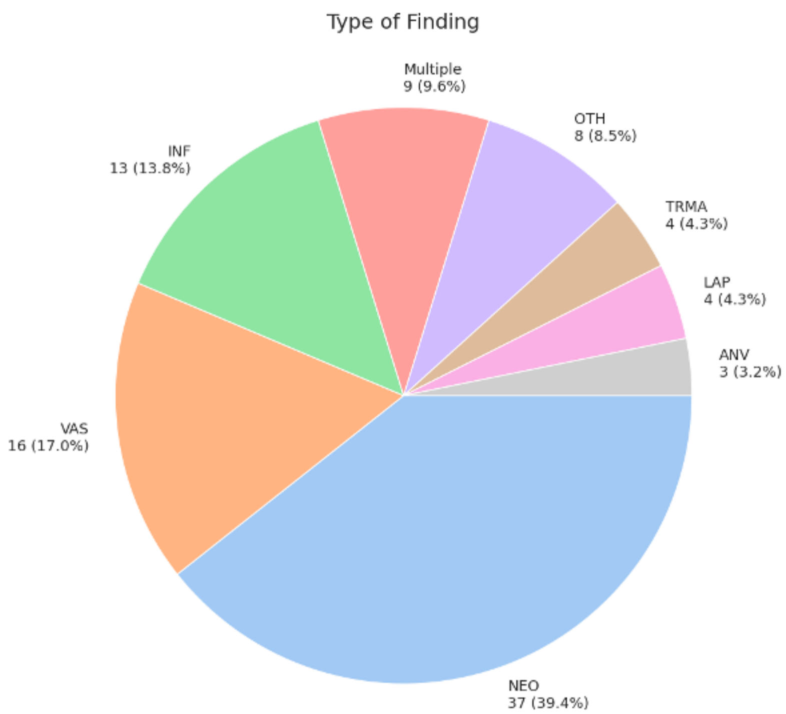

Figure 3. The incidental findings were classified into the following categories: 37 cases (39.4%) were neoplastic (NEO), 16 (17.0%) were vascular (VAS), 13 (13.8%) were inflammatory (INF), 9 (9.6%) involved multiple findings (MULT), 8 (8.5%) were designated as "other" (OTH), for example, an instance with a gastric malrotation, 4 (4.3%) were traumatic (TRMA), 4 (4.3%) were lymphatic (LAP), and 3 (3.2%) represented anatomical variations (ANV).

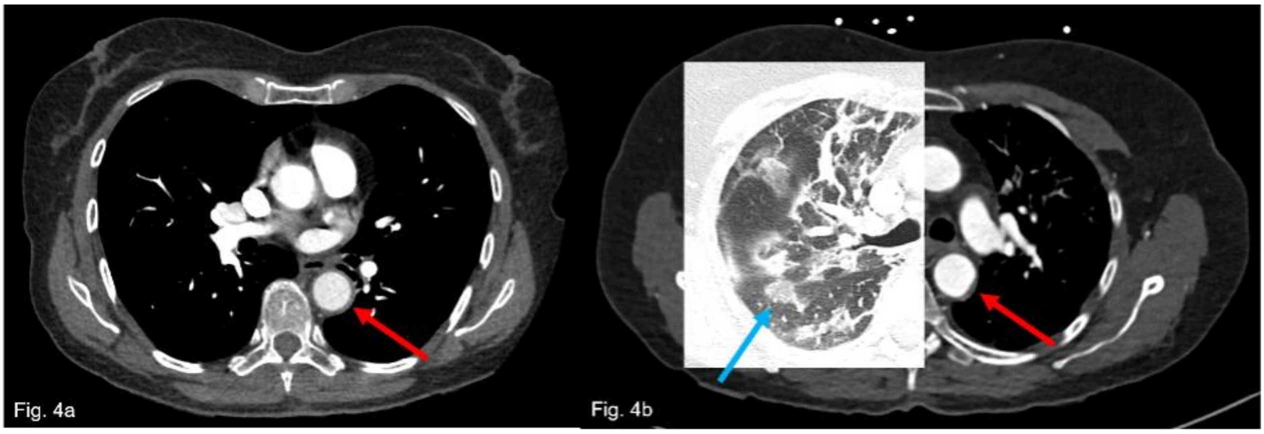

Figure 4. Case 1, a 67-year-old female. a) Initial chest CT to clarify pulmonary embolism or post-COVID-19 findings showed concentric wall thickening of the thoracic aorta (red arrow), indicating large vessel vasculitis. No pulmonary infiltrates or post-COVID-19 findings were observed. b) Follow-up computed tomography 2 months later showed indeterminate appearance of recurrent COVID-19 pneumonia (blue arrow) and slightly regressed arterial wall thickening (red arrow).

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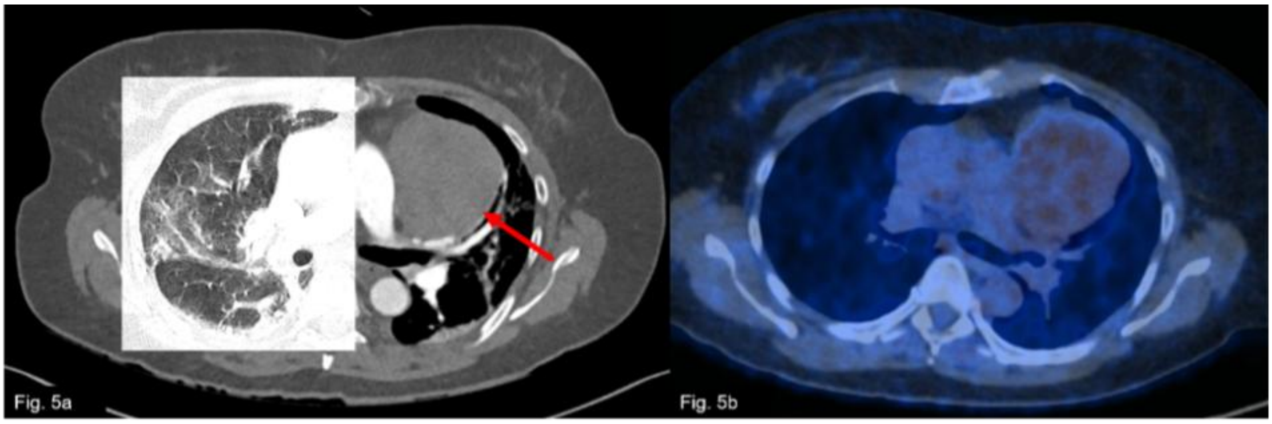

Figure 5. Case 2, 60 yrs old female. a) Initial chest CT to clarify pulmonary embolism or COVID-19 findings showed pneumonic infiltrates of indeterminate appearance for COVID-19 (blue arrow) and revealed a large mediastinal mass (red arrow). b) PET/CT demonstrated mild FDG-uptake, making the diagnosis of thymoma more likely than lymphoma.

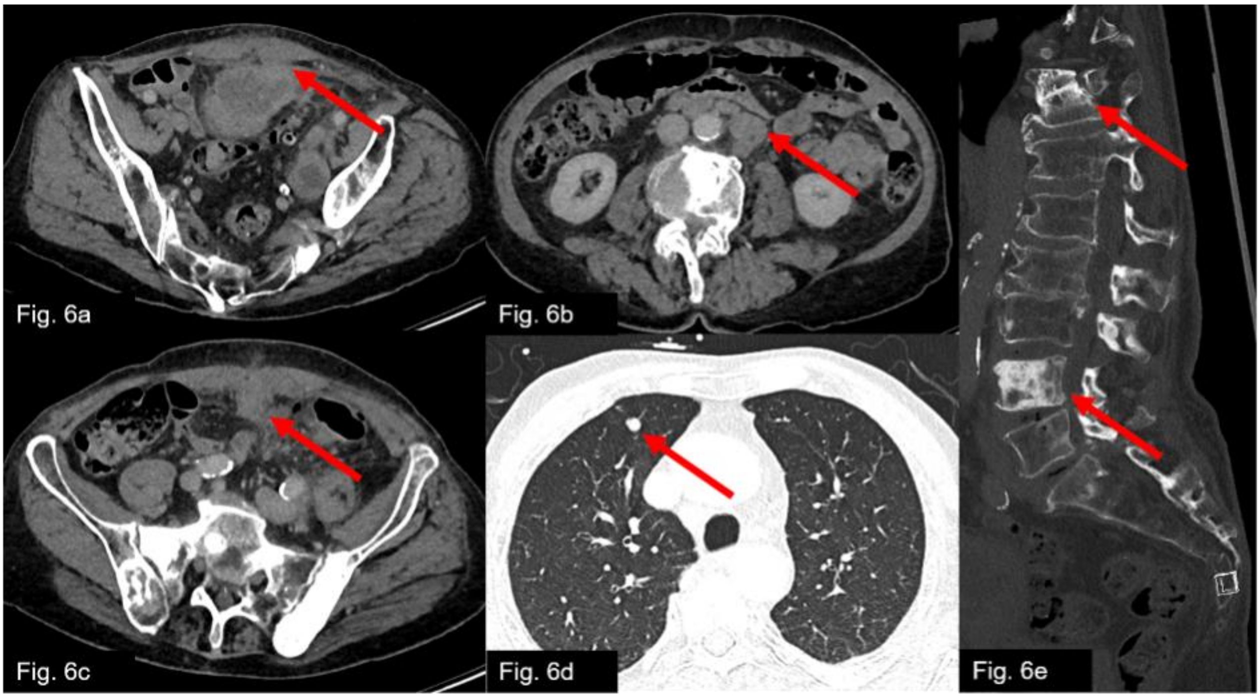

Figure 6. Case 3, 76 yrs old male. Initial chest and abdominal CT to investigate potential infections, including COVID-19 findings, revealed no infectious source. However, there was strong suspicion for metastasized carcinoma: a) Wall thickening of a urachal remnant raised concern for urachal carcinoma with infiltration of the abdominal wall. b) Enlarged lymph nodes were suspicious for lymph node metastases. c) A peritoneal soft tissue mass suggested peritoneal metastasis. d) A solid pulmonary nodule in the lung raised concern for lung metastases. e) Multiple sclerotic lesions in the spine were indicative of osseous metastasis. Histopathological examination following surgical intervention confirmed the diagnosis of metastasized sigmoid carcinoma.

3.4. Follow-Up or Further Clarification Recommendations

In 45 cases (47.9%), recommendations for follow-up or further evaluation of incidental findings were not pursued by the clinicians (IGN). Follow-up imaging (FI) was performed in 23 cases (24.5%), 4 cases (4.3%) underwent biopsy, 3 cases (3.2%) underwent surgical intervention, and 1 case (1.1%) underwent laboratory testing for Epstein-Barr virus (EBV) (LAB). Fourteen cases (14.9%) were categorized as "other" (OTH), including instances where patients declined further medical evaluation or passed away before additional diagnostic measures could be undertaken. Figures 7 and 8 show examples of potential suboptimal clinical management despite recommendations in the radiological reports.

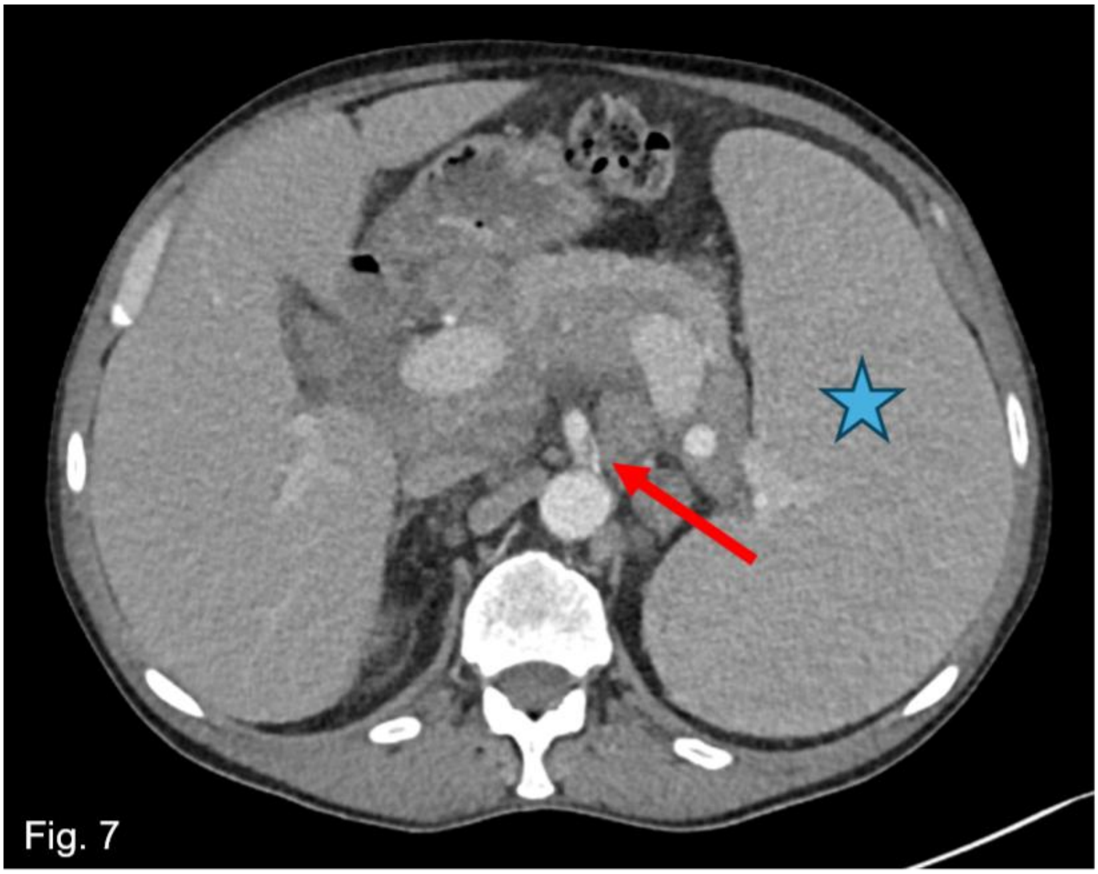

Figure 7. Case 4, 66 yrs old male with history of marginal zone lymphoma. A chest CT scan was performed after recovering from COVID-19 to assess post-primary changes in the lung. No pathological lung findings were observed. However, an incidental finding of a short dissection in the superior mesenteric artery was noted (red arrow). Additionally, the spleen is enlarged (blue asterisk), consistent with the underlying disease. .

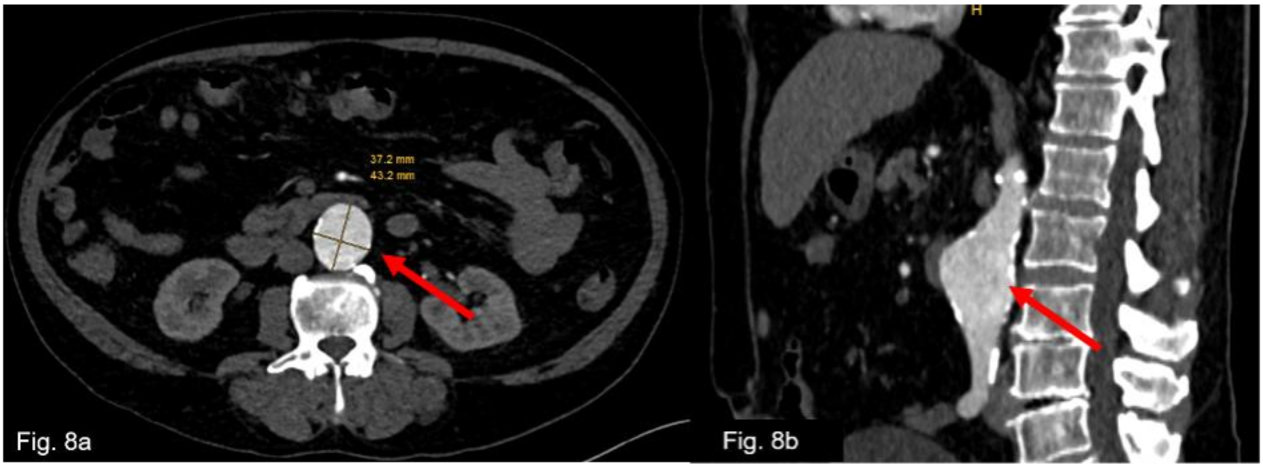

Figure 8. Case 5, 67-year-old male. A chest CT scan was performed to evaluate for pulmonary embolism after recovering from COVID-19. a) Axial view, b) sagittal view. As incidental finding, an abdominal aortic aneurysm was discovered (red arrows).

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3.5. Statistical Evaluation of Imaging Findings Among the Subgroups

Incidental findings were observed in 18.4% of female patients (51 out of 277) and 10.6% of male patients (43 out of 406). Women had a significantly higher incidence of incidental findings than men (p = 0.005), specifically 73.5% more. There was no significant difference in the detection of incidental findings between non-enhanced and enhanced CTs (p=0.702). No significant association was found between COVID-19 test status and the occurrence of incidental findings (p = 0.076). There were significantly more incidental findings in scans with negative Covid-findings (p=0.017).

The ANOVA test results (interval vs. nominal) showed that age had no significant influence (p=0.182).

4. Discussion

In this retrospective study, we evaluated incidental findings on chest computed tomography (CT) scans performed for COVID-19 diagnosis (I) and their subsequent clinical management, particularly regarding their impact on clinical workflows and patient care (II). Our findings provide valuable insights into the prevalence, categorization, and clinical response to incidental findings in chest CT scans performed during the COVID-19 pandemic.

In this retrospective study, we found a 73.5% higher incidence of incidental findings in women than in men. This might be due to the possibility that women have less reluctance to visit a physician if they feel unwell. Another factor might be that some of the more frequent incidental findings occur more often in women than in men; for example, thyroid cancer is three times more common in women [25]. No significant differences in incidental finding detection rates were observed between non-enhanced and contrast-enhanced CT scans, likely because most incidental findings are visible without contrast. Similarly, neither COVID-19 status nor age significantly influenced incidental findings prevalence. Notably, incidental findings were more frequently detected in CT scans of patients without COVID-19 pneumonia (n=49) than in those with pneumonia (n=44), possibly due to obscuration by lung pathology or "satisfaction of search" bias.

Incidental findings are common in radiology, with reported frequencies of up to 40% [26], often requiring future clinical management [27]. The increasing detection of incidental findings in imaging is no surprise due to the advancements and expanded availability of imaging modalities, especially computed tomography. In urban and well-resourced areas, CT imaging is available around the clock and is often used as a first-line diagnostic tool in emergency and acute care settings. Modern CT-scanners are equipped with features such as dual-energy imaging, iterative reconstruction algorithms, and advanced detector systems, which offer significantly improved resolution and enable a more detailed visualization of anatomical structures. Some state-of-the-art systems can even provide functional assessments like perfusion imaging or material decomposition, for example iodine maps [7,19,28]. This combination of availability and technological power leads to a higher detection rate of unexpected findings.

A giant cohort study in Ankara, Turkey, investigated the incidence of incidentally identified thyroid nodules on thoracic computed tomography (CT) scans performed for suspicion of COVID-19 pneumonia. The study concluded that incidental thyroid nodules (ITN) may provide a valuable opportunity for the early detection and treatment of thyroid cancer [21].

Another study was conducted in India to address the frequency and prevalence of incidental findings in COVID-19 screenings. This study highlighted the challenge of balancing the benefits of identifying potential malignancies with the risks of overdiagnosis. It also underscored how the structure of screening programs can influence the nature of incidental findings. For instance, the lack of a widespread breast cancer screening program in India was reflected in the study results, which demonstrated a comparatively high incidence of incidental breast findings, including one confirmed malignancy and nine cases of calcifications/densities, among 100 incidental findings in female patients [22].

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A study conducted in Northeast Brazil investigated the prevalence of reported adrenal findings in chest computed tomography scans performed during the COVID-19 pandemic. Although the overall impact of incidental adrenal findings on the healthcare system was minimal, the study highlighted concerns that high workloads may contribute to the underreporting or oversight of incidental findings [23].

A frequently raised concern regarding incidental findings is the potential for over-informing of patients and the impact on healthcare resources, particularly if specialized follow-up care is needed [7,22,23].

However, these studies evaluated rather short time periods with datasets ranging from 2 months [22] to 7 months [21,23].

Incidental findings are expected in CT imaging, and their likelihood increases with age, as the prevalence of undiagnosed pathologies increases. In our cohort, the age distribution peaked in the range of 50-75 years, which aligns with the demographic characteristics of patients typically affected by common conditions, such as pulmonary and thyroid nodules. According to the "National Cancer Institute" of the United States, the median age at cancer diagnosis is 67 years, and most common cancers fall within this range; for example, breast cancer has a median age of 63 years, colorectal cancer has a median age of 66 years, and lung cancer has a median age of 71 years [29].

Screening programs face challenges comparable to incidental findings. For example, mammography for breast cancer may reveal incidental calcifications, diverticulosis is one of the most common incidental findings in colonoscopy for colorectal cancer, and low-dose computed tomography for lung cancer can reveal suspicious lesions in the kidneys or other non-target organs [30–32].

CT imaging has a relatively high diagnostic accuracy, particularly in identifying incidental findings with sufficient specificity to guide clinical decision-making. In many cases, CT alone provides sufficient detail to characterize incidental lesions and assess their clinical relevance. This is reflected in our study, where 25 cases (26.6%) received recommendations for no further evaluation, direct biopsy (3 patients, 3.2%), laboratory testing (1 patient, 1.1%), or other measures (14 patients, 14.9%) such as medication adjustments. When CT alone is not definitive, a single additional imaging modality is often sufficient to establish a diagnosis [26], a trend also observed in our cohort with 51 patients (54.3%) being advised to undergo further radiologic imaging such as CT, MRI, US, or PET/CT.

The increasing detection of incidental findings has led to the development of various clinical guidelines developed by medical societies, for example the American College of Radiology (ACR), for appropriate management, especially the most common incidental findings [7]. For incidental lung findings in chest CT, the ACR has issued a White Paper titled "Managing Incidental Findings on Thoracic CT: Lung Findings" [33] and the Fleischner Society has issued the "Guidelines for Management of Incidental Pulmonary Nodules Detected on CT Images" [34]. Additional ACR White Papers address incidental findings on CT for pancreatic cysts [33], for the incidental renal mass [35] and overarching guidelines for incidental findings on abdominal CT in general [36]. These guidelines aim to improve care quality and reduce missed diagnoses by offering evidence-based recommendations for managing unexpected yet common findings, thereby reducing the risk of overlooking significant abnormalities in clinical practice [37].

The data availability for incidental findings is inherently limited, and incidental findings are often not systematically followed up, as our findings suggest, with 47% (45/94) of incidental findings being ignored. This observation is supported by a study conducted by Mabotuwana et al., which demonstrated that the adherence rates are inherently low and vary by modality, with mammography showing the highest follow-up adherence rate at 69.03% [38]. However, this cannot be confirmed by our study, as there was no follow-up recommendations related to mammography in our dataset. This absence may be due to the existence of a dedicated mammography screening program at our university hospital. Incidental findings are rarely the primary focus of studies, especially those that are prospective. Therefore, data on their true clinical impact and long-term outcomes remain scarce.

Our findings suggest that incidental findings frequently lack appropriate follow-up, potentially delaying patient care. While over-reporting may cause unnecessary anxiety [22], radiologists must ensure that referring physicians are effectively informed of clinically significant incidental findings.

And if a radiology report includes ambiguous language regarding the significance of an incidental finding or lacks clear recommendations for management, it is often beneficial to review the imaging with a clinically experienced radiologist to guide appropriate next steps [39].

A key component in future healthcare systems will be the further development and integration of artificial intelligence (AI) driven clinical decision support systems (CDSS), including reminder systems that utilize HIPAA-compliant messaging platforms. CDSS aim to support healthcare professionals by delivering evidence-based guidance and patient specific data to improve diagnostic precision, treatment efficacy and patient outcomes [40]. These systems can electronically deliver patient-specific recommendations for example as reminders or information display. These reminder systems can coordinate guideline-based communication with clinicians and patients. Moreover, reminder systems can proactively identify and engage patients who have not followed management plans and thereby help reducing no-show rates and optimize continuity of care [19,41–43].

4.1. Limitations

Limitations of this study are:

- The absence of direct insight into how clinicians acted upon reported incidental findings, relying solely on subsequent medical documentation. Thus, the extent to which incidental findings were addressed remains uncertain.
- The single-center-design of our study, therefore the applicability of our findings to other institutions or healthcare facilities may be limited.
- Potential reporting bias: Even though the radiologists were unaware of the study participation due to the retrospective design, a potential reporting bias regarding incidental findings cannot be excluded, as the pandemic-related high workload might have affected reporting behavior.

5. Conclusions

This study highlights the ongoing challenge of reporting incidental findings and the role of radiologists in guiding clinicians on how to address them. However, the responsibility of follow-up lies outside radiology, contributing to uncertainty regarding incidental finding outcomes. The integration of AI applications could help mitigate some of these challenges by automating aspects of the reporting process and enhancing communication between radiologists, clinicians, and patients [19,40].

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Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki, and approved by the Institutional Review Board of the Swiss Association of Research Ethics Committees (Basec-Nr. 2019-01676).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data cannot be made available due to legal restrictions.

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(ChatGPT; OpenAI, San Francisco, CA, USA) to enhance readability and language, aiding in formulating and structuring content. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

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