



Power Up at The Crossroads of Radiology® May 21–25, 2017

Building a Structure to Effectively Conduct Patients with Relevant Imaging Incidental Findings in an Emergency Department



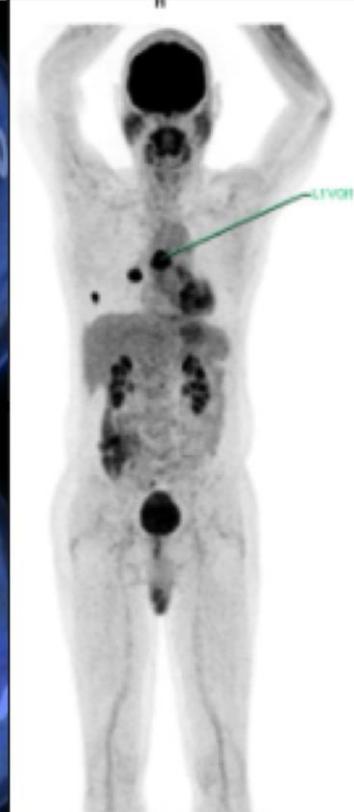
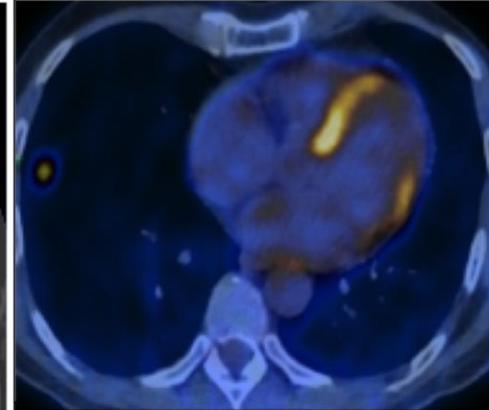
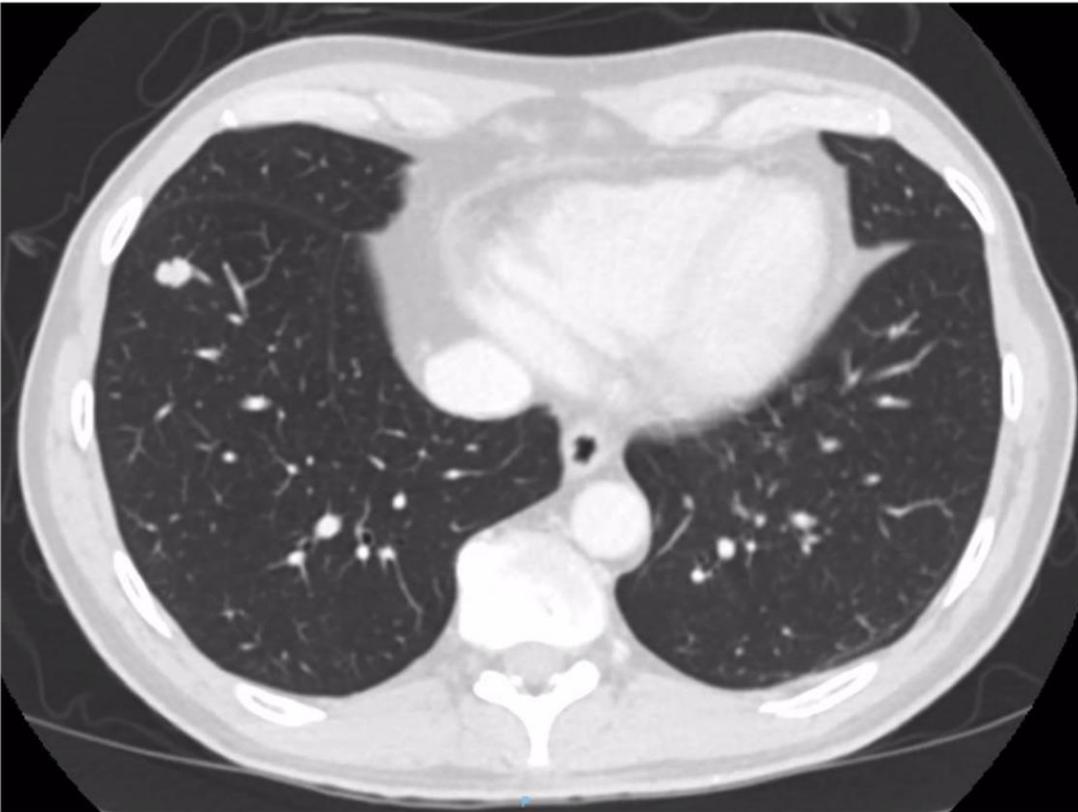
Authors

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Adverse Event



- CT of Abdomen for abdominal pain (Emergency Department)
- Incidental Finding of a Pulmonary Nodule that missed follow-up!
- Almost 1 year later a Lung Adenocarcinoma was diagnosed with Hilar and Subcarinal Lymphnode methastasis (PET/CT)

Purpose

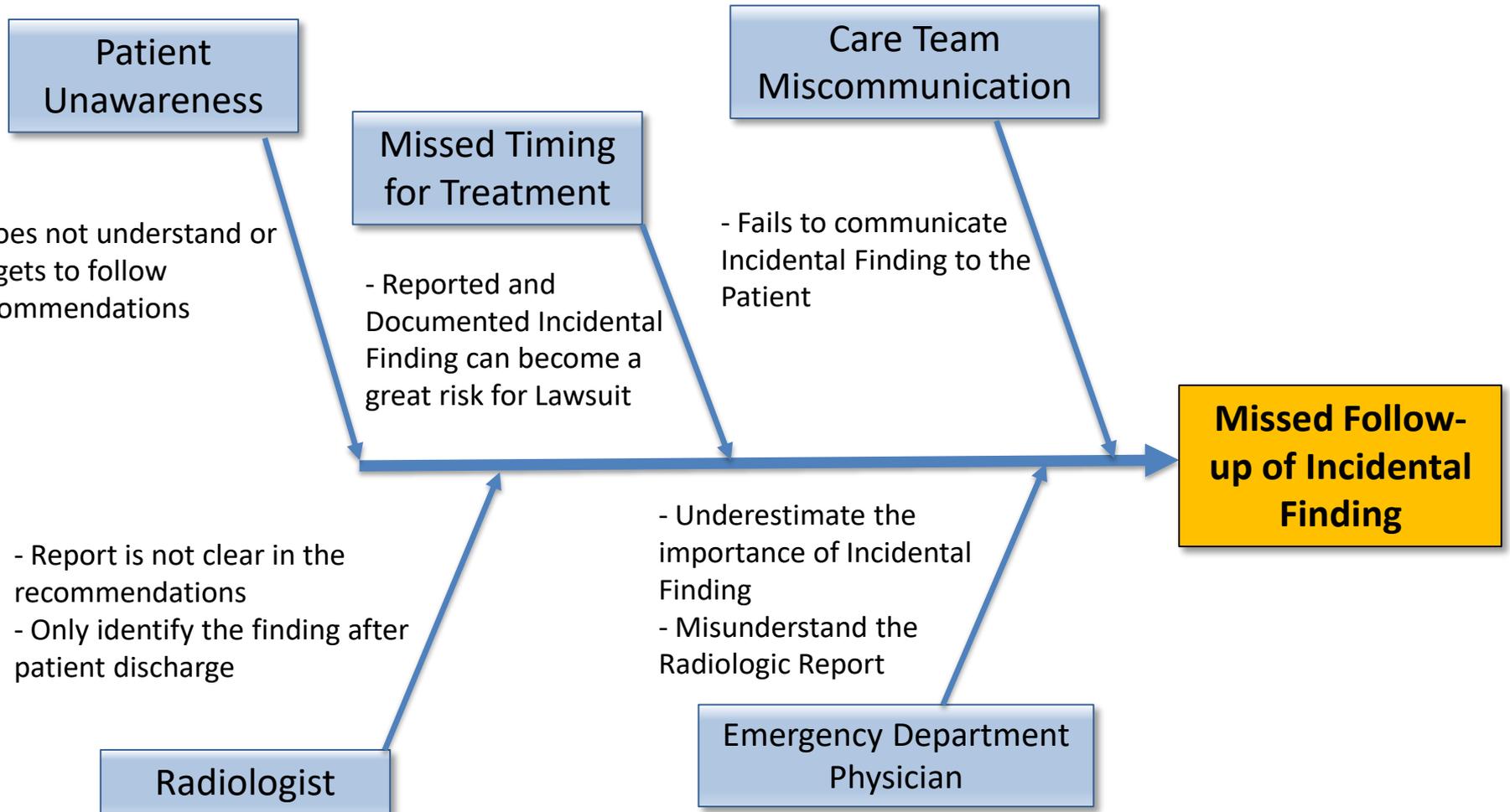
- The adverse event inspired us to **take an action!**
- Build a quality infrastructure to manage **incidental findings** in patients who underwent imaging exams in an Emergency Department.



Methodology

- PDCA Methodology (Plan Do Check Act) was used

● ● ● ● PDCA



Plan: Ishikawa Diagram

Do: Workflow

● ● ● ● PDCA

Radiologist Identify *IF* and communicates with the *QO* by e-mail

Quality office organizes the communication of the *IF*

Schedule a Consultation with the Radiologist if needed

Radiologist writes a report on *RIS* with recommendations

QO tracks recommendations

Abbreviations

IF: Incidental Finding

RIS: Radiology Information System

QO: Quality Office

Check



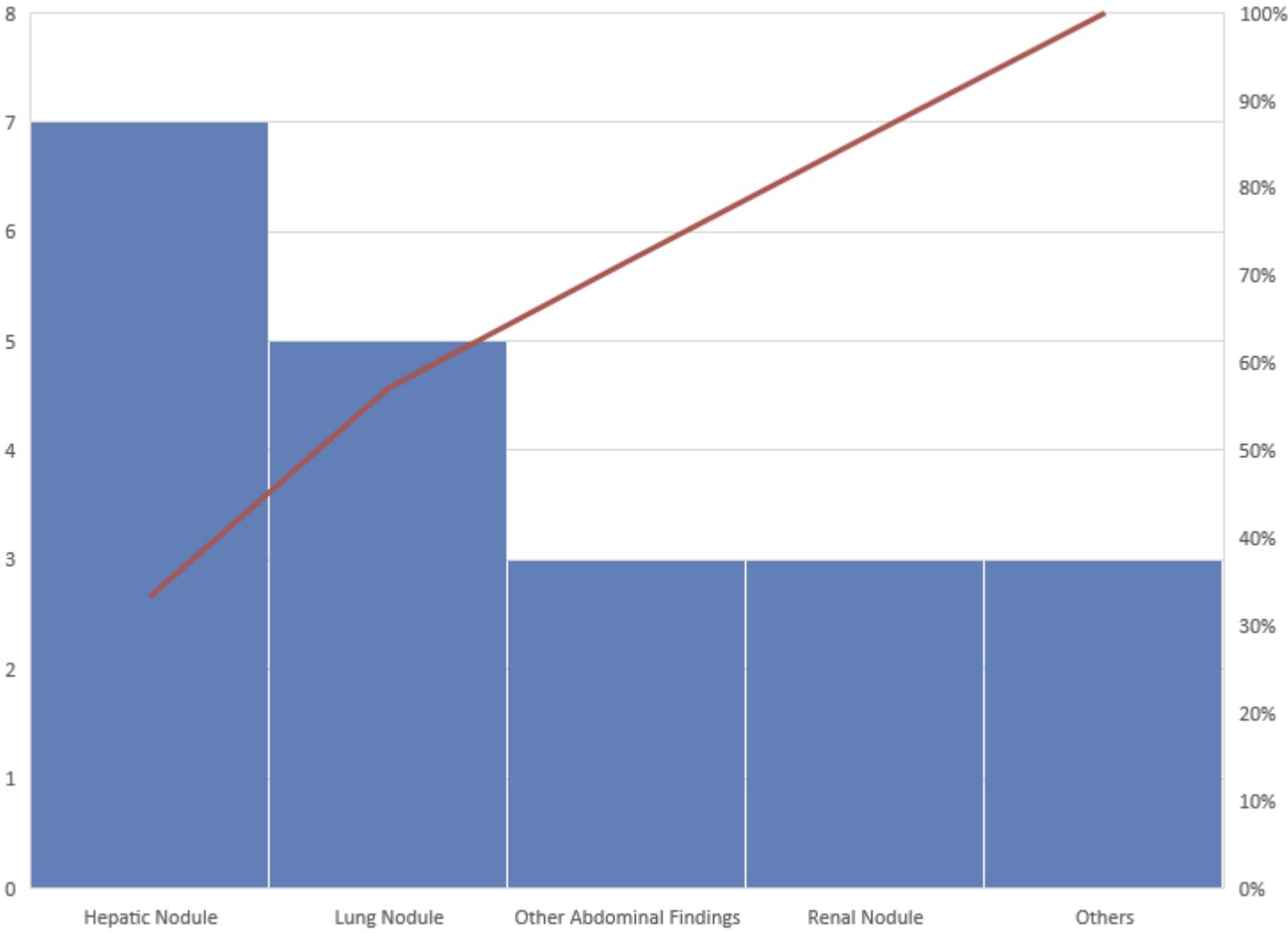
TABLE: Management of Incidental Findings

total exams	34,321
incidental findings	22 (0,06%)
subsidiary exams	11
biopsies	3
outcomes	1 early lung cancer (curative surgery)
management costs	US\$ 20,532.36

Results of the Incidental Findings Management Program from March/2016 to March/2017

Check

● ● ● ● PDCA



Act



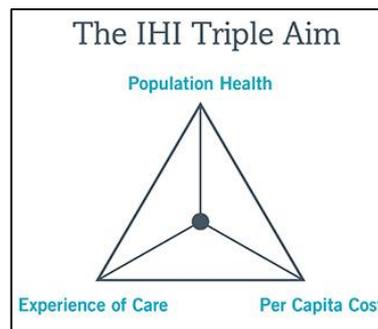
- This Quality Improvement action is Aligned with the “Triple Aim”:*

1- Patient Experience: the patient feels that someone is taking care of his/her health.

2- Populational Health: acts on prevention.

3- Reduce per capita costs: diseases are treated earlier.

- Places radiologists in a central role in clinical management adding value to our practice.



*<http://www.ihl.org/Engage/Initiatives/TripleAim/Pages/default.aspx>

Act



- *EVIDENCE: Spontaneous manifestation of a patient:*

“My husband underwent an emergency CT, and the doctor who analyzed the images saw a lung nodule that wasn’t related to the main complain. This doctor called in to advise on follow-up.

We are very thankful for all the attention that you gave us.”

Act



- The implemented structure improved quality and safety of patients.
- Places radiologists in a central role in clinical management
- Adds value to our practice.
- It is cost-effective: it was necessary 22 interventions to treat an important finding (in our case an early stage lung cancer).
- Total cost of US\$20,532.36 was spent for follow-up, and treatment in order to treat one life-threatening finding.

Discussion

- We present an early and limited experience of the Radiology Department playing an essential and central role in patient management.
- The main weakness of the program is that it depends on the active notification of the radiologist.
- Our experience showed that most incidental findings were underreported.



Discussion – Future Perspectives

- Our goal is to expand this program to achieve the rate of **2% of incidental findings** that need additional intervention, as is reported by Lumbreras et. al in a large prospective study published in 2014 in *Clinical Imaging*¹
- **Compliance** monitoring with consensus guidelines like the ACR's guidelines²⁻⁸ for incidental findings should be an improvement for this program⁹
- **Automated tools** will certainly improve underreport of notification and follow-up. An experience of an automated tool for recommendation tracking was described by Cook et. al in *JACR 2017*¹⁰



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Thank you!

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