

# Improving the quality of follow-up recommendations for incidental abdominal aneurysms

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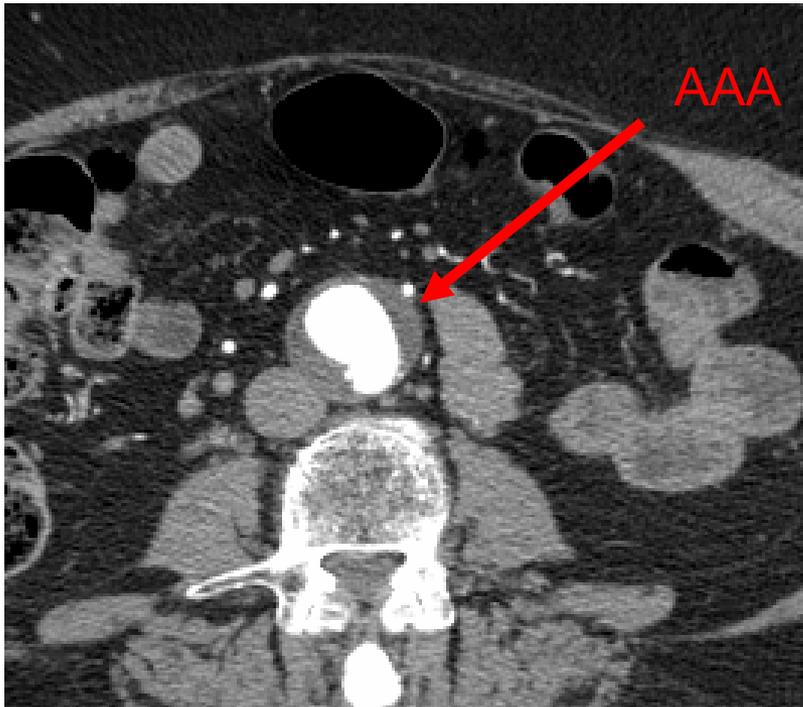
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# Incidental Finding: Case Study

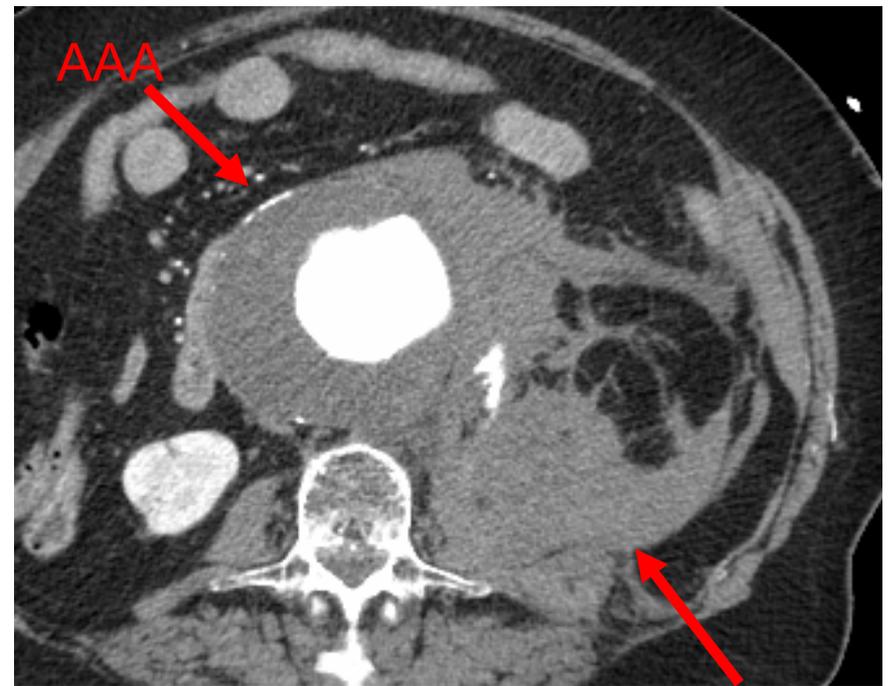
2007



Impression: Slight interval increase in size of the infrarenal aortic aneurysm to 3.7 cm.

No follow-up recommendation reported

2014



hemorrhage

# Background

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- National guidelines provide evidence-based management recommendations for a variety of incidental radiologic findings
  - Implementing these practices is relatively low on the local level
- BIDMC has developed institutional guidelines on a few, but not all, of these incidental findings
- Lack of institutional guidelines can result in variable reporting, unnecessary testing or delayed treatment

# Goal

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To use a gap analysis of national versus BIDMC institutional guidelines for the management of incidental abdominal imaging findings in order to:

- Identify recommendations that could be instituted at BIDMC
- Implement guideline, based on national recommendations, and assess impact on patient outcomes

# Methods

Incidental Finding	National Guideline	BIDMC Recommendation
Adnexal Findings	ACR, SRU	Consistent with SRU guidelines
Pancreatic Cysts	ACR	BIDMC-specific based on ACR guidelines
Adrenal Masses	ACR	Consistent with ACR guidelines
Renal Mass	ACR	Absent
Liver Lesions	ACR	Absent
Vascular Findings	ACR	Absent
Splenic and Nodal Findings	ACR	BIDMC-specific based on <i>Radiology</i> publication
Gallbladder and Biliary Findings	ACR	Absent
Pulmonary Nodules	Fleischner	Consistent with ACR guidelines

Targeted for  
guideline  
development



## Develop BIDMC-specific recommendations

- Aneurysm recommendations based on national guidelines and literature
- Input from radiologists, interventional radiologists and vascular surgeons

For management of an incidental **abdominal aortic aneurysms** measuring [choose size]:

- Option 1: 3.0-3.4 cm, follow-up US in 3 years recommended. Additionally, recommend Vascular Surgery consultation.
- Option 2: 3.5-3.9 cm, follow-up US in 2 years recommended. Additionally, recommend Vascular Surgery consultation.
- Option 3: 4.0-4.4 cm, follow-up US in 1 year recommended. Additionally, recommend Vascular Surgery consultation.
- Option 4: 4.5-4.9 cm, follow-up US in 6 months recommended. Additionally, recommend Vascular Surgery consultation.
- Option 5: 5.0-5.5 cm, follow-up US in 3-6 months recommended. Additionally, recommend Vascular Surgery consultation.

For management of an incidental **splenic artery aneurysm** measuring [choose size]:

Option 1: < 2.0 cm, [select option]

- 1 year follow-up with CTA recommended.
- If the aneurysm is stable, recommend subsequent follow-up every 12 months with US, and if not well seen, with MRI

Option 2:  $\geq 2.0$  cm, Interventional Radiology and/or Vascular Surgery consultation recommended for consideration of endovascular management

For management of an incidental **renal artery aneurysms** measuring [choose size]:

Option 1: 1.0 cm -1.4 cm, [select option]

- follow-up with CTA recommended in 1-2 years.
- if the aneurysm is stable, recommend subsequent follow-up every 12-24 months with US, and if not well seen, with MRI

Option 2:  $\geq 1.5$  cm, Interventional Radiology and/or Vascular Surgery consultation recommended for consideration of endovascular management

# Results-AAA

## Pre-intervention

## Post-intervention

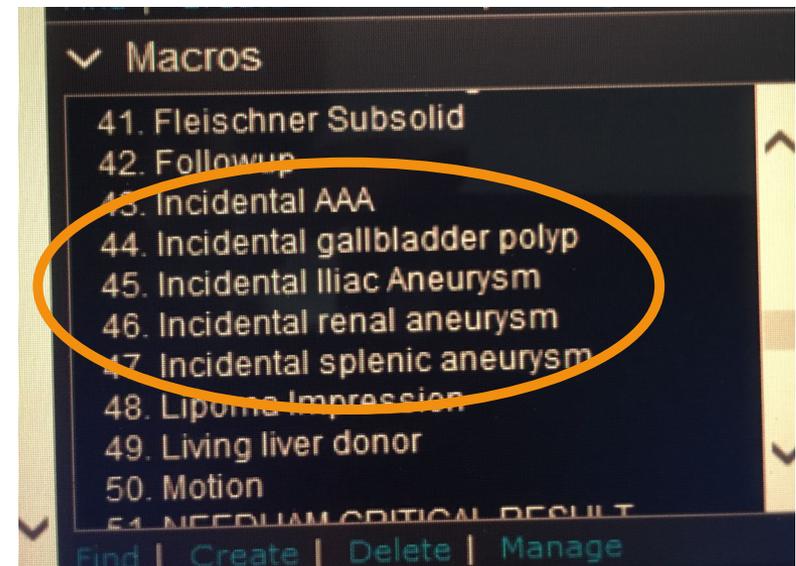
	Feb - Apr 2019	Feb - Apr 2020	Feb - April 2021
Number detected	90	75	103
Known to vascular surgery	14 (16%)	13 (17%)	*
Correct follow-up recommendation reported	8 (9%)	13 (17%)	40 (39%) <i>p &lt; 0.001</i>
• No follow-up imaging (3.0-4.5 cm)	63 (77%)	55 (89%)	52 (50%)
• No vascular sx referral (>4.5 cm)	19 (23%)	7 (11%)	11 (11%)
New vascular sx referral after scan?	8 (9%)	9 (12%)	*
Follow-up imaging to re-assess AAA	15 (17%)	13 (17%)	*

# Results

	Pre-intervention		Post-intervention
	Feb - Apr 2019	Feb - Apr 2020	Feb - Apr 2021
<b>Splenic artery aneurysm</b>			
Number detected	46	25	69
Correct follow-up reported	3 (7%)	0 (0%)	21 (30%) <i>p &lt; 0.001</i>
New Vasc sx/IR referral after scan	0/4 (0%)	0/3 (0%)	*
Follow-up imaging to re-assess	2/46 (4%)	0/25 (0%)	*
<b>Renal artery aneurysm</b>			
Number detected	10	5	9
Correct follow-up reported	0 (0%)	0 (0%)	0 (0%)
New Vasc sx/IR referral after scan	1/3 (33%)	0/2 (0%)	*
Follow-up imaging to re-assess	3/7 (43%)	0/5 (0%)	*

# Conclusion

- Institution-specific guidelines can improve the reporting of recommendations for incidental abdominal aneurysms
- Next steps
  - Impact on imaging follow-up and specialist referral
  - Increasing uptake and ensuring sustainability



# THANK YOU

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