Adrenal Incidentaloma: guidelines for investigation

Version:	2.1
Ratified by:	Clinical Biochemistry Senior Staff Meeting
Date ratified:	18 January 2018
Name of originator/author:	Mr Ceri Rowe/Dr Danni Fan
Director responsible for implementation:	Dr Edmund Lamb
Date issued:	22 Dec 2020
Review date:	Every two years
Target audience:	Healthcare professionals in secondary care

Version control schedule

version	date	author	status	comment
1.0	2/3/2018	Mr C Rowe	archived	
2.0	22/6/2020	Dr D Fan	archived	Addition of pMETs testing for investigation of Phaeochromocytoma
2.1	24/12/2020	Dr D Fan		Updated pMET testing following European Society Guideline

Contents

1. Policy summary

This policy gives guidance on the biochemical investigation of adrenal incidentaloma.

2. Introduction

An adrenal incidentaloma is an adrenal mass detected on imaging performed for reasons other than suspected adrenal disease. Biochemical tests are undertaken in certain cases to exclude the possibility of functioning adrenal tumours.

Published evidence [3, 4] suggests the following aetiology of adrenal masses discovered incidentally:

Endocrine inactive adenoma	41-85% of cases
Metastases	15-19% of cases
Cortisol secreting adenoma	5-10% of cases
Adrenocortical carcinoma	2-10% of cases
Phaeochromocytoma	3-8% of cases
Aldosterone secreting adenoma	2-5% of cases
Other causes	2-9% of cases

3. Purpose and scope

This policy outlines biochemical testing that should be requested for an adrenal incidentaloma. It is intended for use by healthcare professionals in secondary care.

4. Definitions

None.

5. Duties

All staff involved in the requesting of biochemical tests for the investigation of adrenal incidentaloma, whether clinical or laboratory must adhere to this policy.

6. Investigating adrenal incidentaloma

6.1 Assessment of endocrine status

Careful personal and family history and full clinical examination should be performed, including sitting and standing blood pressure. If underlying endocrinopathy suspected, investigate appropriately.

6.2 If normotensive (defined as sitting office blood pressure measured in accordance with NICE Hypertension Guidelines of <140/90 mmHg), no other suspected endocrinopathy and the adrenal incidentaloma is <1 cm, biochemical testing is not appropriate.**

6.3 If no endocrinopathy is suspected and the adrenal incidentaloma is ≥1 cm, proceed with the following tests, depending upon the clinical features present:

- In patients where the lesion is not clearly an adenoma, request plasma metanephrines (collected with patient in seated position) as first line screening to exclude phaeochromocytoma. If further investigation required, please refer to BIO NO 846 Phaeochromocytomas and paragangliomas: Guidelines for Requesting Plasma Free Metanephrines.
- If patient has features of Cushing's syndrome, perform a 1 mg overnight dexamethasone suppression test (ONDST) or request a 24-hour urine free cortisol. if further investigation required, please refer to BIO NO 300 Cushing's syndrome – Guidelines for investigation.
- If patient has concomitant hypertension and/or hypokalaemia, request aldosterone/renin ratio accompanied by serum creatinine/sodium/potassium /bicarbonate/chloride and 24-hour urinary sodium/ potassium to exclude primary hyperaldosteronism (See BIO NO 046 Primary hyperaldosteronism – Guidelines for investigation).
- In patients with clinical or imaging features suggestive of adrenocortical carcinoma, request sex-hormones (DHEA-S, Androstenedione, testosterone in women and oestradiol in men and post-menopausal women) and steroid precursors (17-hydroxyprogesterone) **OR** 24 h urine steroid profile.

- In patients with bilateral adrenal incidentalomas, if suspected on clinical grounds or if imaging suggests bilateral infiltrative disease or haemorrhages, serum 17-hydroxyprogesterone should be measured to exclude congenital adrenal hyperplasia and testing for adrenal insufficiency should be considered

Protocols for the investigation of Cushing's syndrome, primary hyperaldosteronism (Conn's syndrome) and phaeochromocytomas and paragangliomas can be found on EKHUFT intranet at http://www.ekhuft.nhs.uk/patients-and-visitors/services/pathology/clinical-biochemistry/

Confirmatory hormonal testing is recommended for all positive screening tests to limit false positive results and unnecessary surgeries.

** It is worth noting that a phaeochromocytoma is extremely unlikely if Hounsfield units are less than 10. A phaeochromocytoma diagnosis becomes more likely if the Hounsfield units are more than 10 and the lesion is more than 3cm in size.*

***https://www.nice.org.uk/guidance/CG127*

7. Key Stakeholders, Consultation, Approval and Ratification Process

East Kent Hospitals University NHS Foundation Trust is the key stakeholder for this policy.

This document has been prepared in consultation with Dr Tim Doulton, Consultant Nephrologist/Hypertension Specialist. Consultants in Endocrinology and Radiology were also invited to comment on the guideline. Consultation has been through e-mail communication between clinical biochemistry staff and medical consultants. Email correspondence is stored on Q-pulse and the S drive.

8. Review and Revision arrangements

Every two years from implementation date, by author.

9. Dissemination and Implementation

The guidance will be hosted on the Health Professionals/Pathology area of TrustNet, and will be proactively implemented through the Care Groups by appropriate clinical leads and by proactive dissemination to primary care partners.

10. Document control including archiving arrangements

Archive of this document will be via Q-Pulse.

11. Monitoring Compliance

Within the Trust, compliance with this policy must rest with the requesting Care Groups with vetting of requests in Clinical Biochemistry. Compliance will also be subject to occasional audit within Clinical Biochemistry.

12. References

1. Fasssnacht M, Arlt W, Bancos I et al. Management of adrenal incidentalomas: European Society of Endocrinology Clinical Practice Guideline in Collaboration with the European Network for the Study of Adrenal Tumours. European Journal of Endocrinology 2016 Aug;175(2):G1-G34.
2. University Hospital Bristol NHS Foundation Trust. Clinical Guideline: Suspected Adrenal 'Incidentaloma'. Version 1 Sept 2011. Dr Karin Bradley, Consultant Endocrinologist
3. National Institute of Health consensus statement. Management of the Clinically Inapparent Adrenal Mass 2002. Volume 19 (2)
4. Mansmann G, Lau J, Balk E, Rothberg M, Miyachi Y & Bornstein SR. The Clinically Inapparent Adrenal Mass: Update in Diagnosis and Management. Endocrine Reviews 25(2):309–340.

Appendix A - Equality Impact Assessment

Equality and Human Rights Impact Analysis (EHRIA)

Part One – Screening Tool

Name of the policy, strategy, function or methodology:	Adrenal Incidentaloma: guidelines for investigation

Details of person completing the EHRIA	
Name	Mr Ceri Rowe
Job Title	Senior Clinical Scientist
Department/Specialty	Pathology/Clinical Biochemistry
Telephone Number	x723 6287

1. Identify the policy, strategy, function or methodology aims

What are the main aims, purpose and outcomes of the policy, strategy, function or methodology?
To ensure appropriate investigation of adrenal incidentaloma across the health service in East Kent.
Does it relate to our role as a service provider and/or an employer?
Service provider.

2. Assess the likely impact on human rights and equality

Use this table to check if the policy, strategy, function or methodology:

- could have a negative impact on human rights or on any of the equality groups, or
- could have a positive impact on human rights, contribute to promoting equality, equal opportunities or improve relations.

It is not necessary to complete each box, nor to mark whether it is positive or negative, although you can do this if you find it helpful.

	Protected Characteristic								
	Race	**Sex**	**Disability**	**Sexual Orientation**	**Religion or belief**	**Age**	**Gender reassignment**	**Marriage & Civil Partnership**	**Pregnancy & Maternity**
Could this policy, procedure, project or service affect this group differently from others? **YES/NO**									
Could this policy, procedure, project or service promote equal opportunities for this group? **YES/NO**									
Right to life *e.g. decisions about life-saving treatment, deaths through negligence in hospital*									
Right not to be tortured or treated in an inhuman or degrading way *e.g. dignity in care, abuse or neglect of older people or people with learning disabilities.*									
Right to respect for private and family life e.g. *respecting lgb relationships, confidentiality*									
Right to freedom of thought, conscience and religion *e.g. respect for cultural and religious requirements*									
Right to freedom of expression *e.g. access to appropriate communication aids*									
Right to freedom of assembly and association *e.g., right to representation, to socialise in care settings*									
Right to education *e.g. access to basic knowledge of hygiene and sanitation*									
Right to liberty e.g. informal detention of patients who do not have capacity									

3. How does it impact on people's human rights and equality?

Using the table above, explain anticipated impacts. If a full EHRIA is recommended, you can summarise the impacts - it is not necessary to set these out in detail,

Could people's human rights be impacted negatively? Could the policy, strategy, function or methodology result in inequality or discrimination?
No
Could this policy, strategy, function or methodology result in positive impacts on people's human rights or equality? Could it present opportunities to promote equality?
No

4. Recommendations

Is a full EHRIA recommended? If not, give reasons
No. The policy has equal impact.

5. Publication of EHRIA

Give details of where Screening Tool or the full EHRIA will be published and when this will take place
With document.

Details of person completing the EHRIA	
Name	Mr Ceri Rowe, Senior Clinical Scientist

Signed …… Date: ……

Approval and sign-off	Name
Head of Department/Director	Mr Edward Kearney, Head of Service Clinical Biochemistry

Signed …… Date: ……

	Name
Trust Board approval and sign-off	not applicable

Signed …… Date: ……

Appendix B – Author's Checklist of compliance with the Policy for the Development and Management of Organisation Wide Policies and Other Procedural Documents

POLICY:

To be completed and attached to any policy when submitted to the appropriate committee for consideration and approval.

	Requirement:	Compliant Yes/No/ Unsure	Comments
1.	**Style and format**	Yes	
2.	**An explanation of any terms used in documents developed**	Yes	
3.	**Consultation process**	Yes	
4.	**Ratification process**	Yes	
5.	**Review arrangements**	Yes	
6.	**Control of documents, including archiving arrangements**	Yes	
7.	**Associated documents**	n/a	
8.	**Supporting references**	Yes	
9.	**Relevant NHSLA criterion specific requirements**	n/a	
10.	**Any other requirements of external bodies**	n/a	
11.	**The process for monitoring compliance with NHSLA and any other external and/or internal requirements**	n/a	

Appendix C – Plan for Dissemination of Policies

To be completed and attached to any policy when submitted to the appropriate committee for consideration and approval.

Acknowledgement: University Hospitals of Leicester NHS Trust (Amended)

Title of document:	Adrenal Incidentaloma: guidelines for investigation		
Version Number:	2.0		
Approval Date:		**Dissemination lead:**	Mr Ceri Rowe
Previous document already being used?	No		
If yes, in what format (paper / electronic) and where (e.g. Directorate / Trust wide)?	n/a		
Proposed instructions regarding previous document:	n/a		

To be disseminated to:	**How will it be disseminated, who will do it and when?**	**Format (i.e. paper or electronic)**	**Comments:**
Trust clinical staff	Trustnet	electronic	
Clinical Biochemistry staff	Q Pulse	electronic	

Author's Dissemination Record - to be used once document is approved – to be kept with the master document

Date document forwarded to be put on the Trust's central register / in SharePoint:		**Date document put on Directorate register (if appropriate) / on Directorate webpage (if applicable)**	

Disseminated to: (either directly or via meetings, etc.)	**By Whom?**	**Format (i.e. paper or electronic)**	**Date Disseminated:**