

Freedom of Information Request

Ref: 24-112

15 February 2024

By Email

Dear Sir/Madam

Thank you for your request for information under the Freedom of Information Act 2000. The Trust's response is as follows:

- We can confirm that we do hold the information you are requesting

I would be grateful if you could provide me with the following:

1. The normal range (adults and children) for the following liver enzymes: alanine transaminase (ALT), aspartate transaminase (AST), alkaline phosphatase and gamma GT.

Please see our response in the table below:

ALT	<1 year: 13 – 45 U/L Female 1+ years: 10 – 40 U/L Male 1+ years: 10 – 60 U/L	<1 year: Beckman Coulter kit insert. 1+ years: Ceriotti et al. Clin Chem Lab Med 2010;48:1593-1601 rounded to nearest 10 U/L
AST	<2 weeks: <150 U/L 2-52 weeks: <60 U/L 1-7 years: <40 U/L Female 8+ years: <35 U/L Male 8+ years: <50 U/L	<8 years: CALIPER website, rounded to nearest 10 U/L 8+ years: Beckman Coulter kit insert
GGT	<2 weeks: <160 U/L 2-52 weeks: <100 U/L Female 1+ years: <38 U/L Male 1+ years: <55 U/L	<1 year: CALIPER website, rounded to nearest 10 U/L 1 year+: Beckman Coulter kit insert
ALP	<2 weeks 90-273 U/L 2-52 weeks: 134-518 U/L 1-9 years 156-369 U/L 10-12 years 141-460 U/L F 13 -14 years 62-280 U/L M 13 -14 years 127-517 U/L F 15 -16 years 54-130 U/L M 15 -16 years 89-365 U/L F 17 -18 years 54-130 U/L M 17 -18 years 59-164 U/L B 19 years + 30-130 U/L	0-18 years: In house derived 19 years+: Pathology Harmony

2. The method and machine used with reference so it can be identified.

Beckman Coulter AU5800. AST and ALT are with PLP activator (IFCC approved)

3. How was your local normal range determined?

1. From the reference range specified by the manufacturer

2. By the lab of a large group of normal volunteers

3. From historical data

4. Other – please describe.

Please see the table above in question 1.

5. Do your liver function tests automatically include measurement of AST?

No

6. How many sets of liver function tests, which include measurement of ALT and alkaline phosphatase, does your hospital or laboratory complete each year? How many patients does this represent?

457,646 (calendar year 2023)

7. How many requests for measurement of AST does your hospital or laboratory complete each year? How many patients does this represent?

5,649 (calendar year 2023)

8. How many values exceed the upper limit of normal for each liver function test?

Please note, the Trust does not hold the data in a format that would enable us to fully respond to your request to the level of detail required and a manual trawl for this information would significantly exceed the 18 hours limit set down by the FOI as the reasonable limit. Section 12 of the FOIA provides that we are not obliged to spend in excess of 18 hours in any sixty-day period locating, retrieving and identifying information in order to deal with a request for information and therefore we are withholding this information at this time.

9. If you do not hold this information because you consider the analyses to be done externally by an outside laboratory, please provide the name of the laboratory and email address for their FOI officer.

Not applicable.

This concludes our response. We trust that you find this helpful, but please do not hesitate to contact us directly if we can be of any further assistance.

If, after that, you are dissatisfied with the handling of your request, you have the right to ask for an internal review. Internal review requests should be submitted within two months of the date of receipt of the response to your original letter and should be addressed to:

Data Protection Officer

University Hospitals Bristol and Weston NHS Foundation Trust

Trust Headquarters
Marlborough Street
Bristol
BS1 3NU

Please remember to quote the reference number above in any future communications.

If you are not content with the outcome of the internal review, you have the right to apply directly to the Information Commissioner for a decision. The Information Commissioner can be contacted at: Information Commissioner's Office, Wycliffe House, Water Lane, Wilmslow, Cheshire, SK9 5AF

Publication

Please note that this letter and the information included/attached will be published on our website as part of the Trust's Freedom of Information Publication Log. This is because information disclosed in accordance with the Freedom of Information Act is disclosed to the public, not just to the individual making the request. We will remove any personal information (such as your name, email and so on) from any information we make public to protect your personal information.

To view the Freedom of Information Act in full please click [here](#).

Yours sincerely

Freedom of Information Team
University Hospitals Bristol and Weston NHS Foundation Trust