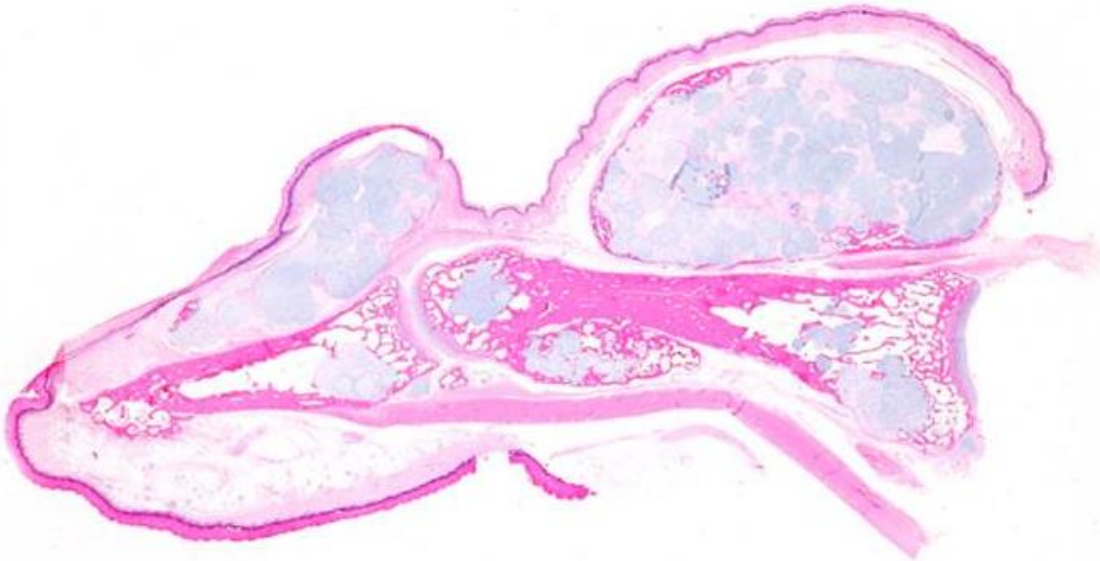



The Robert Jones and Agnes Hunt <b>NHS</b> Orthopaedic Hospital NHS Foundation Trust		Quality Document	
Department of Histopathology		MP012	Version 004
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Author	Supriya Kapas	Review Date	January 2025
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User Manual			

# DEPARTMENT OF MUSCULOSKELETAL HISTOPATHOLOGY

## USER MANUAL



The Robert Jones and Agnes Hunt  Orthopaedic Hospital NHS Foundation Trust		<b>Quality Document</b>	
<b>Department of Histopathology</b>		<b>MP012</b>	<b>Version 004</b>
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<b>User Manual</b>			

### Table of contents

Section	Title	Page
1	Scope	3
2	Purpose	3
3	Service information	3
4	Transport and sample requirements	8
5	Requests for histological services	11
6	Completion of histology request forms	13
7	Health and safety	14
8	Issuing of reports	14
9	Complaints	14
10	Changes to document	15
Appendix 1	Histopathological examination request form – general samples	16
Appendix 2	Histopathological examination request form – needle biopsies	17
Appendix 3	Histopathological examination request form – frozen sections.	18

The Robert Jones and Agnes Hunt <b>NHS</b> Orthopaedic Hospital NHS Foundation Trust		Quality Document	
Department of Histopathology		MP012	Version 004
Responsible Person	Quality Manager	Issue Date	January 2023
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<b>User Manual</b>			

## 1. Scope

The user guide is intended to provide an easy reference to the Musculoskeletal Histopathology Service provided by the Histopathology Department at the Robert Jones and Agnes Hunt Orthopaedic Hospital (RJAH). The service provides access to information relating to specimen and labelling requirements. If you are unable to find the information you require users are encouraged to contact key relevant personnel listed or email [rjah.histology@nhs.net](mailto:rjah.histology@nhs.net)

## 2. Purpose: Service background

Since the 1960s, the Histopathology Laboratory has offered a routine and specialised orthopaedic diagnostic service and a neuromuscular diagnostic service for RJAH since the 1960s. It is also a specialised orthopaedic diagnostic service for the Shrewsbury and Telford Hospitals NHS Trust (SaTH). Due to the specialist nature of the Department cases are also referred from other Trusts.

## 3. Service information

### 3.1. Key personnel

The service is directed by Professor Paul Cool (Laboratory Director). He has the responsibility for, but not limited to, professional, scientific, consultative or advisory, organisational, administrative, educational, activities relevant to the services provided and medical direction and clinical governance. He maintains overall control and responsibility for the delivery of the service and has the necessary competence, authority, and resources to fulfil the requirements of The International Standard.

Key staff and contacts are:

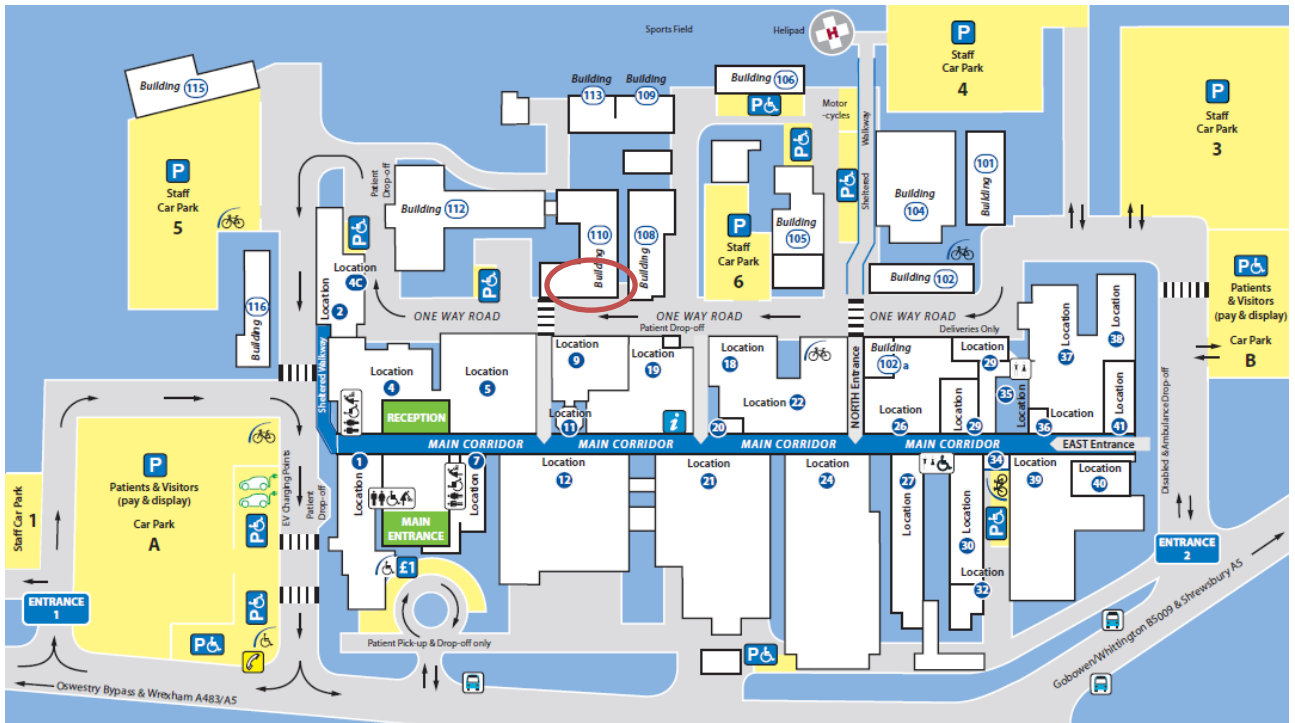
Staff	Contact details
Secretarial Office 09.00 – 17.00 (Monday – Friday except Bank Holidays)	01691 404148
Laboratory 09.00 – 17.00 (Monday – Friday except Bank Holidays)	01691 404148
Preferred method of contact	<a href="mailto:rjah.histology@nhs.net">rjah.histology@nhs.net</a> (general enquiries)
Pat Evans Biomedical Scientist & Laboratory Manager	01691 404120 <a href="mailto:pat.evans5@nhs.net">pat.evans5@nhs.net</a>


The Robert Jones and Agnes Hunt <b>NHS</b> Orthopaedic Hospital NHS Foundation Trust		Quality Document	
Department of Histopathology		MP012	Version 004
Responsible Person	Quality Manager	Issue Date	January 2023
Author	Supriya Kapas	Review Date	January 2025
Approved by	Pat Evans	Supersedes Doc:	User Manual v003
<b>User Manual</b>			

Consultant Medical Staff who provide advice	
Professor Adrienne Flanagan MB, BCh, BAO, LRCPI, LRCSI, FRCPath, PhD, FMedSci	Cell and molecular pathology of bone and soft tissue tumours and non-neoplastic musculoskeletal disorders
Dr Fernanda Amary MB, PhD, Affiliated to the RCPATH	Bone and soft tissue pathology. Molecular genetics of sarcoma
Dr Roberto Tirabosco MD, Affiliated to the RCPATH	Soft tissue and bone pathology
Dr Daniel Lindsay MBBS, FRCPath	Soft tissue and bone pathology
Professor Federico Roncaroli FRCPath, Professor in Neuropathology & Honorary Consultant	Division of Neuroscience and Experimental Psychology, University of Manchester
Professor Caroline Sewry PhD, FRCPath, Muscular consultant and honorary professor	Consultant Clinical Scientist (Muscle pathology)

### 3.2. Location of Laboratory

The Histopathology Department is housed in modern laboratories located on the 1st floor of the Arthritis Research Centre (ARC, Building 110) at The Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust.



The Robert Jones and Agnes Hunt  Orthopaedic Hospital NHS Foundation Trust		<b>Quality Document</b>	
<b>Department of Histopathology</b>		<b>MP012</b>	<b>Version 004</b>
<b>Responsible Person</b>	Quality Manager	<b>Issue Date</b>	January 2023
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<b>Approved by</b>	Pat Evans	<b>Supersedes Doc:</b>	User Manual v003
<b>User Manual</b>			

### 3.3. Services offered by the Laboratory

#### 3.3.1. Diagnostic Service

The department aims to provide an efficient diagnostic service to clinicians, and patients; within the resources of time, knowledge and skills available. For specific clinical enquiries, please refer to the relevant telephone numbers that are provided in section 3.1. Advice on the taking of specimens, appropriate containers, fixative etc. can be obtained by contacting the biomedical scientific staff on 01691 404148 (internal extension 4148).

Services:

- Diagnostic histopathology of soft tissue and bone, including primary tumours (sarcomas)
- Diagnostic immunohistochemistry of tumours
- Diagnostic immunohistochemistry and enzyme histochemistry of muscle biopsies
- Rapid diagnosis from frozen sections of soft tissues
- Support for research projects (by arrangement)


A wide variety of techniques are provided for a comprehensive musculoskeletal histopathology service, including:

- Paraffin processing of tissues
- Cutting and staining of formalin fixed, paraffin embedded tissue sections
- Cutting and staining of frozen tissue sections
- Enzyme histochemistry
- Muscle immunohistochemistry
- Tumour immunohistochemistry (at the Royal National Orthopaedic Hospital (RNOH))
- Molecular genetic investigations, for diagnostic and research purposes [DNA-specific mutation detection, FISH, gene amplification and gene rearrangement] (at the RNOH).

Tumour immunohistochemistry tests conducted at RNOH include:

1. AE1/AE3	19. CD99 mic-2	37. H3.3G34W
2. ALK1	20. CD117 c-kit	38. INI 1
3. Bcl2	21. CD138	39. Ki-67
4. Brachyury	22. CAM 5.2	40. Melan A
5. Caldesmon	23. Chromogranin A	41. MNF116
6. Calponin	24. CK 7	42. MUC-4
7. CAMTA1	25. CK 20	43. Myogenin
8. CD1a	26. Desmin DER 11	44. PgR
9. CD3	27. DOG-1	45. P63
10. CD10	28. EMA	46. PSA
11. CD20	29. ER	47. S100
12. CD21	30. ERG	48. SMA
13. CD30	31. FOS	49. STAT-6
14. CD31	32. FOSB	50. Synaptophysin
15. CD34	33. GFAP	51. TdT
16. CD35	34. HMB45	52. TTF1
17. CD45	35. H3K36M	53. TFE3
18. CD68 KPI	36. H3K27me3	

Visit <https://www.rnoh.nhs.uk/services/cellular-and-molecular-pathology/immunohistochemistry> for further details.

The Robert Jones and Agnes Hunt  Orthopaedic Hospital NHS Foundation Trust		Quality Document	
Department of Histopathology		MP012	Version 004
Responsible Person	Quality Manager	Issue Date	January 2023
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<b>User Manual</b>			

FISH and RT-PCR tests conducted at RNOH are:

- ASPSCR1-TFE3 (RT-PCR)
- BCOR-CCND3 (RT-PCR)
- CIC gene rearrangement (FISH)
- C-MYC gene amplification (FISH)
- COL1A1-PDGFB fusion (FISH)
- CTNNB1 ( $\beta$ - Catenin) - Specific mutation analysis: Thr41Ala, Ser45Pro, Ser45Phe
- DDIT3 (CHOP) gene rearrangement (FISH)
- EWSR1 gene rearrangement (FISH)
- EWSR1-ATF1 type 1 EWSR1-ATF1 type 2, EWSR1-ATF1 type 3 (RT-PCR)
- EWSR1-ATF1 (RT-PCR)
- EWSR1-NR4A3 type 1, EWSR1-NR4A3 type 2, EWSR1-NR4A3 type 3 (RT-PCR)
- EWSR1-CREB1 (RT-PCR)
- EWSR1-ERG (RT-PCR)
- EWSR1-FLI1 type1 / EWSR1-FLI1 type 2 (RT-PCR)
- EWSR1-WT1 (RT-PCR)
- FOXO1 gene rearrangement (FISH)
- FUS gene rearrangement (FISH)
- FUS-CREB3L2 (RT-PCR)
- FUS-DDIT3 (RT-PCR)
- GNAS1 - specific mutation analysis: Arg201Cys, Arg201His, Gln227Leu
- HEY1-NCOA2 fusion gene (RT-PCR)
- MDM2 gene amplification (FISH)
- NR4A3 gene rearrangement (FISH)
- PAX3-FOXO1 (FISH and RT-PCR)
- PAX7-FOXO1 (FISH and RT-PCR)
- SS18 gene rearrangement (FISH)
- SS18-SSX1 and SS18-SSX2 (RT-PCR)
- TAF2N-NR4A3 (RT-PCR)
- USP6 gene rearrangement (FISH)
- USP6-MYH9 (RT-PCR)
- WT1 gene rearrangement (FISH)
- WWTR1-CAMTA1 (RT-PCR)

Further details are provided at <https://www.rnoh.nhs.uk/services/cellular-and-molecular-pathology/molecular-pathology>

### 3.3.2. Genomic Medicines Service - whole genome sequencing

The introduction of an NHS Genomic Medicine Service (GMS) is a world-leading initiative that aims to integrate genomic medicine into routine NHS patient care and has the potential to transform healthcare in the UK. The initial focus of this service is on increasing diagnostic services for cancer and rare diseases, while also harnessing the use of personalised medicine for therapeutic interventions.


The Histopathology department is contributing in consolidating the UK's position as a global leader in genomics. Through its participation of delivering the national genomic healthcare strategy the service supports the offer of whole genome sequencing (WGS) to patients as a diagnostic test for sarcoma as part of previously announced plans to sequence 500,000 whole genomes within the NHS.

### 3.3.3. Research Service

The department offers a service for research projects and provides access to bio-banked tissue for ethically approved projects. For further advice relating to the research project, please e-mail [rjah.histology@nhs.net](mailto:rjah.histology@nhs.net) or [rno-tr.Histopathology@nhs.net](mailto:rno-tr.Histopathology@nhs.net) with an outline of the project. Subsequently, the Biobank co-ordinator will discuss your requirements for research and/or advice.

### 3.3.4. Laboratory working hours

The laboratory is open for telephone calls from 09.00 am to 17.00 Monday to Friday, except bank holidays. These are also the hours when clinical advice for ordering examinations (tests) and interpretation of examination results are available.

The Robert Jones and Agnes Hunt  Orthopaedic Hospital NHS Foundation Trust		Quality Document	
Department of Histopathology		MP012	Version 004
Responsible Person	Quality Manager	Issue Date	January 2023
Author	Supriya Kapas	Review Date	January 2025
Approved by	Pat Evans	Supersedes Doc:	User Manual v003
<b>User Manual</b>			

A routine service is not provided during weekends and bank holidays, although this can be arranged if requested in advance for clinically relevant cases.

An out of hours service is not provided, but specific requests will be considered if clinically appropriate.

For urgent advice and requests, please contact the consultant pathologists and/or laboratory manager on the office number (01691 404148) or the hospital switch board (01691 404000, out of hours). Where possible, any request for work to be done outside of the normal hours of service must be arranged as far in advance as possible so that there is adequate time for arrangements to be made to facilitate such a service.

### 3.4. Referral Laboratories

Cases can be referred to pathologists in other laboratories for a second opinion or sent for further test to be carried out as required. The UKAS accreditation status and participation in recognised external quality assurance (EQA) schemes is confirmed and recorded for all of the referral laboratories listed below:

Muscle opinions	Professor Federico Roncaroli The Department of Cellular Pathology Salford Royal Foundation Hospital Salford, Manchester, M6 8HD
Haematopathological opinions	Dr B Vydianath or Dr RA Kashipaz Clinical Laboratory Services/ Cellular Pathology Histopathology University Hospitals Birmingham NHS Foundation Trust Queen Elizabeth Hospital Birmingham, B15 2GW

### 3.5. Quality and Governance

The Department aims to provide service of the highest quality, whilst ensuring optimal use of available resources. The service is aimed to be:

- effective and efficient
- readily available
- good value
- responsive to the needs of our customers, the Health and Safety at Work Act and current employment legislation
- safe and compliant with statutory requirements and clinical risk management


#### 3.5.1. External Quality Assurance

The Department participates in all appropriate national external quality assurance (EQA) schemes. Confirmation of our scores is available on request ([rjah.histology@nhs.net](mailto:rjah.histology@nhs.net)) and on the departmental website ([www.rjah.nhs.uk/our-services/histopathology](http://www.rjah.nhs.uk/our-services/histopathology)). Quality assurance procedures are performed daily in the laboratory. Regular audit and competency assessments are undertaken.

#### 3.5.2. Human Tissue Authority

The Department has a licence for tissue banking from the Human Tissue Authority (HTA), Licence Number 11064 (<https://www.hta.gov.uk/establishments/robert-jones-and-agnes-hunt-orthopaedic-and-district-hospital-11064>).



The Robert Jones and Agnes Hunt  Orthopaedic Hospital NHS Foundation Trust		Quality Document	
Department of Histopathology		MP012	Version 004
Responsible Person	Quality Manager	Issue Date	January 2023
Author	Supriya Kapas	Review Date	January 2025
Approved by	Pat Evans	Supersedes Doc:	User Manual v003
<b>User Manual</b>			

Further information is available on the RJAH website (<https://www.rjah.nhs.uk/our-services/musculoskeletal-histopathology/rjah-biobank-and-research-programme/>).

### 3.5.3. External support

The Department is supported in agreement by The Royal National Orthopaedic Hospital NHS Trust (RNOH) in providing a service to RJAH; covering work required supporting the tumour unit and other orthopaedic work. The support consists of reporting on histopathology specimens (bone and soft tissue) and involvement in multi disciplinary team meetings (MDT) by sub-speciality bone/soft tissue histopathologists.

RNOH's Histopathology Department is a UKAS accredited medical laboratory (number 8680) that can be confirmed on the UKAS web site ([www.ukas.com](http://www.ukas.com)). The RNOH histopathology department has a licence for tissue banking from the Human Tissue Authority; Licence Number 12325 and participates in EQA schemes UKNEQAS-ICC, CEQAS and CPTNEQAS. Further information available is available on <https://www.rnoh.nhs.uk/our-services/cellular-and-molecular-pathology>.

The RJAH histopathology department is also supported in agreement by Professor Federico Roncaroli of The Department of Cellular Pathology, Salford Royal Foundation Hospital, Salford, Manchester, M6 8HD, UK. This support specifically covers the muscle biopsy reporting service. Professor Federico Roncaroli actively participates in EQA schemes via The British Neuropathological Society.

### 3.5.4. Protection of Personal Information

The Histopathology Department maintains the confidentiality of patient information by following Trust policy on Information Governance [POL009] and national guidelines including the Caldecott principles. It will only disclose information on patients to other health care professionals who need to know that information to provide effective care and treatment to that patient. The information provided will be the minimum necessary to allow appropriate and effective care.

In cases where a specimen may need to be referred to an external laboratory for specialised testing or opinion, patient consent to disclose clinical information and family history to that laboratory is assumed as given as part of the overall consent to take the specimen and perform the test.

## 4. Transport and sample requirements


### 4.1. Transport

All internal samples, unless stated, must be sent to the laboratory via the theatre portering staff. Routine collections are three times a day from the operating theatres.

All internal samples must be delivered to the laboratory in rigid, leak proof tins or boxes labelled with UN3733 diamond of appropriate size according to the P650 packaging guidelines. The transport boxes must contain an absorbent sheet to absorb any spillages and must be regularly disinfected or immediately following contamination.

Normally, specimens must be placed in approximately ten times their volume of neutral buffered formalin. Please choose the appropriate size of container. Alcohol or other forms of fixation must



The Robert Jones and Agnes Hunt  Orthopaedic Hospital NHS Foundation Trust		Quality Document	
Department of Histopathology		MP012	Version 004
Responsible Person	Quality Manager	Issue Date	January 2023
Author	Supriya Kapas	Review Date	January 2025
Approved by	Pat Evans	Supersedes Doc:	User Manual v003
<b>User Manual</b>			

not be used (unless agreed with the department) as this may adversely affect the microscopic appearances.

Specimens are to be kept at ambient temperature. Specimens placed in formalin can also be kept at ambient temperature but must be transported to the laboratory as soon as possible.

### **Transport of samples from Shrewsbury and Telford Hospitals (SaTH)**

Transport boxes containing specimens from SaTH arrive via the hospital transport department twice a day.

It is essential that all specimens are transported to the laboratory under conditions which comply with Health and Safety legislation, IATA regulations and packaging instructions P650 to ensure the integrity of the specimen and protect postal workers, couriers, porters and laboratory staff.

All diagnostic specimens must be placed in a primary specimen container, which is sufficiently robust and leak proof under normal use. This then must be placed inside a sealed specimen bag with sufficient absorbent material to absorb the contents of the primary specimen container. The request form must be placed in a separate compartment of the bag.

This is then placed in an outer packaging which must have adequate cushioning material and must protect their contents from physical damage or extreme temperature changes whilst in transit. The smallest external measurement must be 10 cm x10 cm.

The outside packaging must have a UN3373 diamond sticker and the wording Biological Specimen Category B on one side. The outer box must be at least 10 cm x 10 cm, the diamond no smaller than 5 cm sides. The lettering within the diamond and the written description must be no smaller than 6 mm high, the thickness of the diamond border line a minimum of 2 mm thick. The box must also be labelled with the destination.

### **Transport of samples from Wards, Theatres and Outpatients**


Specimens taken in from other locations such as wards need to be transported to the histopathology department with the appropriate record book, either in person at the department or via arrangement with the portering department.

There is a specimen box containing all the relevant materials (appropriate specimen pots, and request forms) located in the Histopathology Laboratory for use by Radiology staff for the collection and transport of image guided biopsies.

## **4.2. Sample requirements**

Specimens

- Image guided biopsies and biopsies taken in the Montgomery Unit  
Histology laboratory immediately: For sarcoma diagnostics place sample in a dry universal container; minimum of five cores (15 mm in length) are required to facilitate diagnostic work and whole genome sequencing.
- Biopsies and small tissue samples  
Must be placed in a container with an orange lid (holds 60 ml neutral buffered formalin), and the container labelled appropriately.
- Medium size tissue samples (ie heads of femur)

The Robert Jones and Agnes Hunt  Orthopaedic Hospital NHS Foundation Trust		Quality Document	
Department of Histopathology		MP012	Version 004
Responsible Person	Quality Manager	Issue Date	January 2023
Author	Supriya Kapas	Review Date	January 2025
Approved by	Pat Evans	Supersedes Doc:	User Manual v003
<b>User Manual</b>			

Must be placed in a container with a white lid (holds 360 ml neutral buffered formalin), and the container labelled appropriately.

- Resection specimens and amputations

Must be sent fresh to the Histopathology Department.

Place the specimen in two plastic bags, seal securely and attach patient identification label. Place bagged sample in the transport container provided in theatres; red wheelie bin for amputation specimens. Send to histopathology via a porter as soon as possible.

Please contact the department and inform a member of staff that the specimen is on its way.

Details for requesting frozen sections, muscle biopsy diagnosis, cell culture and cytology (crystal identification or) can be found in section 5.

#### 4.3. Post and courier transferred blocks and slides

Correct packaging of all slides and blocks is essential to prevent breakages and potential loss during transportation. Slides must be sent in appropriate rigid packaging to avoid damage. They must be thoroughly dried before sending to reduce the risk of adhering to the packaging and breaking. Blocks must be padded in cushioned material to prevent damage and if necessary with a refrigerant gel pack for protection against melting that may occur in warm weather during shipping.

Second opinion cases must be sent with a letter from the requesting consultant with:

- Patient surname and first name;
- Date of birth
- Gender
- Clinical details and history
- Reason for referral and required tests (if applicable)
- Date of request
- All slides (including haematoxylin-eosin and immunohistochemistry)

Failure to include any of the above may result in longer than expected turnaround times or possible return of material.

Please ensure that all blocks and slides are clearly labelled. A label bearing our laboratory number will be adhered to the back of all blocks and written on slides to facilitate passage through the department. All submitted blocks and slides will be returned to the requesting department.

#### 4.4. Acceptance criteria

*(taken from the Institute of Biomedical Science (IBMS), Patient Sample and Request Form Identification Criteria)*

All specimens must be clearly and unequivocally identified with a minimum of three key identifiers (one must be the full name). The identifiers must match the patient information on the histopathology request form.

The Robert Jones and Agnes Hunt <b>NHS</b> Orthopaedic Hospital NHS Foundation Trust		Quality Document	
Department of Histopathology		MP012	Version 004
Responsible Person	Quality Manager	Issue Date	January 2023
Author	Supriya Kapas	Review Date	January 2025
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<b>User Manual</b>			

Acceptance criteria are:

Sample			
		Essential	Desirable
1	Patient's surname	✓	
2	Patient's forename	✓	
3	NHS Number or Hospital number	✓	
4	Date of birth		✓
5	Date		✓
6	Time		✓

Request form			
		Essential	Desirable
1	Patient's surname	✓	
2	Patient's forename	✓	
3	NHS Number or Hospital number	✓	
4	Date of birth		✓
5	Patient address		✓
6	Date <b>and</b> time of collection	✓	
7	Consultant name	✓	
8	Consultant signature	✓	
9	Destination of report		✓
10	Type of sample and source	✓	
11	Clinical information		✓


## 5. Requests for histological services

### 5.1. Frozen sections

When a frozen section is required the department secretary must be contacted on extension 4148 or via email to [rjah.histology@nhs.net](mailto:rjah.histology@nhs.net) to ensure reporting pathologist availability prior to booking on the Bluesprier System as a Histology Resource [[HX040 MANAGEMENT OF FROZEN SECTIONS](#)].

Please give at least one week's notice; more whenever possible. Booking frozen sections in advance ensures that consultant staff will be available to provide a report.

- Frozen sections are available on Mondays, Tuesdays, Wednesdays and Thursdays.
- Emergency frozen sections (i.e. without notice) can be provided within normal office hours, provided a consultant histopathologist is available to review the specimen.
- The specimen(s) must be transferred to a sterile universal container(s) labelled with the patient details and dispatched to the laboratory via a theatre porter, together with a completed request form. A contact number must be included. Please contact the laboratory when the specimen is on its way.
- A written report will be e-mailed to the theatre reception as soon as possible by the Histopathology Administration staff; usually within 20 minutes of receipt of the specimen if the pathologist is on site, or 30 minutes when reporting remotely.
- A written confirmatory report will follow a few days later after the specimen(s) has been through normal laboratory procedure.

The Robert Jones and Agnes Hunt  Orthopaedic Hospital NHS Foundation Trust		Quality Document	
Department of Histopathology		MP012	Version 004
Responsible Person	Quality Manager	Issue Date	January 2023
Author	Supriya Kapas	Review Date	January 2025
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<b>User Manual</b>			

## 5.2. Muscle biopsy examination

When a muscle biopsy examination is requested the laboratory must be contacted on extension 4148 and listed on Bluespier as a Histology Resource [[HX039 PROVISION AND COLLECTION OF MUSCLE BIOPSY/SKIN BIOPSY FOR CELL CULTURE](#)].

Please give at least 24 hours' notice; more whenever possible.

- Muscle biopsies need to be received fresh in the laboratory within 30 minutes of surgical removal.
- Wrap the tissue in gauze moistened but not soaked in physiological saline and place in a sterile universal container.
- A completed request form must accompany the specimen.

## 5.3. Skin or muscle culture

When cell culture is required the laboratory must be contacted on extension 4148 at least 24 hours before the procedure is to take place to ensure the availability of culture media.

Cell culture is usually requested at the same time as muscle biopsy and listed on Bluespier as a Histology Resource.

- A cell culture is usually grown from a skin biopsy.
- Ring the laboratory the morning of the procedure and a member of the histopathology staff will bring the cell culture medium to theatres or to your location.
- Place the skin biopsy into the culture medium using aseptic technique.
- Once the specimen is placed in the medium keep the container in an upright position. **This is important as it reduces the risk of contamination from the top of the container.** Arrange for a porter to bring the specimen to the Histopathology department immediately, ensuring that they understand the importance of keeping the container in an upright position.

## 5.4. CT- and ultrasound-guided biopsies


When a CT-guided biopsy is to be performed it will be listed on Bluespier. The laboratory staff monitor this system daily. Radiology admins informs the department of ultrasound-guided biopsies on a weekly basis.

- The specimen box can be collected from the Histopathology Laboratory.
- Within the box are containers of neutral buffered formalin, dry histology pots, swabs for microbiology, sterile universal containers and request forms.
- Once obtained place the tissue samples into the appropriate containers using sterile technique.
- Complete and sign a request form for histopathology (and microbiology if required).
- Return the box and specimens to the histopathology department via a porter or a member of your staff along with the specimen record book to be signed to register receipt of the samples in the Histopathology Department.
- A written report will follow, usually within 7 calendar days.

## 5.5. Tissue for frozen tissue archive

Patients who are consented for tissue to be stored in the frozen tissue archive are identified at MDT. These patients are then identified on Bluespier, and date and time of procedure is noted by the laboratory staff. Specimens containing primary or metastatic tumour tissue are suitable for archiving.

- Patient consent must be obtained prior to archiving.
- Specimens must be sent to the laboratory fresh, immediately after surgical removal. Place the tissue into either a sterile universal container or into two securely sealed plastic bags.

The Robert Jones and Agnes Hunt  Orthopaedic Hospital NHS Foundation Trust		Quality Document	
Department of Histopathology		MP012	Version 004
Responsible Person	Quality Manager	Issue Date	January 2023
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<b>User Manual</b>			

- Label the specimen with the patient's details, ideally with an adhesive identification label from the patient's notes.
- Complete a histopathology department request form and contact the laboratory when the specimen is on its way.

## 6. Completion of Histopathology request forms

It is the responsibility of the requesting clinician and the sample taker to ensure that request forms and samples are correctly and identically labelled. It is essential that the risk of mis-reporting pathology results is minimised to ensure patient safety and to this end accurate identification of the patient from whom the specimen/ sample was obtained is of paramount importance. See Appendices 1 to 3 for samples of request forms.

Each request accepted by the Histopathology service is considered to be an agreement between the laboratory and the requestor.

The laboratory will refuse to accept samples that do not comply with the criteria detailed below.

### Laboratory criteria for the acceptance of histopathology requests/samples:

#### General Information:


- All samples **must** arrive at the Pathology Department accompanied by a laboratory request form containing relevant information.
- Patient demographics on the sample and request form **must** be clearly annotated and identical.
- If samples have a discrepancy, the requesting consultant will be contacted to amend the discrepancy and may cause a delay to the issue of the report.

#### Required information:

- Use a histopathology department request form.
- Use a patient identity adhesive label from the patient's notes if available (If no identity label is available fill in the patient's hospital number, name, date of birth, location ie ward, requesting consultant and address).
- Identify the nature of the specimen and its site of origin.
- State the time and date of specimen collection.
- Provide adequate clinical information including details of any previous histopathology requests.
- Clearly identify "high risk" specimens.
- Write legibly.
- Sign the request form.
- Urgent specimens must be clearly marked.

#### Priority Status

Requests are assumed routine unless marked 'URGENT' or fast track, clinically urgent samples that require a fast turnaround above the published service must be discussed with the laboratory manager (by telephone or email [rjah.histology@nhs.net](mailto:rjah.histology@nhs.net)) to ensure these samples are identified and effectively managed.

The Robert Jones and Agnes Hunt  Orthopaedic Hospital NHS Foundation Trust		Quality Document	
Department of Histopathology		MP012	Version 004
Responsible Person	Quality Manager	Issue Date	January 2023
Author	Supriya Kapas	Review Date	January 2025
Approved by	Pat Evans	Supersedes Doc:	User Manual v003
<b>User Manual</b>			

## 7. Health and Safety

Histopathology: formalin fixative is classified as a class 1B carcinogen and must be handled within a controlled environment with minimum exposure. Any spillages must be absorbed using Formaspill® granules to neutralise the formaldehyde, prior to scooping and disposal into clinical waste.

(Please be aware that some specimens must be sent to the department fresh ie without fixative: see section 5).

- Please use the correct container and close securely to prevent leakage.
- 10% Neutral Buffered Formalin is the fixative of choice. It is a toxic substance and as such must be treated with care.
- All used sharps must be disposed of immediately in a sharps bin. Never send specimens with needles or other sharp objects.
- Ensure that the specimen is correctly labelled and that the appropriate request form details have been filled in and the form signed.
- Do not place specimens in food or vaccine refrigerators to await collection.
- A "Danger of Infection" label must be used on both specimen and form when Hepatitis, HIV or TB are suspected.
- Always wash your hands thoroughly after handling specimens and/or fixative.

## 8. Issuing of reports

- Final reports on soft tissue cases and bone biopsy (needle) cases are usually available on the Telepath system between 3 and 10 days of receipt and subsequently on the Electronic Patient Record (EPR) system. Printed reports are issued and sent via the internal mail system to consultant secretaries or requesting location. An interim report can be issued on cases requiring further investigations e.g. immunohistochemistry or molecular testing.
- Final reports on bone specimens, soft tissue tumours and bone tumours are usually issued between 3 and 21 days of receipt,
- Interim reports on muscle biopsies can be made available within 14 days on request. Issuing of a final report is dependent on the complexity of the case, but is usually issued less than 42 calendar days after date of receipt.
- If you require information on the progress of a particular specimen, please ring the histopathology office on extension 4148.


## 9. The laboratory's complaint procedure.

The laboratory welcomes feedback from service users, whether suggestions, compliments or complaints.

Complaints about the service must be made in the first instance to Pat Evans, Histopathology Manager on 01691 404148 or by e-mail to [pat.evans5@nhs.net](mailto:pat.evans5@nhs.net) as soon after the incident has happened.

Please include full details of any patients affected.



The Robert Jones and Agnes Hunt  Orthopaedic Hospital NHS Foundation Trust		<b>Quality Document</b>	
<b>Department of Histopathology</b>		<b>MP012</b>	<b>Version 004</b>
<b>Responsible Person</b>	Quality Manager	<b>Issue Date</b>	January 2023
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<b>User Manual</b>			

## 10. Changes to document

<b>Version</b>	<b>Section</b>	<b>Changes made</b>
001	Appendices	Removed the existing histopathological examination request forms and new forms added.
002 Nov 2019	Content table	Amendment to page numbers.
	3.3.1	Addition of immunohistochemistry, RT-PCR and FISH tests carried out by RNOH
	3.5	Expansion of Quality and Governance section to include sub section 3.5.4 regarding protection of personal information.
003 Sept 2020A	Throughout	Reference to previous names Lab Director changed to new individual
	3.1	Identification of ICH, FISH and RT-PCR tests carried out by RNOH on behalf of RJAH
	3.5	Section split to clearly identify how the dept maintains its quality and governance arrangements via partaking in national external QA schemes and support from other external bodies
	3.5.4	Section added to describe how we maintain the confidentiality of patient information; how it may be disclosed to bona fide third parties and data storage requirements.
004 04 Jan 2023	Throughout	Periodic review of document; Amendments to external Consultants titles
	4.1 & 4.3	Requirements to transport samples and blocks and slides
	4.4	New section on acceptance criteria taken from SOP HW028 Specimen Reception.

The Robert Jones and Agnes Hunt <b>NHS</b> Orthopaedic Hospital NHS Foundation Trust <b>Department of Histopathology</b>		Quality Document	
		MP012	Version 004
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<b>User Manual</b>			

### Appendix 1. Histopathological examination request form – general samples

The Robert Jones and Agnes Hunt <b>NHS</b> Orthopaedic Hospital NHS Foundation Trust <b>Department of Histopathology</b>		Quality document	
		QF033	Version 005
Author	Supriya Kapas	Issue Date	Dec 2022
Approved by	Pat Evans	Review Date	Dec 2024
Responsible Person	Quality Manager	Supersedes Doc	QF033 v4
<b>Histopathological Examination Request form</b>			

Histology Lab ☎ Ext 4148		Histology Laboratory email: <a href="mailto:rjah.histology@nhs.net">rjah.histology@nhs.net</a>	
Lab Ref No.	<b>HISTOPATHOLOGY EXAMINATION REQUEST</b>		
STICK PATIENT IDENTIFIER HERE		Specimen Nature and Source:	
		Clinical Details	
Consultant patient registered with:			
Consultant signature:			
Ward/Location report to be sent to:			
Date sample collected:	Time sample collected:		
<b>BELOW IS FOR LABORATORY USE ONLY</b>			
MDT	Discussion required: Yes / No	Date discussed:	
<b>Specimen Details</b> (Initial and date)	<b>Frozen Tissue Archive</b> (Initial and date)	<b>Processing Details</b> (Initial and date)	<b>Admin. Details</b> (Initial and date)
Date/Time received in Lab:	Date/Time tissue frozen:	Wax Embed:	Data input Tpath:
Dissection by:	No of vials:	Section:	MDT List:
Date/Time:	Box No:	QC:	Medilims:
Decal: EDTA/FORMIC Date:	Position No:	Digital Scan:	Macro:
Processor: SOFT/BONE	By whom:	Extra work:	Procedure:
Date:	Biobank Patient Ref No.		Form scan:

The Robert Jones and Agnes Hunt <b>NHS</b> Orthopaedic Hospital NHS Foundation Trust		Quality Document	
Department of Histopathology		MP012	Version 004
Responsible Person	Quality Manager	Issue Date	January 2023
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Approved by	Pat Evans	Supersedes Doc:	User Manual v003
<b>User Manual</b>			

## Appendix 2. Histopathological examination request form – needle biopsies

The Robert Jones and Agnes Hunt <b>NHS</b> Orthopaedic Hospital NHS Foundation Trust		Quality document	
Department of Histopathology		QF031	Version 004
Responsible Person	Quality Manager	Author	Supriya Kapas
		Issue Date	Dec 2022
		Review Date	Dec 2024
		Supersedes Doc	QF031 v3
<b>Histopathological Examination of Needle Biopsy Request form</b>			

Histology Lab ☎ Ext 4148		Histology Lab email: <a href="mailto:riah.histology@nhs.net">riah.histology@nhs.net</a>	
Lab Ref No.	<b>HISTOPATHOLOGY EXAMINATION REQUEST FOR NEEDLE BIOPSY IMAGE GUIDED OR TRUCUT</b>		
Tick appropriate box:			
CT	<input type="checkbox"/>	US	<input type="checkbox"/>
Clinic	<input type="checkbox"/>	Soft	<input type="checkbox"/>
	<input type="checkbox"/>	Bone	<input type="checkbox"/>
STICK PATIENT IDENTIFIER HERE		Specimen Nature and Source:	
		Clinical Details	
Consultant patient registered with:			
Consultant radiologist performing biopsy:			
Consultant radiologist signature:			
Ward/Location report to be sent to:			
Date sample collected:		Time sample collected:	
<b>BELOW IS FOR LABORATORY USE ONLY</b>			
MDT	Discussion required: Yes / No		Date discussed:
Specimen Details (Initial and date)		Frozen Tissue Archive (Initial and date)	Processing Details (Initial and date)
Date/Time received in Lab:		Date/Time tissue frozen:	Embed:
Dissection by:		No. of cores:	Section:
Date/Time:		Box No:	QC:
Decal: EDTA		Position No:	Digital Scan:
Date:		Date/Time tissue thawed:	Extra work:
Processor: SOFT		By whom:	Form scan:
Date:			

The Robert Jones and Agnes Hunt <b>NHS</b> Orthopaedic Hospital NHS Foundation Trust		Quality Document	
Department of Histopathology		MP012	Version 004
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<b>User Manual</b>			

**Appendix 3. Histopathological examination request form – frozen sections.**

The Robert Jones and Agnes Hunt <b>NHS</b> Orthopaedic Hospital NHS Foundation Trust		Quality document			
Department of Histopathology		QF032		Version 004	
Responsible Person	Quality Manager	Author	Supriya Kapas	Issue Date	Dec 2022
		Approved by	Pat Evans	Review Date	Dec 2024
		Supersedes Doc	QF032 v3		
<b>Histopathological Examination Request form</b>					
Histology Lab ☎ Ext 4148			Histology Lab email: <a href="mailto:rjah.histology@nhs.net">rjah.histology@nhs.net</a>		
Lab Ref No.	<b>HISTOPATHOLOGY EXAMINATION REQUEST FOR: FROZEN SECTION</b>				
Theatre Contact Information:		Theatre no:			
Extension no:		Name of contact:			
STICK PATIENT IDENTIFIER HERE		Specimen Nature and Source:			
		Clinical Details			
Consultant patient registered with:					
Consultant signature:					
Ward/Location report to be sent to:					
Date sample collected:		Time sample collected:			
<b>BELOW IS FOR LABORATORY USE ONLY</b>					
Date/time report emailed to Theatre (initial)		Date/time receipt of report confirmed (initial)			
Specimen Details (Initial and date)	Frozen Tissue Details (Initial and date)	Processing Details (Initial and date)		Admin. Details (Initial and date)	
Date/Time received in Lab:	Date/Time tissue frozen:	Wax Embed:		Data input <del>Path</del> :	
Dissection by:	Frozen section cut by:	Section:		MDT List:	
Date/Time:	QC:	QC:		<del>Medilims</del> :	
Decal: EDTA/FORMIC Date:	Time tissue thawed/fixd:	Digital Scan:		Macro:	
Processor: SOFT/BONE Date:	By whom:			Procedure:	
				Form scan:	