



# Best practice recommendations

## Staffing and workload for cellular pathology departments

**April 2026**

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## Contents

|  |    |
|--|----|
| Foreword.....  | 3  |
| 1 Introduction.....  | 4  |
| 2 Methods .....  | 10 |
| 3 Recommendations .....  | 15 |
| 4 References.....  | 32 |
| Appendix A Notes on job planning.....                              | 33 |
| Appendix B Workload management strategy.....                       | 37 |
| Appendix C Workload points .....                                   | 38 |
| Appendix D Examples of how to score cases .....                    | 66 |
| Appendix E Quality assurance direct clinical care activities ..... | 74 |
| Appendix F Workload distribution examples.....                     | 77 |

## Foreword

Best practice recommendations (BPRs) published by the Royal College of Pathologists should assist pathologists in providing a high standard of care for patients. BPRs are systematically developed statements intended to assist the decisions and approach of practitioners towards patients regarding appropriate actions for specific clinical circumstances. They are based on the best available evidence at the time the document was prepared.

This guidance should be considered in context and requires a holistic approach taking into consideration the circumstances and systems in which cellular pathologists work. Variation will therefore occur in working rates and patterns on a daily basis, as well as contextual factors including working across split sites, covering many specialties, differing staff makeups and varying equipment and IT. Rather than being a rigid set of metrics requiring absolute adherence, this guidance may be considered as offering median workload figures to aid local discussions around pathologists work.

A formal revision cycle for all BPRs takes place every 5 years. The College will ask the authors of the BPR to consider whether the recommendations need to be revised. A review may be required sooner if new developments arise or changes in practice necessitate an update. A full consultation process will be undertaken if major revisions are required. If minor revisions or changes are required, a short note of the proposed changes will be placed on the College website for 2 weeks for members' attention. If members do not object to the changes, a short notice of change will be incorporated into the document, and the full revised version will replace the previous version on the College website.

This BPR has been reviewed by the Professional Guidelines team. It was placed on the College website for consultation with the membership from 28 March to 31 July 2019, where 124 formal comments were received and considered in the development of an updated version of the document. This version was placed on the College website for consultation with the membership from 26 January to 1 March 2024, where 88 formal comments were received and considered. The decision from the Working Group (WG) to publish the document largely unchanged following the most recent consultation was due to the considerable interest among pathologists and the wider NHS organisation in obtaining updated guidance, but each comment received from the membership has been addressed by the authors to the satisfaction of the Clinical Director of Quality and Safety.

This BPR was developed without external funding to the writing group. The College requires the authors of BPRs to provide a list of potential conflicts of interest. These are monitored by the College's Professional Guidelines team and are available on request. The authors of this document have declared that there are no conflicts of interest.

## 1 Introduction

### 1.1 Background

The Specialty Advisory Committee (SAC) for Cellular Pathology set up a WG in April 2016 to revise the Royal College of Pathologists' *Guidance on staffing and workload for histopathology and cytopathology departments*. The WG is chaired by Dr Gareth Rowlands and its members are Dr Desley Neil, Dr Gareth Bryson, Dr Mayuri Basnet, Dr Muhammad Aslam, Dr Marium Khan, Dr Paul Barrett, Dr Richard Carr and Dr Yee Wah Tsang.

The College's Cellular Pathology SAC has had 3 chairs during the review period: Dr Adrian Bateman (current chair), Professor Michael Osborn and Dr Anne Thorpe, all of whom have been in regular communication with the WG. Dr Anne Thorpe also contributed to this resulting document.

Guidelines on staffing and workload were first issued by the Royal College of Pathologists in 1992. This first version used specimen requests as the unit of workload measurement. Subsequent versions have moved towards using specimen complexity as a better measure of workload. As people increasingly work more individualised job plans, it is necessary to try and ensure equitable distribution, by benchmarking the relative values of specimens from different organ systems against each other.

The second edition developed the principle of scoring cases based on complexity and credited additional scores for consultations and ancillary investigations. However, these were applied retrospectively, making it impossible for organisations to plan capacity. The 3rd edition (published in 2012) and 4th edition (published in 2015, with updated ophthalmic workload scores) addressed the issue of retrospective amendments by translocating internal consultations, administration and governance of these cases, into a separate direct clinical care (DCC) session. This was labelled as a quality assurance (QA) session.

These 2 editions have been widely used and have proved useful to pathology departments in facilitating individual job planning and assessing staffing requirements. This 5th edition has been developed to reflect changes in clinical laboratory practice since the publication

of the previous edition. The recommendations in this BPR document should be fully implemented – no aspects should be ‘cherry-picked’ or excluded from working practices. To reflect contemporary terminology, the current document will refer to departments reporting either histopathology and/or cytopathology as ‘cellular pathology’.

During the development of this document, the WG undertook consultation with College fellows. We are grateful to everyone who has assisted in this process, especially the College’s subspecialty advisors, members of the SAC and those who responded to our survey.

The current revision cycle took significantly longer than anticipated. This delay was largely due to the widespread disruption caused by the COVID-19 pandemic and the inherently complex nature of the subject matter, which required extensive consultation to ensure safe and manageable workloads for members. In the interim, the members of the WG, in collaboration with RCPATH representatives, have been piloting the new scoring systems within their own departments to serve as a QA measure to validate the practical applicability of the proposed changes.

This BPR is intended to help departments benchmark their staffing levels relative to their workload, which should be measured in terms of its volume as well as its complexity. This document discusses the main principles underpinning the new recommendations and equitable workload distribution in the context of time-based job plans. The appendices also include workload tables organised by organ system.

Forensic pathology, paediatric pathology and neuropathology are excluded from this BPR, as they are separate specialties within the Specialist Register of the General Medical Council.

Owing to the dynamic nature of this specialty and the rapid pace of technological and diagnostic advancements, this particular document will require more frequent and timely updates than is customary for guidance issued by the College.

It is the intention of the WG to support this ongoing evaluation following publication, where users will be able to provide formal feedback. As with the usual College consultation process, a full consultation process will be undertaken if major revisions are required. If minor revisions or changes are required, a short note of the proposed changes will be placed on the College website for 2 weeks for members’ attention. If members do not object to the changes, a short notice of change will be incorporated into the document and the full revised version will replace the previous version on the College website.

Regular and frequent updates will be essential as new diagnostic tests, evolving dataset requirements and advancements in genomics, molecular pathology, digital pathology and AI continue to reshape the diagnostic landscape.

## **1.2 Aims and objectives of this BPR**

This BPR is intended to:

- ensure a sustainable and high-quality diagnostic service for patients by supporting pathology departments in determining staffing requirements based on their current and future anticipated workload
- facilitate the equitable distribution of work between pathologists within departments by providing a complexity-based weighting system for specimen types
- provide reliable supporting evidence for job planning discussions
- assist service users and commissioners in predicting resource implications of demand changes
- enhance cooperation and collaboration between all relevant parties.

## **1.3 Key points**

- All recommendations in this BPR have been driven by the importance of patient safety and improving equity of work distribution between pathologists, but will only work in an adequately resourced department.
- This BPR introduces a reconfigured points-based system to indicate a long-term average (typically over 12 months) allocation for all specimen types, acknowledging that any individual specimen will often take more or less time than the official allocation (sometimes considerably more or less time), depending on the nature of the case, the structure of the department, the staffing level adequacy and, to an extent, the individual reporting pathologist. This will allow the measurement of each specialty's annual workload requirements. It is clearly not appropriate for histopathology services to operate using rigid daily minimum or maximum point allocations per pathologist. Also, additional work, which is usually at the discretion of the individual reporting pathologist, does not attract additional points, unless it is clearly stated otherwise in the scoring tables.
- The new histopathology and cytology workload 'currency' has been redesigned so that 1 point will equate to 1 minute (average) of measured activity to allow easy merging of

points and time-based activities (such as in specimen dissection and multidisciplinary team [MDT] meetings) for job planning and tracking of flexible weekly activities.

- Allocated times have been designed around the concept of best practice reporting while simultaneously trying to demonstrate appropriate efficiencies, given current constraints.
- The previously recommended QA session, with regard to that related to the primary reporting diagnostic workload, has been removed as a discrete entity; the required time has been incorporated into the workload points and associated recommended work rate. As a backstop position, local decisions to automatically retain a QA session for everyone in the department, for the routine diagnostic workload, should require a proportionate increase in expected work rate per reporting session, unless job planning determines otherwise. There may be valid reasons to include a separate QA component within individual job plans, such as meeting local requirements for general administrative duties or accounting for the workload of a local expert who regularly receives a disproportionate number of cases for second opinions. These situations should be addressed through local discussion as part of the job planning process.
- Macroscopic work should no longer be given workload points, due to the variable roles of trainee pathologists and biomedical scientists in this area. A fixed allocation of time per week is considered a more realistic and efficient approach; alternatively, local workload points could be created to support this area. Time allocated should include any direct supervision as determined by the job planning process, supported by regular local audit. Typically, junior doctors in their ST1 year would generally require full direct supervision of their macroscopic work.
- Workload points should be prospectively allocated according mainly to specimen type and, to a lesser extent, the suspected clinical diagnosis. Retrospective reallocation of points is recommended only in extremely specific and limited circumstances.
- Molecular/genetic-related work is recognised formally for the first time, with workload points given for specific activities; this will clearly be an evolving and increasingly complex area as the speed of new diagnostic tests in this area is unprecedented. The 'new normal' of working within histopathology will require significant collaboration with molecular genomics colleagues. This document is an opportunity for the discipline to build back better, after an extended period of time where there has been no

acknowledgement of molecular genomics in the diagnostic workloads of histopathologists.

- Complexity is reflected in this version through the creation of 12 scoring categories.
- To improve reproducibility between centres, multi-pot cancer resections will often be bundled together as a fixed score, rather than as cumulative scores on a per-pot basis.
- Workload points should be referenced over an absolute minimum of at least 3 months (ideally longer and annualised is best) to facilitate maximum team-based flexibility.
- While departments should use the points rigidly to determine their overall capacity, the points should be used flexibly when distributing work between pathologists on a day-to-day basis. Where workload is allocated prospectively, account should be taken for the effects on workflow-related safety issues and opportunities for training for residents.
- In departments working under optimal conditions, the recommended average work rate for most substantive consultants is 60 points per hour for diagnostic reporting and any associated administration, internal opinions and authorisation of those reports. The College recognises that 90% of pathologists work beyond contracted hours and at least half are faced with excessive workload, insufficient time available for service work and CPD, and poor administrative support.<sup>1</sup>
- To provide the time needed for diagnostic reporting, all departments should aim to undertake appropriate steps, in conjunction with all staff, to minimise any ad-hoc interruptions.
- Individuals will very occasionally receive cases that are extremely time-consuming to report due to their significant complexity, which means the time taken will far exceed their allocated diagnostic points. Local discretion should be applied (and recorded appropriately) in these circumstances if pathologists are unable to complete the agreed points due to a high proportion of difficult, complex and challenging cases.
- Activities other than those involved in the production of diagnostic reports are not specifically covered by this points-based allocation system. These are best timetabled when based on a diary exercise, as using points alone is likely to underestimate the time required.
- Individual job plans should have sufficient detail to specify the mutually agreed duties that will be undertaken by the pathologist on behalf of their employer. There is little to

be gained in making their objectives excessively granular or rigid. Retaining flexibility is key in allowing pathologists to deliver a safe and high-quality service.

This document and the points obtained for individuals should not be used as the sole basis of job planning, as this contractually remains a time-based activity and is best assessed by reference to work diaries. However, combining the work diary with workload points reported over the year could be used to support individual job plans, enabling them to be modified accordingly if required. The points obtained are best used to determine staffing requirements for a department and within each subspecialty. They rely on departments to be appropriately resourced for maximum value.

#### **1.4 Notes on future editions**

In recognition of the rapid developments in molecular and digital pathology – coupled with the impact of other reporting practitioners and AI – it would be sensible to update the workload guidance on a more frequent basis than in the past. This will reduce the lag between changing clinical practice and recommended workload for pathologists.

The WG recommends that regular reviews and updates are carried out to accurately reflect evolving clinical practice. This will enable the WG to respond quickly if specimen types, specimen values and recommended working rates need amending due to changes in practice.

It is the intention of the WG to allow fellows to have an opportunity to give feedback on this document following its publication, after giving an opportunity for everyone to try out the new scores on their own workloads. This will help identify if there are any specimens in particular that require modifications to their points value, or if there are other matters within the document that require attention.

Some specific changes have been made in response to the feedback received in January 2024, and those comments that have not led to changes will form the basis of any review taken after the document's publication. We will also invite additional input from users based on their implementation experience. This combined feedback, as well as continued data monitoring of the points' usage by participants, will inform any necessary refinements to specimen scoring and other aspects of the document at the end of that period. We will do our best to consider all feedback in future editions.

In the event of significant changes to practice occurring nationwide between formal revisions, the WG will meet, discuss and issue an appendix or supplementary document as an interim measure to reflect these issues in the BPR.

## 2 Methods

### 2.1 Basic principles of the 5th edition

The WG identified the following guiding principles and aims as essential for the 5th edition.

- Patient safety should be the main consideration throughout this BPR. The potential dangers of overworked pathologists cannot be over-emphasised.
- The BPR will attempt to reduce inequity between pathologists in how their workload is measured for job-planned sessions.
- Points do not replace the agreed terms and conditions of any contract of employment completing an allocation of points is not automatically synonymous with completing one's job-planned diagnostic sessional objectives, although these should closely align over time.
- Points need to highlight the diverse and complex nature of work, realistically reflecting typical real-life reporting times when measured over the long term.
- Points should be generous enough to accommodate sufficient time to deal with complex scenarios, complete any datasets and follow appropriate guidelines. At the same time, they should facilitate the efficient use of valuable resources when dealing with straightforward cases.
- Points need to capture as much of the microscopy activity as possible to reduce the number of hidden DCC activities that are otherwise unacknowledged.
- Workload points are separate from all other activities that need to be completed and should have no bearing on other job planning matters.
- Workload points are not specifically designed to solve or worsen current staffing issues, although they may highlight relevant issues.

### 2.2 Views of fellows

The WG created new points categories as part of the necessary requirements for scoring complexity. Using their equivalent time values from the 3rd and 4th editions, specimen

types were transferred onto the new matrix and then realigned where necessary, based on the considered complexity level and typical medicolegal risk of each specimen type.

The aim of this exercise was to try and achieve a more linear relationship between the typical time taken and credited workload points, encompassing both the reporting and any QA aspects for each specimen type.

The WG then undertook a pilot study of volunteers to monitor their work activities by time, using the proposed points. There were 112 original expressions of interest from which 74 participants contributed data.

As anticipated, analysis of the pilot data showed significant variation between the time participants spent reporting and their required QA times. There was, however, more uniformity between the results of the individual organ systems, which is indicative of good parallel alignment between the specimens of different systems with equal points values. 124 formal comments were received during the formal consultation period between 29 March and 31 July 2019. All comments were acknowledged and discussed by the WG and some of the changes in this version are as a direct result of the feedback process, including the amended point values and recommended work rate per session, addressing concerns about patient safety.

## 2.3 Matters needing reform for the 5th edition

Table 1 contains information about the issues identified with the 3rd and 4th editions, as well as the recommended changes and rationale for these.

**Table 1: Matters needing reform for the 5th edition.**

| <b>Subject</b>  | <b>Issue</b>  | <b>Recommended change</b>                                    | <b>Rationale for change</b>  |
|---|---|--|--|
| QA sessions: variable acknowledgement by departments      | Inequity between pathologists                               | Removal of QA session  | Integrating this time into specimen scores will result in all pathologists getting QA time |
| Number of points categories: too few for some departments | Inadequate representation of specimen complexity            | Increasing the number of points categories from 6 to 12      | Greater flexibility in scoring specimens   |
| Relative values of point categories: graded increments    | Distorts alignment between points done and real time taken; | Modify points values and the incremental change between them | Better alignment with real time taken  |

|  |   |  |   |
|--|---|--|---|
| between values are too wide  | masks true resource requirements  |  |   |
| Macroscopic points set too high compared with the equivalent microscopy points   | Work increasingly performed by others but no guidance regarding supervision; creates inequality between pathologists, depending on cut-up commitments and retention of macroscopic points | Macroscopic (cut-up) scores to be abandoned in favour of a time-based approach covering direct cut-up activities and the supervision of cut-up work by others                                      | Requires direct interaction with other staff working at fixed times and supervising other professionals; more appropriate to job plan and regularly audit locally |
| Multi-pot cancer resections: local surgical practice could influence case points   | Lack of reproducibility and efficiency in scoring multi-pot resection cases   | Bundling cancer resections as single packaged scores rather than the cumulative sum of all specimens in request  | Improve reproducibility between centres; less dependent on local surgical practice; more efficient use of resources   |
| Integrated molecular and biomarker reports: no credit for authorising results of additional tests conducted for specific cases or reporting biomarker work | 'Creep up' of hidden time-based activities that create additional pressures on pathologists   | Points to be given for the integration of molecular results performed elsewhere, as well as for specific immunohistochemical /molecular tests reported in-house                                    | Specific additional molecular work requires appropriate time to be credited in the diagnostic job plans of pathologists   |
| Expert referral consultations: often no credit has been given for receiving these cases in the job plans of pathologists                                   | Unless job planned, 'hidden' time-based activities place additional pressures on pathologists   | Recommendation of full case scores (primary reporting score) and an additional 24 points administrative tariff, if not remunerated in some other manner  | Acknowledge all diagnostic work, whatever its source, on the proviso that there is no double scoring for any of these cases                                       |
| Cases which follow the patient and are requested to be re-reported by clinicians, e.g. from places that they do satellite clinics                          | Variable how departments deal with this workload – often hidden work  | This specimen type to be given the same as standard in-house case of the same type without the additional administrative tariff that an external consultant to consultant expert referral receives | This specimen is 'standard' work and requires reporting in the usual manner   |

|   |  |  |   |
|---|--|--|---|
| Cases for MDT review that may or may not require full re-reporting  | Variable how departments deal with this workload – often hidden work   | Best done by work diary exercise and incorporated into MDT time  | Considered the best way to capture the time involved  |
| Missing specimens: specimens not scored in 3rd and 4th editions, due to their rarity in clinical practice at that time  | Could end up being inappropriately grouped with other specimens that are superficially similar in nature   | Add new specimen types into the list of specimens for each organ system  | Better reflects the nature of work that has emerged in clinical practice since the last edition |
| Frozen sections   | The reporting time for the paraffin section not included in the last guidance  | All frozen sections get given standard 40 points per episode, including the macro time; additionally, they need the standard points that the specimen would have had for reporting the subsequent paraffin sections +/- special stains and other ancillary investigations              | Capture hidden work   |
| Urgent specimens requiring same-day initial reporting and transmissions of results to clinicians (mainly involving transplant specimens, as well as some others such as medical liver and renal biopsies) | Specimens requiring immediate (within hours) provisional reports for clinicians, prior to the pre-requested usual ancillary investigations being undertaken, have never had this initial first immediate step credited as additional work, on top of the standard reporting of this case | 24 points should be provided to the pathologist who makes this first immediate urgent report to the clinicians; full subsequent reporting of the case should be given the standard points for the case; this does not refer to urgent cases sent as part of the cancer pathway process | Capture hidden work in these highly specialised areas   |
| MDT: Multidisciplinary team; QA: Quality assurance.   |  |  |   |

The WG identified additional recommended changes to the 4th edition of this document, as listed in Table 2.

**Table 2: Additional recommended changes in 5th edition of guidance.**

| <b>Recommended change</b>  | <b>Rationale for change</b>   |
|--|---|
| Redistribution between 'low-risk, low-complexity but heavy volume' and 'high-risk, high-complexity but low volume' specimens | Better reflects 'real time' and allows pathologists to receive allocated time that best suits their individualised case mix                                   |
| Expand the grouped tiers of biopsies, mainly in gastrointestinal and prostatic specimens                                     | Reduce the impact of 'cliff edge' cut-offs of biopsy groups   |
| Variable recommended reporting rates based on specific individual and departmental circumstances                             | Reduced work rates recommended when circumstances impede efficient working practices; higher work rates when receiving skewed 'non-urgent, less complex' work |

## **2.4 Clarification of guidelines on staffing and workload limiting the workload of pathologists**

In January 2018, a document published by the Royal College of Pathologists aimed to clarify how the 4th edition of the workload document was being applied by some individuals and departments in unintended ways.<sup>2</sup>

The WG fully supports the published statement and would reiterate that working additional points in each session is not considered unsafe by default, provided that there is contracted time remaining in people's diagnostic sessions. This will depend on individual circumstances and other aspects of their job plans.

In endorsing the mentioned clarification, the WG would like to emphasise:

- workload points were not intended to be used rigidly as a maximum daily cap
- daily or weekly fixed minimum or maximum points or case numbers are not appropriate
- variations in daily or weekly specimen complexity and case mix will alter the number of points achievable in a given time, although these should average out over the long term
- workload points are not a direct substitute for fulfilling a time-based contract
- points need to be used in the most efficient manner to support meaningful productivity

- annualised points allow for a robust departmental assessment of capacity against demand
- intrinsic natural variation in reporting speed between pathologists should be acknowledged by pathologists and managers
- flexible use of workload points assists team working and efficient practice considerably
- patient safety and covering urgent work during contracted times should never be compromised as a result of an individual having already completed a daily tariff of points
- points should never be used to force work on individuals when it is clearly unsafe to do so or lies outside of their contractual obligations (except in the setting of true clinical emergencies).

## 3 Recommendations

### 3.1 Proposed approach to workload units

Workload points are primarily allocated based on specimen type. Further refinement of the points for a subgroup of specimens will be required due to their nature, based on the additional clinical information provided by the requesting clinician.

Workload points should be scored independently from pathologists – ideally by clerical or laboratory staff – at the time of booking-in, cut-up or at checkout stages.

Cases should not as a matter of principle (unless otherwise specified) be rescored retrospectively based on routine additional work having been performed (such as immunohistochemistry [IHC]), or a second opinion on the case being sought from a colleague. Additional points for choosing to undertake additional work (which is by its very nature often subjective) would prevent reproducibility between pathologists, reduce the efficiency of departments and make it impossible to plan resources. Prospective scoring ensures a more transparent, credible and equitable approach.

Despite its undesirability, retrospective amendments of points may be needed in limited and specific circumstances, to ensure pathologists are given appropriate credit for additional work they have carried out, which has not been accounted for in the standard points allocation for the specimen. Integrating highly specialist external molecular testing or reporting biomarking-related work will be the most likely scenarios requiring the need for

such amendments. This is discussed further in section 3.5 with reference to molecular/biomarker workload. An alternative way to capture this could be to calculate the total additional points that have been worked over the year. These additional points could then be converted into clinical sessions on the job plan.

Mis-scored cases (inputting the wrong score for the specimen type/incorrect booking-in of specimen type) is 1 significant type of error that can have quite a profound effect on the credited workload points, which is often done at the time of booking-in or at cut-up. The reporting pathologist should inform the laboratory when such a discrepancy is identified for the workload scores to be amended. Regular training of staff in scoring specimens, alongside regular audit and feedback, is recommended. Errors in common specimens are far more significant in their consequences than errors in rarer specimens, in terms of assessing whole departmental workloads.

Clinical activities that are either done on an irregular basis or are not covered in the workload tables of this document are best recorded in a work diary to get an accurate representation of the time taken. This time could either then be converted into equivalent workload points or added on an individual's annual job plan, depending on which is easier to accommodate in a department. Matters such as selecting blocks and slides from historical cases for molecular testing and estimating the percentage of tumour volume on a slide might be such examples where a work diary estimation or a record of the annual number of cases would be recommended.

Please note that although this document is primarily aimed at consultant histopathologists and cytopathologists, there is no conceivable reason as to why the workload points cannot be utilised by other professionals who are involved in the diagnostic workload; these may include junior doctors in Histopathology Specialty Training Programmes (during Stage D), specialty and associate specialist (SAS) doctors/locally employed doctors and reporting biomedical scientists. However, the context of their posts and responsibilities, case mix and how much of their work requires formal checking needs to be taken into consideration when determining the number of diagnostic sessions they should report, as well as the recommended working rate per session; it is likely that this will be less than the recommended working rate for consultants, but this will need to be determined on an individual case-by-case situation.

### 3.2 Workload scheme

To facilitate a simplified approach to measuring workload, the new 'currency' for histopathology and cytopathology workload will be that 1 point equates to 1 minute (average) of measured activity over the long-term 'real time'.

12 scoring categories are proposed. Table 3 shows the points categories, as well as their relative time allocations, calculated at 60 points per hour, including QA/additional time requirements, e.g. administration time for reporting these cases.

This is a change to the original draft, in response to the formal comments, where 12 categories were proposed, with lower value point values and a working rate of 50 points per hour.

**Table 3: Time value of each points category.**

| <b>Points category</b> | <b>Time allocation @ 60 points per hour (including all QA related to the cases). Standard rate for appropriately resourced departments</b> |
|------------------------|--|
| 3 points               | 3 minutes  |
| 6 points               | 6 minutes  |
| 8 points               | 8 minutes  |
| 12 points              | 12 minutes   |
| 16 points              | 16 minutes   |
| 24 points              | 24 minutes   |
| 40 points              | 40 minutes   |
| 60 points              | 60 minutes   |
| 80 points              | 80 minutes   |
| 100 points             | 100 minutes  |
| 120 points             | 120 minutes  |
| 160 points             | 160 minutes  |

The categories in Table 3 were chosen to more accurately reflect the time involved in reporting all specimen types, including all the standard associated 'hidden extras' (see Appendix F).

The WG feels that, if the specimens have been scored correctly, the time taken to report and authorise the most straightforward cases for pathologists should be less than the actual points allocated. This should generate a sufficient cumulative of surplus time to deal

with cases that require additional work, as well as reporting more challenging and often contentious cases. This is an important principle that can be often misunderstood by those assessing the workloads in histopathology and cytopathology; in other words, not all cases of the specimen type are of equal value and, in practice, a minority of cases often take up most of the required reporting time.

Point increments are judged to be approximately linear to time, such that doubling the points values should equate to the average expected reporting time taking twice as long for those points.

The QA DCC time in previous editions has been incorporated within these points to render them more equitable. It will, therefore, no longer be needed as a separate entity within job plans for completing routine diagnostic reporting sessions, assuming all other aspects of the document and recommendations have been incorporated.

Departments that still wish to retain a separate QA DCC for the purpose of their local job planning process for reporting of these cases, without adequate justification, would therefore be required to increase the recommended working rate proportionately for the remaining diagnostic sessions of substantive consultants to allow the QA DCC session to be incorporated. This is a necessary backstop measure to ensure that the principle of reducing inequality between the time pathologists are given for different specimen types is adhered to (see Appendix E for more details on this requirement and how it can be calculated).

This does not necessarily indicate that no specific additional sessions for DCC-related activities cannot ever be given to the DCC part of any individual's job plan, but rather that the principle of this document is that they should not be automatically given to all pathologists by default, but on a more individual basis; this will completely depend on the nature of the work, experience and responsibilities of individual pathologists, including the volume of secondary and tertiary internal consultations that they may receive from others.

It will also depend on issues such as whether they are expected to report a higher proportion of complex cases within their workload compared with their usual case mix, due to persisting staff vacancies and their low-risk routine cases being outsourced elsewhere for reporting. Vacancies and outsourcing of low-risk specimens usually result in more need for internal consultation times – this needs to be reflected in the job plan by measures such as additional DCC QA time for these internal opinions.

Other reasons for individuals retaining a QA-related time could include if, temporarily, additional training is required for a period of time to report new specimen types or adjust to new forms of technology. Diary exercises and job planning meetings should assist with all these issues. Another reason could potentially be insufficient supporting professional activities (SPA) time to undertake expected non-clinical duties, coupled with a disproportionate amount of DCC reporting expectations, matched by diary-based evidence.

Any considerable regular or ad hoc time required to deal with general laboratory or departmental issues, that is not covered by other aspects of an individual's job plan (such as being head of service), is not DCC activity and should be provided elsewhere in the job plan. DCC-related work is about dealing with named individual or groups of patients.

### **3.3 Number of point categories**

The WG fully recognises that increasing the number of point categories from 6 to 12 potentially adds an additional layer of complexity to the system, which could be of concern to some pathologists and laboratory staff. However, increasing the number of point categories should allow for much greater flexibility in determining where to place specimen types. This will make it easier to futureproof the complete system as further clinical and workforce developments occur.

Having a greater number of point categories allows for better subdivision of specimen types, where appropriate splitting of specimen types into degrees of complexity is deemed sensible. Eliminating standardised macroscopy points and introducing bundled cancer resection specimen fixed scores should further assist in reducing the overall time taken to score cases.

### **3.4 Workload units**

#### **3.4.1 Macroscopy**

The consensus of the WG is to not use workload points for macroscopic examination, as such activity is becoming increasingly difficult to assess reliably using a single score. Such scoring will become less and less representative of consultant input into this activity. The use of biomedical staff and junior doctors in undertaking macroscopic work varies tremendously across departments in the UK but is expected to further increase over time to release consultant time for other activities.

Providing representative guidelines on how to fairly allocate points when dealing with supervised macroscopic work is challenging, as requirements will vary depending on levels

of seniority and the experience of the cut-up practitioner. Data from the pilot study indicated that most departments that utilise microscopic workload points do not use the macroscopic elements of this activity, instead preferring a time-based approach related to the job planning process. Macroscopic assessment is thus best recorded by a regular work diary exercise over a representative time period, including supervision time, which if preferable could then be converted into workload points in the job plan.

Supervision time refers specifically to time directly spent 'at the bench' with another practitioner, rather than nominal supervision from a distance. Time spent on obtaining tissue bank specimens could either be included here or timed separately as part of SPA time, depending on local agreement.

### **3.4.2 Microscopy**

Workload points will be given to the reporting of specimens. This typically includes:

- receiving the slides and request form
- checking and matching microscopy slides with the request form
- checking specimen type and number of slides
- microscopy assessment
- requesting any ancillary investigations
- reviewing any previous relevant histology reports/slides
- writing/dictating a report
- checking and authorising a report
- completing relevant datasets and/or tissue pathways.

Any required additional DCC activities, including seeking out further opinions within the department, are included within this time (see Appendix E).

Very occasionally, there will be overly complex and challenging resection-type cases, especially in highly specialist units, the reporting of which will require a significant amount of time. These fall outside the recommendations provided in this document. Although it is sensible to count the workload points on these cases as like any other specimen, it would also be prudent to record the amount of additional time it took to complete, compared with more usual specimens.

If, for certain specimen types, the local practice of surgeons/radiologists demands significantly more routine reporting work than would be expected by the published datasets or tissue pathways, the WG accepts that a local variation in scoring may need to be made to facilitate that practice. Robust audit data must be provided as evidence of the time required to produce the additional information.

Additional work that is related to specific research-directed funded projects should not be included in the above, but instead identified as required time in the individual's SPA sessions (rather than DCC activity).

Whenever such local variations in points are deemed necessary, it is always recommended that pathology departments take the opportunity to discuss with clinical colleagues the clinical benefits of undertaking this additional work and ensure that any changes to point allocations are audited.

Local discretion should also be applied as new tests evolve between revised editions of this BPR. When such tests are added to the scoring categories for local use, they must be based on data detailing the average time that such new activities typically require. The WG should at the same time be notified of the new activities so that they can be subsequently incorporated into future editions.

A notable change has been made to the way complex resection specimens are scored. In the 3rd and 4th editions, multiple-pot specimen requests were often added up separately, with each specimen pot receiving an individual score to generate a single combined score for the whole request. While this often appeared simple to apply, equity between pathologists was lacking as similar cases could receive different scores based on how the specimens had been sent to the laboratory, irrespective of the time taken to report the cases. It is also an inefficient method to utilise resources, as less overall administration is often required when multiple specimens are sent within the same request.

The WG feels that the best way to score many of the complex resection cases would be to allocate a fixed score for specific specimen types, irrespective of how they are delivered within the request. For example, in this edition, a hysterectomy for endometrial cancer scores 60 points, while a hysterectomy with accompanying bilateral pelvic lymph node dissection and omental biopsy would score 100 points. This change should make it easier to score specimens at reception.

The biopsy grouping ranges for other specimen types (mainly biopsy-type work) have been expanded from the previous edition to reflect the increasing complexity of work. While time

savings are often generated as the number of biopsy pots increase, if the range of specimen pots for the same score is too wide, then the principle of equity diminishes.

Aspects of any individual's DCC workload that are not, or cannot be, covered by workload points or are irregular and difficult to numerically quantify, needs recording in a work diary, over the long-term, which should then be converted to either specific sessional time on one's job plan or annualised workload points based on the time involved in these activities.

### **3.5 Molecular/biomarker workload**

There has been a tremendous amount of growth, since the last edition, in the development and use of molecular-based tests in histopathology and cytopathology specimens for diagnostic, prognostic and predictive decision-making. This edition attempts to start quantifying the workload for pathologists using workload points in specific circumstances. This will assist in gradually reducing the hidden effect of tests where there has been an unacknowledged 'creep-up' of additional tasks since the previous edition. It will require refinement as we undertake increasingly more of these investigations, almost certainly growing at an exponential rate.

This type of work may be delivered in a number of potential ways, each with differing implications for time taken by individual pathologists, dependent on which member of staff does the actual test, who generates a test result and who integrates the test into the original report, to provide a clinical meaningful interpretation, assisting in patient management.

The most commonly encountered scenarios are detailed below (other scenarios could also exist).

1. A designated 'molecular' pathologist who supervises laboratory-based biomarker/molecular reporting done by biomedical scientists/clinical scientists.
2. A designated 'molecular' pathologist who reports the biomarker/molecular tests on behalf of colleagues, from their own and often other departments, as part of a centralised regionalised service provision; these 'molecular' pathologists will generally not be involved with the reporting of those individual cases.
3. The pathologist who requests the original biomarker/molecular tests reports them directly on their own cases.

Once the test has been interpreted, it requires integrating the result into the original diagnostic report to complete the case. This should ideally be done by the original

pathologist who requested the test, as they are most familiar with the intricacies of the case. They will have knowledge of relevant clinical information, histological findings and immunohistochemical results, which will assist in providing a clinically relevant interpretation to assist in patient management.

In scenarios 1 and 2, the test results will usually be returned to the original pathologist, who will then integrate and interpret the results appropriately into the primary reports, often as supplementary reports. In scenario 3, the pathologist who requests the tests will interpret and then input the results directly into their own diagnostic reports.

Scenario 1 work is best done by a diary-based exercise to determine the average time required for the supervisory role and then incorporated into the job plan of the 'molecular' pathologist.

In scenario 2, the reporting work of the 'molecular' pathologist could be captured if desired as workload points, for those specifically named tests in this document, which could be converted into equivalent sessional commitments at job planning meetings.

In scenario 3, the workload of reporting the diagnostic cases has been incorporated into the points system within this document; this is either directly within the standard specimen points (for example, if the testing is routinely undertaken as part of reflex testing process for those specimens) or as additional points (where it is more of an ad hoc/not routine event for that specimen). The ad-hoc molecular reporting points can either be allocated retrospectively on a case-by-case basis or by an annual calculation, subsequently converted into sessional time at job planning meetings, dependent on which is logistically easier to facilitate.

Whatever the scenario, it is vital that the additional time that is taken for these additional investigations are captured by a reliable and auditable measure. The WG expects this component of workload to expand exponentially over the next decade; thus, this section will inevitably require regular updates regarding how tests are scored.

### **3.6 Expert referral consultations**

Another source of often hidden activities has been the formal direct referral of complex cases for an opinion outside the referring pathologist's department, NHS trust or health board. Historically, this activity has often not been formally recognised in the job plans of pathologists receiving these cases, which leads to additional pressures on their own local workloads.

This BPR suggests that, in the absence of mutually agreed specific job-planned time, cases within the NHS received for external consultation that are sent directly from another pathologist in another department should receive:

- full reporting points for that case, equivalent to that received for primary reporting of the case. This should also include those cases sent as part of the process of patients being referred to and reviewed at another hospital via the clinicians' specific requests, requiring (re)-reporting of the specimen by pathologists at a tertiary referral centre
- for pathologist-to-pathologist direct referral cases, an additional 24 points should be allocated for the administration time required to deal with such cases (including all the required additional communication with the referring pathologist).

Cases reviewed as part of any MDT-derived process, rather than a direct referral for an opinion, should not be included in this category, as the required resources for these cases should be separately job planned.

Pathologists receiving opinions back from cases they had sent away to another pathologist should not give themselves additional points for integrating these opinions into their own reports.

### **3.7 Case mix**

Many more pathologists are now receiving a skewed case mix, compared with when past versions of this document were written. This occurs for a multitude of reasons, including:

- increasing subspecialisation within departments
- reconfiguration of cancer services
- cancer target pathways
- consultant vacancies
- laboratory staffing shortfall
- increased demand.

The above factors have resulted in many pathologists encountering a reduced variety of cases. This frequently results in an inability to average out the points, which usually occurs when reporting a mixture of quicker and slower cases within same points category. This has the potential to skew the points, so that the time taken is significantly overestimated or underestimated. The proposed increased number of specimen categories should reduce

this problem by giving pathologists the ability to split cases by expected specimen complexity. While the intention is to minimise the influence case mix has on overall points, this must still be considered if any individual's long-term work rate is felt to be lower than expected.

It should also be noted that, in an RCPATH histopathology workforce survey, 97% of all departments reported that staffing levels were inadequate to meet demand and were using at least 1 specific method to deal with excess capacity. These included additional sessions, overtime, waiting list initiatives, outsourcing work and the use of locums.<sup>3</sup>

This has led to uneven distribution of work in many departments with many having to triage specimens. This has also resulted in a disproportionate amount of complex and urgent cases being dealt with by the substantives in the department, while more routine cases are reported by locums or external services.

### 3.8 Recommended work rates

Table 4 contains the recommended work rates and time equivalents for various posts within the NHS.

**Table 4: Recommended work rates.**

|   | <b>Recommended work rate (long term)</b>                              | <b>Time equivalent for 1 RCPATH point (with QA)</b> |
|---|---|---|
| Substantive consultant post (adequately resourced departments)          | 60 points per hour  | 1.00 minutes  |
| First year as substantive NHS consultant (after completion of training) | 50 points per hour (assuming departmental rate at 60 points per hour) | 1.20 minutes  |
| Substantive consultant post (inadequately resourced departments)        | Likely lower work rate for long-term average<br>Diary exercises       | Depending on group diary exercises                  |

An average long-term reporting rate of 60 points per hour of diagnostic microscopy should be achievable for most substantive consultants under optimal circumstances over a long-term period (such as 3, 6 or 12 months). There will inevitably be fluctuations on a day-to-day basis, where more or fewer points will be able to be completed in the allocated time, depending on the nature of the cases and other circumstances. This working rate should

be used as a basis for managers to calculate the resource requirements of their departments and benchmark workloads between units.

It should be emphasised that safeguards must be in place to ensure that pathologists are not expected to spend all their diagnostic sessions reporting cases at an intensive rate. The reality is that extended periods of uninterrupted reporting are rare and there is an unavoidable 'overhead' of smaller activities that need to be carried out during a DCC programmed activity (PA).

The physical strain of microscopy on pathologists must also be considered. Neck and back problems are potential afflictions in this respect, so periods of intense concentration should be separated by regular breaks or less intense types of work. Departments should ensure that they are able to provide a quiet and calm environment for pathologists to undertake diagnostic reporting work. This is essential to minimise the potential for errors and to maximise efficiency and productivity.

For departments that are working under less-than-optimal conditions, the suggested long-term recommended work rate may be difficult to achieve due to inadequate clinical, technical and clerical staffing. A lack of appropriate support will inevitably reduce what can be achieved by pathologists in terms of their diagnostic work. Group diary exercises are strongly recommended to assess the impact on the ability of pathologists to complete their diagnostic workload; depending on the results, this may indicate a need for a lower departmental work rate following discussion at appropriate job planning/departmental meetings.

Conversely, there are also opportunities for potentially higher working rates to be achieved if departments produce innovative ways of working that could potentially improve productivity. They could involve novel ways of working, including how they utilise their clerical/secretarial and laboratory staff, potential for pre-screening and triaging cases, as well as the use of technological assistance, such as AI and other IT solutions. Group diary exercise should be taken to determine the appropriate work rate.

The suggested recommended work rates in Table 4 are contingent on there being no separate generic QA session allocated in the job plans of individuals for administration work needed on their own diagnostic cases (as this has already been integrated into the points).

It is conceivable that all DCC activities could be converted into equivalent points by agreement. The use of a 'common currency' across all departmental activities is often beneficial for flexible team working and enhancing efficiency.

SPA activities are best timetabled separately, if possible, as each individual and each department has different requirements for the activities undertaken (for example, undertaking CPD, service development and research activities, and participating in EQA schemes).

While this BPR has attempted to separate the nature of the work in terms of the expected complexity levels, it is inevitable there will be a persisting intrinsic natural variation in deliverable reporting rates. Individuals and managers will need to balance out, in a pragmatic manner, the completion of a specified amount of workload points over the year against their contracted time.

It should be emphasised that these workload points should not be used as a form of minimum or maximum targets that pathologists are mandated to reach within a certain amount of time, but rather a form of trading currency that can be used to distribute workloads more equitably within departments, given that increasingly pathologists report on a smaller number of organ systems than in the past. Time is the true currency of what is contracted. The points are also useful to calculate the workload of each specialty in the department.

Pathologists who find it challenging to complete their workload points within their diagnostic sessions over a lengthy period of time should request a discussion with their line manager to establish whether this is due to the nature of the work (for example, case mix or specific organ system matters) or specific local issues (for example, job plan split or the impact of vacancies) that need to be addressed to improve concordance.

Other pathologists will inevitably work significantly faster than their peers, given the nature of the work received. It should be noted that the quality of reports was not assessed as part of the pilot study on work rates. Assuming that working at a faster rate does not lead to any loss of quality in the work, it might be reasonable to expect them to undertake additional reporting, or other appropriate duties within their departments, within their remaining contracted time.

Co-reporting with junior doctors or other healthcare professionals will require additional time to be factored in, as individuals will need to undertake reporting and training duties.

This additional time should either be specified in the job plan or there should be an equivalent reduction in the work rate.

The WG feels that there should be a reduction in the departmental work rate for all substantive consultants during their first year of working in the NHS after completing their training programmes; this will facilitate an adequate transitional phase to working as a substantive consultant. Reporting work at an average rate of 50 points/hour (rather than the general recommended rate of 60 points/hour) might be considered reasonable during this first year as a substantive consultant.

These recommendations are not intended to be used as a 'fee per case' system of payment.

### **3.9 Calculating the annual workload of departments**

The best way to calculate the required staff numbers is to determine the sum of all required activities, using their PA values and/or convert all workload points into equivalent PAs. This provides the annual PAs needed for the department to fulfil all required obligations (for example, macroscopy, reporting, teaching, MDT meetings, management, etc.).

Based on the suggested recommended work rate in well-resourced departments:

*1 PA = 240 points for substantive posts (225 in Wales, with 3.75-hour PAs)*

When assessing an entire department's annual workload against the required medical staffing, the working year of each consultant should be considered to be 40 weeks. This is made up of a combination of annual leave, study leave, bank holidays, professional leave, short-term sickness/compassionate leave and any remaining statutory days.

An individual consultant may work more or fewer weeks than this, depending on individual circumstances and what has been agreed with their line manager (for example, additional professional leave for specific wider duties in the NHS, or long-term sickness leave). Most individuals, in the absence of sickness or any professional leave, would typically work 42 weeks within a year (as opposed to the departmental staffing calculations of 40 weeks). The following calculation can be used to identify the average weekly shortfall within the department for reporting cases. This can then be used to identify how many consultant sessions need to be filled, either internally, externally or by advertising new posts.

*Weekly number of DCCs for reporting x 40 = Annual capacity PA reporting DCCs*

*Annual DEPARTMENTAL WORKLOAD in points / 240 = Annual DEPARTMENTAL WORKLOAD in PA DCCs*

*Annual DEPARTMENTAL WORKLOAD in PA – Annual capacity in PA = Demand – capacity mismatch in PAs*

### **3.9.1 Individualised recommended workload points**

The expected annual workload points for a pathologist will depend on how much leave they take within their year. Typically, this would result in 42 working weeks per year, but there will be individual variation, on a year-by-year basis, based on what leave is taken for the individual and when. For example, if there are 6 DCC PAs for reporting per week in the job plan and the individual worked 42 weeks in the year:

*6 x 42 = 252 PAs typically per year = 252 x 240 = 60,480 workload points per year (if no professional or sick leave has been taken by that individual)*

*6 X 40 = 240 PAs typically per year = 240 x 240 = 57,600 workload points per year (if 2 weeks of professional or sick leave has been taken by that individual)*

6 PAs per week is an average of 1,440 points per full week (assuming no leave), although this is purely a guide for a long reference period (minimum 3 months recommended, if not a year).

Individual weeks are likely to generate fewer or more workload points, depending on other work commitments and job plans and the actual complexity of individual cases in that week, as well as adjusting for other staff on leave and maintaining service provision.

## **3.10 Post-mortem examinations**

### **3.10.1 Consented post-mortem examinations**

Consented hospital post-mortem examinations now account for a small proportion of the workload of most departments. This makes it difficult for the WG to provide recommended workload scores. Nevertheless, they must be accounted for adequately in job planning.

### **3.10.2 Coroners' post-mortem examinations**

Work for the coroner does not constitute work for the NHS, although most coronial autopsies are currently undertaken by NHS pathologists on NHS premises. This workload is outside the scope of this BPR. The contractual arrangements for coronial work vary

across the UK. Such work may be performed outside of NHS contracted hours using time-shifting, or it may be considered, at least in part, as NHS work because of the benefits it brings to the NHS (e.g. teaching and training, feedback to clinical teams, audit and income to the trust from the coroner for use of the mortuary). The individual contractual arrangement should be clearly described in the job plan.

### **3.10.3 Other types of post-mortem specimens**

Changes in work practices (for example, the introduction of inherited cardiac condition clinics) have resulted in a new work category of reviewing and discussing old post-mortem reports with clinicians, which involves reviewing the slides and conducting additional stains as appropriate. Due to an emphasis on understanding unexplained cardiac death in the young, pathologists are encouraged to refer post-mortem hearts for specialist opinions.

These cases frequently get booked under post-mortem tissue categories and may not be included in standard work data. Any work of this type is best considered under the heading of post-mortem tissue and the time involved determined by a work diary exercise. This work may be quite sporadic, so an extended period of work diary assessment is likely to be required. It is likely, with a predicted increase in genetic type workload, that for inherited conditions this type of review will increase and specific workload points may therefore need to be created in future editions.<sup>4</sup>

## **3.11 Developing services for the digital era**

Over the coming years, pathology services in the NHS will undergo a significant transformation in terms of how they function, given the increasing use of digital pathology and other emerging technologies, such as AI. While these new tools will enhance how we deliver patient care over the medium to long term, it is important to recognise that an initial investment of time will need to be spent by staff in training and educating both themselves and others to utilise these technologies.

Pathologists will need to provide the same accurate and safe diagnosis using digital technology as has traditionally been provided using light microscopy. Audit and validation of such technologies will be required to ensure there is no loss of quality and no increased risk of patient harm. Most pathologists will need a slightly lower work rate at the very beginning of the training process; it is considered important for commissioners and managers to allow added initial investment of pathologists' time for such training and validation. Anecdotal evidence suggests that significantly improved productivity may be

possible in the medium term, which, if confirmed by future studies, would justify recommending higher working rates in future editions of this BPR.

## 4 References

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## Appendix A      Notes on job planning

### Programmed activities and timetabling

The 4th edition of this document indicated that the average expected workload should be expressed per DCC PA for consultants employed under the terms and conditions of service, as stipulated in the Consultant Contract (2003). We continue to endorse this recommendation.

Every consultant should have a job plan detailing how many PAs are contracted for DCC, SPA, additional NHS responsibilities and external duties (where applicable). The standard whole-time contract is for 10 PAs per working week, of which 7.5 are for DCC and 2.5 are for SPA, although there appears to be increasing deviation from this standard in many organisations, which may require an appropriate adjustment to average working rates, following job planning meetings and review of work diaries. Some consultants work part time; others are contracted for extra PAs. Consultants in university departments with research and/or teaching duties may undertake additional SPA or external sessions.

Maintaining a running total of individual workload data across a department will provide robust information on the time needed for diagnostic reporting. This will enable an appropriate number of DCC PAs to be contracted for each consultant in the department. If workload data also includes information from each organ system as work is booked into the laboratory, this will allow a robust assessment of capacity and identify where the true demand–deficit lies within an increasingly subspecialist environment.

Strict timetabling of diagnostic reporting is usually an artificial exercise, and largely unnecessary, since histopathology is a reactive specialty. One cannot, for example, predict when there will be a request to undertake a frozen section or a post-mortem examination, or when clinical colleagues may wish to discuss a case. Additionally, it is not possible to reliably predict how much diagnostic work can be conducted daily.

Workload points for distributing cases to individuals work best when the whole job plan reflects accurately all the work the individual undertakes on behalf of their employer and their department. Proportional distribution of matters, such as the number of MDT meetings and expected macroscopy work based on overall job planned sessions, results in improved harmonisation between the diagnostic work volumes using workload points and the diagnostic DCC sessions.

Many core DCC and SPA activities (such as triaging, validating antibodies, selecting control material, etc.) are not usually timetabled, as they are dependent on which consultant is available. The time assigned to such activities should be averaged over the course of the year. Histopathologists do not normally experience a PA consisting entirely of 'pure' uninterrupted reporting in the way that a surgeon might spend 4 hours in the operating theatre; however, an average number of PAs assigned to diagnostic reporting should be worked over the week.

Direct timetabling is simpler for other DCC activities, such as fine-needle aspiration clinics and MDTs, which are regular and predictable. The average time that each MDT takes for preparation, attendance and follow-up activities is easy to ascertain and can be entered directly into the timetable.

While some activities can be easily classified as DCC (tasks involving named individual patients) or SPA (teaching, continuing professional development, audit or management issues), it may be more challenging to classify other tasks within a binary system. There are tasks that are deemed core activities that may indirectly involve 1 or many patients. Examples include validating antibodies, selecting control material and matters related to hospital ('consent') autopsies. The WG feels that where job plans deviate from the agreed national terms and conditions of service, it would be more suitable for such hybrid activities to be better classified as DCC rather than SPA, in order to retain SPA time for activities such as CPD and participating in external QA schemes.

Although the workload points have been created specifically for the microscopic reporting activities involved in DCC sessions, it would be perfectly feasible to view workload points as a 'common currency' for measuring all activities in a job plan, where 1 point equates to 1 minute (average) of long-term real time. Once the sessional commitment has been agreed, time-based activities could be converted into workload points for consultants to facilitate flexible and efficient working practices. Examples where this works in practice includes the preparation and delivery of MDT meetings.

While it is important to have sufficient detail in pathologists' job plans to provide a clear and unambiguous understanding between the individual and their employer of what will be expected, the WG recommends that this should not become too rigid or granular. This is particularly relevant when it comes to reporting individual diagnostic sessions, as what is safely achievable by each person will vary on a day-to-day basis, depending on a multitude of intrinsic and extrinsic factors.

## **Resources**

Discussion of the resources needed to facilitate delivery of the work is an integral part of job planning. The amount of work a pathologist can achieve in a given time is affected by the level of support provided by the employer.

For maximum efficiency, pathologists need adequate secretarial assistance, a suitable number of senior biomedical scientist staff (including some who can undertake part of the cut-up), an appropriate laboratory computer system, a fast internet connection, a high-quality microscope or digital pathology, ergonomic seating, a quiet office, up-to-date textbooks and access to relevant pathology journals.<sup>5</sup> If any aspect of this support is inadequate, productivity will certainly be adversely affected.

Conversely, if a department is well-resourced and innovative solutions are created with regards to how laboratory and administrative staff are utilised to help the pathologists deal with the workload, coupled with support through AI and up-to-date IT, then productivity has a real chance of improving.

## **Annualisation**

The Consultant Contract (2003), the Staff Grade and Associate Specialist Contract (2008) and the SAS Contract (2021) enable the annualisation of job plans (by individual agreement). Consequently, work can be concentrated into certain parts of the year, allowing for free, or less intense, periods of time during the rest of the year.

This can be particularly useful for those with children or those who wish to take time out for a research project or travelling. It can also be useful for departments whose pathologists wish to retain flexibility within their subspecialty teams. It allows for periods of more intense DCC workload, followed by periods of more devoted SPA-related time, while at the same time giving employers the reassurance of continuous service cover across all subspecialties.

Such an approach is facilitated by keeping a running total of the workload for each pathologist. Over the year, there will be times when an individual lags behind or moves ahead of their colleagues; however, by the end of the year they should have achieved the expected workload in accordance with their annualised job plan.

## **Reporting with junior doctors/biomedical scientists**

Training and supervision of junior doctors and biomedical scientists is a vital and regular part of the daily activities of most consultants who work in the NHS. Much of this day-to-day supervision requires overseeing work related to the macroscopic assessment and block selection of resection cases, as well as co-reporting histological material.

The time spent undertaking these roles will vary between consultants within and between departments, depending on working patterns and the number, seniority and experience of junior doctors and biomedical scientist staff.

Historically, the training of junior doctors has often been regarded as time-neutral for job planning, largely due to the additional training time at the microscope being balanced out by time savings generated at the cut-up bench.

Increasing subspecialisation and expansion of biomedical scientist cut-up of specimens traditionally carried out by pathologists (of all grades) have resulted in this historical time-neutral assumption not necessarily being reflected in the working lives of many consultant histopathologists. Indeed, a mix of patterns has been identified across the UK: some consultants have opted out of training, others are given varying degrees of credit for their training and supervisory time, and some do not have junior doctors in their departments. Having no official job-planned provision for such training time risks creating inequality in expected work requirements.

Co-reporting ideally needs to be separately allocated as part of the consultant's job plan, based on an agreement between the individual and employer. Alternatively, the amount of agreed sessional time for training and supervision could be used as part of the total diagnostic reporting time, to reduce proportionately the expected work rate.

Either way, this training commitment does need to be formally recognised in the job plan/workload. However, given the varying nature of this role across the UK, it should not simply be absorbed within the suggested reporting points with no appropriate credit.

Work as a designated educational or clinical supervisor should also have a separate time allocation.

## **Additional information**

British Medical Association. *Job planning*. Available at: [www.bma.org.uk/pay-and-contracts/job-planning](http://www.bma.org.uk/pay-and-contracts/job-planning)

## Appendix B      Workload management strategy

The Royal College of Pathologists' histopathology workforce survey highlighted the fact that staffing issues have become widespread throughout the UK.<sup>3</sup>

Where there is a significant mismatch between staffing and workload, it will be necessary to implement a workload management strategy to ensure the continued provision of a safe and effective histopathology service. A mismatch may be temporary (for example, due to prolonged leave) or permanent (for example, due to an increase in demand in case numbers, case complexity, additional duties, etc.). Advice regarding workload management in such circumstances is available in the College's document, *Excessive workload management in laboratory medicine: Patient safety and professional practices*.<sup>6</sup>

Pathologists who find themselves faced with an inappropriate workload should inform their clinical director without delay. This applies both to excessive case numbers and when asked to report cases that lie outside their normal area of expertise.

As a first step, specimens should be triaged according to the level of urgency to ensure that patients requiring a rapid diagnosis are not endangered. A triaging policy should be agreed after discussion with pathology consultant colleagues, clinical consultant colleagues and the clinical director for pathology. Depending on the duration of the problem, it may be necessary to manage a waiting list for less urgent specimens.

Consideration should also be given to the possibility of replacing consultant activity using the extended roles of biomedical scientist staff.

If the situation cannot be remedied within a reasonable timeframe, consideration should be given to using a remote reporting service or engaging a locum consultant to assist in the short term, until additional recruitment can be implemented. In highly specialised areas, areas covered by the pathologists involved and their levels of experience should be checked.

The ultimate test of the adequacy of staffing levels is whether consultants have sufficient time to deliver a high-quality service. This includes monitoring its reliability through participation in audit and QA schemes and participating in sufficient educational activities to maintain their own professional development without having to depend on unacknowledged extra-contractual time to complete their workload.

## Appendix C Workload points

The following tables indicate the recommended points to be allocated for microscopy work, in relation to specific specimen types. These points should include all activities from the initial receipt of the slides until the case has been authorised, including any time required for internal consultations, as well as any subsequent administrative time and additional work required on these cases (including that done after the case has been authorised). Separately allocated QA job-planned DCC sessional time should, therefore, result in a correspondingly average higher working rate for the corresponding remaining diagnostic reporting sessions (as mentioned in the main text).

**Table C1: General pathology (including molecular).<sup>a</sup>**

| Points     | Specimens  |
|------------|--|
| <b>(A)</b> | <b>Administrative</b>  |
| 3          | Supplementary report, integrating and authorising externally reported 1–2 molecular tests (see individual exceptions) or other highly specialist tests reported by external units – if not separately job planned <sup>b</sup> |
| 6          | Retrospective unscheduled administrative task (such as selection of blocks for molecular assessment and/or tumour quantification on historical case) – if not separately job planned <sup>c</sup>                              |
| 24         | Administrative time for an external case received for expert opinion (in addition to standard reporting score for case) – if not separately job planned <sup>d</sup>   |
| <b>(B)</b> | <b>Lymph nodes</b>   |
| 3          | Sentinel node – score per section examined, per block of lymph node (if not specified differently in the tables) <sup>e</sup>  |
| 8          | Single non-sentinel lymph node excision, not for suspected lymphoma  |
| 24         | Triage of suspected lymphoma <sup>f</sup>  |
| 40         | Lymph node for suspected metastatic malignancy of unknown primary site <sup>g</sup>  |
| +40        | Additional points if lymph node with confirmed malignancy is subsequently fully worked up as a carcinoma of unknown primary (CUP) <sup>g</sup>   |
| <b>(C)</b> | <b>Ancillary investigations</b>  |
| 3          | Hormone receptors (1 score, for reporting oestrogen receptor [ER] or progesterone receptor [PR]) – if standalone specimen and not separately job planned <sup>h</sup>  |
| 3          | Interpretation of 1 IHC for a mismatch repair protein – if standalone specimen and not separately job planned <sup>h</sup>   |
| 6          | Molecular/biomarker tests: HER2 IHC – if standalone specimen (including any integration of fluorescence in situ hybridisation [FISH] reports) and not separately job planned <sup>h</sup>                                      |

|            |  |
|------------|--|
| 12         | Molecular/biomarker tests: anaplastic lymphoma kinase (ALK-1)  |
| 16         | Molecular/biomarker tests: programmed death-ligand 1 (PDL-1) – Tumour Proportion Score (TPS) <sup>c</sup>  |
| 24         | Molecular classification of endometrial cancer (including administration time of arranging and interpreting all relevant investigations) – on biopsy material <sup>l</sup> |
| 24         | Molecular/biomarker tests: programmed death-ligand 1 (PDL-1) – Combined Proportion Score (CPS) <sup>c,j</sup>  |
| 24         | Interpretation of electron microscopy (taken by electron microscopist)   |
| 40         | HER2 in situ hybridisation count and interpretation by the pathologist   |
| 60         | Interpretation of electron microscopy (taken by pathologist)   |
| <b>(D)</b> | <b>Frozen section</b>  |
| 24         | Frozen section (including macroscopy time), 1 section (paraffin section scored separately) per specimen <sup>k</sup>   |
| 40         | Frozen section (including the macroscopy time), 2–4 sections (paraffin sections scored separately) per specimen <sup>k</sup>   |
| 60         | Frozen section (including the macroscopy time), 5+ sections (paraffin sections scored separately) per specimen <sup>k</sup>  |
| <b>(E)</b> | <b>Miscellaneous specimens</b>   |
| 6          | Granulation tissue   |
| 6          | Thrombus   |
| 6          | Cyst   |
| 6          | Hernia sac   |
| 6          | Adhesions  |
| 12         | Miscellaneous tissues <sup>l</sup>   |

## Notes

- a. Specimens, where these are carried out as part of an established dataset or on an ad-hoc basis by the pathologist in the absence of formal national guidance, should not be given additional scores.
- b. These are tests performed and interpreted externally (such as Oncotype Dx, reports from the National Amyloidosis Centre, etc.) – the points should only be given for the administrative work involved in integrating these results into the main reports, by adding supplementary reports and reauthorising reports. Locally, it may be desirable to convert these points into equivalent time on the job plan, after diary monitoring. They should not be given to the primary reporting pathologist for integrating letters received back from cases sent away for an external diagnostic opinion or if the external test laboratory themselves integrated the results into the report. FISH analysis for HER2

are already integrated into the workload points; thus, no additional points would be given to the primary pathologists receiving these results on their own reported cases. Biomarkers carried out as part of an established dataset or on an ad-hoc basis by the pathologist in the absence of formal national guidance should not be given additional scores.

- c. Increasingly, pathologists are asked to do additional tasks with relation to already reported cases, often months and years later, due to new research trials and molecular tests, new therapeutics, genetic implications and disease progression. Common tasks include selection of blocks and estimating tumour volumes. Ideally, there should be a component in the annual job plan to cover these unscheduled matters, which could be done by converting points worked on these tasks, during the previous 12 months, into equivalent sessional components on the current job plan.
- d. This is for administrative work and time (for example, writing letters, contacting the primary clinician or pathologist, obtaining patient information for reporting, etc.) for a case sent to a pathologist for a formal external opinion by a pathologist from another department. This would be in addition to the standard score for the case. The referring pathologist does not attract any additional points.
- e. Sentinel node scoring to be applied for each case, per block of lymph node, unless specifically mentioned otherwise in the organ system tables (such as they have been included as a single score with the accompanying resections). Sentinel node protocols currently vary widely and have generally been subdivided on points, as to the number of sections that are examined (including both H&E and immunohistochemical sections), if the relevant protocols are followed regarding how sections should be cut and what stains should be examined. The allocated points should be calculated as 3 points per section.
- f. Triage for lymphoma cases for nodal and extra-nodal tissue includes initial analysis with or without a panel of IHC. These cases are then usually sent for expert haematopathologist opinion and their formal reporting.
- g. Lymph nodes sent for suspected metastatic tumour of unknown primary site, often requiring multiple rounds of IHC (as well as sometimes other investigations). Often it will not be clear until after receiving the initial H&E slides and first-round immunohistochemical workup that this is truly a CUP that requires a more intense workup of investigations. For these specific cases, it may be deemed appropriate to give additional points given the significant extra work.

- h. Hormone receptors or HER2 IHC reported by the pathologist (not part of primary diagnosis/therapeutic specimens); this category is for cases where the primary diagnosis/therapeutic specimens have not been reported by the pathologist. These are often carried out as part of a batch reporting process. Integrating FISH reports undertaken following IHC scoring does not attract additional points.
- i. All new diagnoses of endometrial cancer require a molecular classification that requires interpretation of IHC (usually MMR, p53 and ER), as well as requesting of appropriate molecular testing. An additional combined score of 24 points should be given for this additional administrative work, if this is performed on endometrial biopsies where the standard score is insufficient to cover this additional work. This is likely to affect only affect a small percentage of all endometrial biopsies.
- j. CPS is widely acknowledged as being more time consuming and labour intense than TPS, therefore it would be reasonable to allocate more workload points to CPS compared with TPS.
- k. Frozen section includes the time taken for the whole episode per specimen pot including macroscopic and microscopic assessment, followed by contacting the relevant clinicians. Due to the urgent time pressures of this process, scoring has been classified by the number of sections examined. The paraffin sections should be scored separately.
- l. Miscellaneous tissues are for cases not covered in this document, expected to be of low complexity.

**Table C2: Breast pathology.**

| <b>Points</b> | <b>Specimens</b>   |
|---------------|--|
| <b>(A)</b>    | <b>Biopsies (includes any ER/PR/HER2)</b>                            |
| 24            | Breast needle core biopsy (1–2 pots) <sup>a</sup>                    |
| 24            | Nipple skin biopsy   |
| 40            | Breast needle core biopsy (3+ pots) <sup>a</sup>                     |
| 40            | Breast vacuum assisted biopsy/excision (1–2 pots) <sup>a</sup>       |
| 60            | Breast vacuum assisted biopsy/excision (3+ pots) <sup>a</sup>        |
| <b>(B)</b>    | <b>Presumed benign/uncertain excisions (includes any ER/PR/HER2)</b> |
| 8             | Capsulectomy   |
| 9             | Reduction mammoplasty <sup>b</sup>                                   |

|            |  |
|------------|--|
| 12         | Mastectomy scar  |
| 24         | Dochectomy (duct excision)/lumpectomy (benign) and gynaecomastia   |
| 40         | Mastectomy – prophylactic <sup>b</sup>   |
| 40         | Diagnostic excision (B3 or B4 cases) including Phyllodes   |
| <b>(C)</b> | <b>Cavity shaves/re-excisions (includes any ER/PR/HER2)</b>  |
| 24         | Cavity shaving/re-excision (1–3 pots) – separate or alongside main resection specimens <sup>c</sup>  |
| 40         | Cavity shaving/re-excision (4+ pots) – separate or alongside main resection specimen <sup>c</sup>  |
| <b>(D)</b> | <b>Presumed malignant excisions (includes any ER/PR/HER2)</b>  |
| 60         | Mastectomy/wide local excision (including wire localised) for presumed unifocal, invasive, malignancy <sup>b</sup>   |
| 80         | Mastectomy/wide local excision/re-excision (including wire localised) for presumed unifocal, invasive, malignancy, with accompanying sentinel nodes <sup>b</sup>     |
| 80         | Mastectomy/wide local excision/re-excision (including wire localised) for presumed ductal carcinoma in situ (DCIS) or multifocal, invasive, malignancy <sup>b</sup>  |
| 100        | Mastectomy/wide local excision/re-excision (including wire localised) for presumed unifocal, invasive, malignancy, with accompanying axillary clearance <sup>b</sup> |
| 100        | Mastectomy/wide local excision for presumed multifocal malignancy/X-ray/DCIS, with accompanying sentinel nodes <sup>b</sup>  |
| 120        | Bilateral mastectomy/wide local excision/re-excision (including wire localised) for presumed DCIS/invasive malignancy (if no lymph nodes taken) <sup>b</sup>         |
| 120        | Mastectomy/wide local excision for presumed multifocal, invasive, malignancy/X-ray/DCIS, with accompanying axillary clearance <sup>b</sup>                           |
| 120        | Post-chemotherapy mastectomy/wide local excision for malignancy (if no accompanying sentinel nodes/axillary clearances) <sup>b</sup>                                 |
| 160        | Bilateral mastectomy/wide local excision, for presumed DCIS/invasive malignancy, with all accompanying sentinel nodes/axillary clearances                            |
| 160        | Mastectomy for angiosarcoma, with all accompanying sentinel nodes/axillary clearances  |
| 160        | Neoadjuvant endocrine mastectomy/wide local excision for malignancy, with all accompanying sentinel nodes/axillary clearances  |
| 160        | Post-chemotherapy mastectomy/wide local excision for malignancy, with all accompanying sentinel nodes/axillary clearances  |
| <b>(E)</b> | <b>Lymph nodes (see Table C1 for separately submitted sentinel lymph nodes; includes any ER/PR/HER2)</b>   |
| 8          | Lymph node excision <sup>d</sup>   |

|            |  |
|------------|--|
| 24         | Lymph node needle core biopsy  |
| 40         | Axillary node clearance  |
| <b>(F)</b> | <b>Ancillary investigations</b>  |
| 3          | Authorising 1–2 external molecular test reports and specialist tests (including Oncotype Dx, but excluding HER2 FISH assessment integration) <sup>e</sup>            |
| 3          | Hormone receptors (1 score for reporting either ER or PR) – when these are not part of reporting pathologist’s specimens and not separately job planned <sup>a</sup> |
| 6          | HER2 IHC (including FISH report integration) – when these are not part of the reporting pathologist’s specimens and not separately job planned <sup>a</sup>          |

## Notes

- a. Hormone receptors or HER2 IHC reported by the pathologist (that are not part of the primary diagnosis): this category is for cases when the primary diagnosis (such as metastatic breast carcinoma) is not reported by the pathologist and only the breast hormone receptors or HER2 IHC are reported separately, as part of a batch reporting process. Integrating HER2 IHC or FISH reports do not attach any additional credit.
- b. Mastectomy undertaken for non-malignant reasons (such as prophylactic or reduction mammoplasty) should have this score added on to the score given for the mastectomy/ wide local excision done for malignancy.
- c. Cavity shaves/re-excisions are to be given additional points depending on the number of pots received, whether as separate specimens or as part of resection specimens.
- d. Single lymph node excision samples that are sent separately and not part of the resection specimens are given 8 points.
- e. These are tests carried out externally (such as Oncotype Dx) – the points are given for the administrative work involved in these cases, such as adding supplementary reports.

**Table C3: Cardiovascular pathology.**

| Points | Specimens                        |
|--------|----------------------------------|
| 6      | Thrombus                         |
| 6      | Cyst                             |
| 8      | Thymus benign/incidental removal |
| 8      | Lymph node excision <sup>a</sup> |
| 16     | Endarterectomy                   |

|    |   |
|----|---|
| 16 | Pericardial tissue  |
| 16 | Cardiac valve   |
| 16 | Pulmonary thromboendarterectomy   |
| 24 | Left ventricular core biopsy (ischaemic) at ventricular assist device implantation                                      |
| 40 | Temporal artery biopsy  |
| 40 | Biopsy/resection of aorta, large vessels or arteriovenous (AV) fistula  |
| 60 | Cardiac mass (excision)   |
| 80 | Native endomyocardial biopsy, left ventricular core or other intraoperative cardiac biopsy (non-ischaemic) <sup>b</sup> |

## Notes

- a. Single lymph node samples that are sent separately and not part of the resection specimens are given 8 points.
- b. Tests required (IHC, enzyme histochemistry, genetics), overlap with skeletal muscle biopsies, are outside the remit of the document. Work diaries and the use of neuropathology workload document would be recommended.

**Table C4: Cytology.**<sup>a,b</sup>

| Points     | Specimens   |
|------------|---|
| <b>(A)</b> | <b>Urinary tract</b>  |
| 6          | Urine, per specimen   |
| 12         | Urinary tract brushings/washings, per specimen  |
| <b>(B)</b> | <b>Bronchial/biliary specimens</b>  |
| 8          | Sputum, per specimen  |
| 16         | Bronchial/biliary brushings or washings (1–2 slides)  |
| 24         | Bronchial/biliary brushings or washings (3 or more slides)  |
| 24         | Bronchoalveolar lavage (BAL), per specimen, if no cell count by pathologist   |
| 40         | BAL, per specimen, if also cell count by pathologist  |
| <b>(C)</b> | <b>Fine needle aspiration specimens</b>   |
| 12         | Clot/cell block made from needle washings in fine needle aspiration (FNA) specimens, or submitted separately from clinician, per specimen <sup>c</sup>          |
| 24         | FNA, including endoscopic, of all sites (1–4 slides), per site (including all passes), excluding cell blocks made from needle washings/clots <sup>c</sup>       |
| 40         | FNA, including endoscopic, of all sites (5 or more slides), per site (including all passes), excluding cell blocks made from needle washings/clots <sup>c</sup> |

|            |   |
|------------|---|
| <b>(D)</b> | <b>Synovial fluids</b>  |
| 16         | Synovial fluid – basic crystals service and reporting   |
| 40         | Synovial fluid – full service including screening for crystals, cell count and special stains, per specimen |
| <b>(E)</b> | <b>Serous effusions</b>   |
| 12         | Peritoneal washings, per specimen   |
| 24         | Serous effusion – ascitic, pleural, pericardial (including any cell blocks) <sup>a</sup>                    |
| <b>(F)</b> | <b>Other specimens</b>  |
| 8          | Cerebrospinal fluid, per specimen (not for suspected tumour)  |
| 12         | Cerebrospinal fluid, per specimen (for suspected tumour)  |
| 12         | Cyst contents (1–2 slides), per specimen  |
| 12         | Nipple discharge, per specimen  |
| 16         | Cyst contents (3 or more slides), per specimen  |
| 16         | Miscellaneous brushings/washings (1–2 slides), per specimen   |
| 16         | Skin scraping, per specimen   |
| 24         | Miscellaneous brushings/washings (3 or more slides), per specimen   |
| <b>(G)</b> | <b>Cervical</b>   |
| 12         | Cervical cytology (pre-screened) and management, per specimen   |

## Notes

- a. Cytology cases should be scored on the initial number of slides that have been received/examined, per specimen. There are no additional scores given for IHC, unless otherwise specified, as these investigations, as well as internal consultation times and additional administrative times that are required, have been factored into the scores.
- b. Any specific biomarking/molecular investigations that are performed by the cytopathologist, which would be usually counted as additional points if this case was a surgical specimen (such as PDL-1 interpretation), should also be counted in the same manner for a cytology specimen.
- c. Cell blocks made from needle washings of FNA specimens are usually undertaken for ancillary investigations, including molecular tests, and are an integral part of the process given the relatively small number of slides produced from the FNA process compared with historical times. These points would be added on top of the score given for the FNA specimen itself.

**Table C5: Dermatopathology.**<sup>a,b</sup>

| <b>Points</b> | <b>Specimens</b>  |
|---------------|---|
| <b>(A)</b>    | <b>Basic skin specimens</b>   |
| 6             | Basic skin, therapeutic and non-therapeutic (such as cysts, naevi, polyps, tags), <sup>c</sup> excluding:<br>a) inflammatory or suspected lymphomatous lesions<br>b) any atypical pigmented lesions<br>c) clinically malignant tumours or actinic keratosis/cutaneous horn<br>Per specimen pot received |
| <b>(B)</b>    | <b>Suspected non-melanocytic skin cancer or dysplastic lesions</b>  |
| 8             | Non-therapeutic biopsy of tumour or actinic keratosis <sup>c</sup>  |
| 24            | Therapeutic specimens including orientated specimens  |
| 24            | Re-excision following diagnosis of malignancy including orientated specimens  |
| 40            | Therapeutic specimen with complex marginal orientated anatomy requiring extensive sampling either with multiple (10+ blocks) or mega-blocks<br>Typically for cases where marginal involvement would prompt further treatment or to identify involvement of bone or cartilage                            |
| 40            | Suspected adnexal or Merkel cell carcinoma (therapeutic)  |
| 6             | Addition for each additional margin(s) specimens <sup>d</sup>   |
| <b>(C)</b>    | <b>Inflammatory or suspected lymphoma</b>   |
| 40            | Diagnostic inflammatory skin case (score as 1 specimen, if biopsies taken from the same site, separate scores for specimens taken from different sites) <sup>e</sup>  |
| 40            | Initial workup of suspected lymphomatous lesions  |
| 40            | Nail or nail bed for inflammatory lesion <sup>f</sup>   |
| 80            | Alopecia case with multiple biopsies (whole case)   |
| +40           | Addition for immunofluorescence testing   |
| +40           | Specialist reporting of suspected lymphoma with extensive IHC +/- molecular testing   |
| <b>(D)</b>    | <b>Atypical pigmented lesions</b>   |
| 24            | Likely atypical or dysplastic melanocytic lesion (therapeutic or non-therapeutic), including orientated specimens   |
| 24            | Re-excision following diagnosis of malignancy including orientated specimens  |
| 40            | Melanoma/lentigo maligna – partial diagnostic biopsy  |
| 60            | Melanoma/lentigo maligna – excision   |
| +6            | Addition for each additional margin(s) specimens <sup>d</sup>   |
| <b>(E)</b>    | <b>Lymph nodes (see Table C1 for sentinel lymph nodes)</b>  |
| 24            | Lymph node core biopsy  |
| 40            | Lymph node dissection of neck, axilla or groin  |

## Notes

- a. In dermatopathology cases, it is important to determine whether the specimen is from a non-therapeutic diagnostic procedure, rather than a procedure where there is curative therapeutic intent. The actual way the sample is obtained is in many respects less relevant; for example, a punch biopsy may be undertaken to attempt to cure a tumour although it is typically a diagnostic specimen.
- b. Often there is a range of differential diagnosis provided on clinical grounds, which can range between benign, intermediate risk or frankly malignant. If there is a range of differential diagnosis with different workload scores, it is recommended that such cases may be best scored as the first diagnosis listed, which is not subsequently changed after histopathological examination of the case. Mohs microscopic surgery scoring has not been undertaken in this edition, due to its highly specialist nature and the significant variation in the contribution of histopathology to the full diagnostic process. Scoring such workload is best undertaken by a local audit process and work diaries.
- c. Per specimen pot, for these skin specimens.
- d. If a case has additional margin(s) specimens, sent in separately labelled containers or as intraoperative specimens, these should be added to the points attributed to the main specimen; typically seen in the therapeutic excision of non-melanocytic skin cancer. For example, a large squamous cell carcinoma removed with 3 punch biopsies of potentially involved margins would attract a total of 42 points: 24 for the excision and 6 for each of the margin biopsies.
- e. Biopsies of inflammatory dermatoses often require careful study and correlation with clinical findings. As described in the College's [Tissue pathway for dermatopathology](#), the report should attempt to find any major reaction pattern present, as well as identify or favour a specific diagnosis using clinical dermatological terms. If adequate clinical information is not provided, it should be sought. If this cannot be obtained, then a histopathological differential diagnosis should be offered, along with advice for clinicopathological correlation. Where a clinical differential diagnosis has been provided, it is useful to address this, particularly if the histopathological features do not point towards a specific diagnosis.
- f. Nail or nail bed for inflammatory lesion, atypical melanocytic lesion or melanoma.

**Table C6: Endocrine pathology.**

| <b>Points</b> | <b>Specimens</b>   |
|---------------|--|
| <b>(A)</b>    | <b>Thyroid gland</b>   |
| 24            | Completion hemi-thyroidectomy (with a previous malignancy in another lobe)                                       |
| 24            | Thyroid open/core biopsy (e.g. possible anaplastic thyroid cancer, Riedel's, etc.)                               |
| 40            | Total thyroidectomy for presumed non-neoplastic disease (e.g. Graves', multinodular goitre) <sup>a</sup>         |
| 40            | Prophylactic total thyroidectomy (usually for multiple endocrine neoplasia and genetic syndromes) <sup>a</sup>   |
| 60            | Diagnostic hemithyroidectomy or isthmusectomy (after Thy3a/3f/4 cytology)  |
| 60            | Total thyroidectomy for presumed malignancy  |
| 100           | Total thyroidectomy for presumed malignancy, accompanied by unilateral neck dissection (and any other specimens) |
| 120           | Total thyroidectomy for presumed malignancy, accompanied by bilateral neck dissection (and any other specimens)  |
| <b>(B)</b>    | <b>Parathyroid glands</b>  |
| 8             | Parathyroid resection (per pot) for adenoma/hyperplasia/normal   |
| 8             | Thymus received in parathyroid excision  |
| 24            | Parathyroid gland received with attached thyroid lobe  |
| 40            | Parathyroid resection 1 gland – suspected cancer   |
| <b>(C)</b>    | <b>Adrenal glands</b>  |
| 24            | Adrenal – core biopsy for presumed neoplasm  |
| 24            | Adrenal resection – presumed non-neoplastic  |
| 60            | Adrenal resection – presumed neoplastic  |
| <b>(D)</b>    | <b>Lymph nodes</b>   |
| 8             | Lymph node excision <sup>b</sup>   |
| 40            | Unilateral neck dissection   |
| 80            | Bilateral neck dissection and any other accompanying lymph nodes   |

**Notes**

- a. Thyroid glands removed for non-neoplastic reasons are periodically found to have incidental microscopic deposits of malignancy within them, requiring additional sampling and completion of the relevant dataset items.
- b. Single lymph node samples sent separately and not part of the resection specimens are given 8 points.

**Table C7: Gastrointestinal pathology.**

| <b>Points</b> | <b>Specimens</b>  |
|---------------|---|
| <b>(A)</b>    | <b>Biopsies and polyps</b>  |
| 8             | 1 gastrointestinal (GI) biopsy/polyps up to 1 cm (oesophagus/gastric/small bowel/ampulla/large bowel/rectum/bowel screening) – pot <sup>a</sup> |
| 16            | Anal biopsy   |
| 16            | 2 specimen pots GI biopsy/polyps up to 1 cm (oesophagus/gastric/small bowel/ampulla/large bowel/rectum/bowel screening) <sup>a</sup>            |
| 24            | 3–5 specimen pots GI biopsy/polyps up to 1 cm (oesophagus/gastric/small bowel/ampulla/large bowel/rectum/bowel screening) <sup>a</sup>          |
| 24            | Intestinal polyp, >2 cm (per pot) <sup>b</sup>  |
| 24            | Orientated GI series on strip or multi-well cassette (1 pot)  |
| 24            | Duodenal biopsy for known refractory coeliac disease  |
| 40            | 6–9 specimen pots GI biopsy/polyps up to 1 cm (oesophagus/gastric/small bowel/ampulla/large bowel/rectum/bowel screening) <sup>a</sup>          |
| 40            | Orientated GI series on strip or multi-well cassette (2 pots)   |
| 40            | Hirschsprung rectal suction biopsy  |
| 60            | Orientated GI series on strip or multi-well cassette (3 or more pots)   |
| 60            | 10–12 specimen pots GI biopsy/polyps up to 1 cm (oesophagus/gastric /small bowel/ampulla/large bowel/rectum/bowel screening) <sup>a</sup>       |
| 80            | 13 or more specimen pots GI biopsy/polyps up to 1 cm (oesophagus/gastric/small bowel/ampulla/large bowel/rectum/bowel screening) <sup>a</sup>   |
| <b>(B)</b>    | <b>Resections</b>   |
| 8             | Appendix (not for tumour)   |
| 24            | Sub/total colectomy for benign disease (such as diverticular disease)   |
| 24            | Oesophagectomy/gastrectomy for benign disease   |
| 24            | Rectal excision for benign disease  |
| 24            | Small bowel resection for benign disease  |
| 40            | Appendix (for suspected tumour)   |
| 40            | Local excision of oesophagus/stomach for neoplasia (e.g. GI stromal tumour [GIST]) <sup>c</sup>   |
| 40            | Orientated local upper GI or rectal trans-anal excision for neoplasia   |
| 80            | Sub/total colectomy for inflammatory bowel disease (IBD)/polyposis  |
| 80            | Sub/total colectomy for Hirschsprung's disease/IBD/polyposis  |
| 80            | Colectomy for malignancy  |
| 80            | Endoscopic submucosal dissection of early gastric cancer  |
| 80            | Oesophagectomy/gastrectomy for malignancy   |

|            |   |
|------------|---|
| 80         | Rectal resection for malignancy   |
| 80         | Small bowel resection for malignancy  |
| 120        | Colectomy for synchronous cancers   |
| 120        | Pelvic exenteration for GI cancer   |
| 160        | Post-chemotherapy/radiotherapy upper or lower GI resection  |
| <b>(C)</b> | <b>Miscellaneous tissues</b>  |
| 6          | Specimen margins/anastomotic donuts (when submitted separately)   |
| 6          | Anal tissue (tags, haemorrhoids, fistulae, pilonidal sinus)   |
| 6          | Hernia sac  |
| 8          | Stoma – ileostomy and colostomy   |
| 8          | Lymph node excision <sup>d</sup>  |
| 8          | Peritoneal/omental biopsy (not for suspected tumour)  |
| 12         | Omentectomy   |
| 24         | Diagnostic omental or peritoneal biopsy for suspected tumour  |
| 24         | Lymph node core biopsy  |
| 40         | Lymph node dissection without resection   |
| <b>(D)</b> | <b>Ancillary investigations</b>   |
| 3          | Interpretation of each IHC for mismatch repair proteins (not reported as part of primary diagnosis/therapeutic specimens) |
| 6          | HER2 ICC reporting (that is not part of primary reporting of biopsy or resection specimens) <sup>e</sup>                  |

## Notes

- a. GI biopsies and polyps up to 1 cm have been grouped together in scoring batches for the purpose of workload scoring, to facilitate the reporting of areas such as extended colonic series.
- b. Large intestinal polyps often take significantly more time to report than their smaller counterparts, due to the need for multiple blocks and levels. A pragmatic 1 cm cut off is suggested for the purposes of workload scoring.
- c. Neoplasia of upper GI if of benign nature or uncertain malignant potential including GISTs, leiomyomas, neuromas or other soft tissue tumours.
- d. Single lymph node samples that are sent separately and not part of the resection specimens are given 8 points.
- e. In some departments, HER2 IHC is reported independently as a batch and reported by pathologists separately. These need a separate score of 6 points when this work

needs to be separately tariffed for job planning purposes. If in situ hybridisation is performed and counted by the pathologist, that will yield an additional 40 points.

**Table C8: Gynaecological pathology.<sup>a</sup>**

| <b>Points</b> | <b>Specimens</b>   |
|---------------|--|
| <b>(A)</b>    | <b>Vulva/perianal biopsies</b>   |
| 6             | Vulval cysts, polyps, naevi and tags (per specimen)  |
| 16            | Vulval/perianal biopsy (1 specimen pot)  |
| 24            | Vulval/perianal biopsy (2 specimen pots)   |
| 40            | Vulval/perianal biopsy (3–4 specimen pots)   |
| 60            | Vulval/perianal biopsy (5–8 specimen pots)   |
| 80            | Vulval/perianal biopsy (9–12 specimen pots)  |
| 100           | Vulval/perianal biopsy (13 or more specimen pots)  |
| <b>(B)</b>    | <b>Vulva/perianal excisions</b>  |
| 24            | Vulval excision–wide local (< 5 cm)  |
| 60            | Vulval excision– complex (5 cm or more)  |
| 60            | Vulval excision (<5 cm) and unilateral lymph node block dissection (cytology or other lymph nodes are additional) <sup>b</sup>                         |
| 80            | Vulval excision (<5 cm) and bilateral lymph node block dissection (cytology is additional) <sup>b</sup>  |
| 100           | Vulval excision (5 cm or more) and unilateral lymph node dissection (cytology or other lymph nodes are additional) <sup>b</sup>                        |
| 120           | Vulval excision (5 cm or more) and bilateral lymph node block dissection specimens (cytology is additional) <sup>b</sup>                               |
| <b>(C)</b>    | <b>Cervix/vagina</b>   |
| 6             | Cervical polyp   |
| 8             | Cervical amputation (not for cancer)   |
| 12            | Cervical/vaginal biopsy  |
| 24            | Cervical large loop excision of transformation zone (LLETZ) or cone (per pot) <sup>c</sup>   |
| 40            | Hysterectomy for pre-invasive disease (such as cervical intraepithelial neoplasia and cervical glandular intraepithelial neoplasia) or abnormal smears |
| 40            | Vaginal excision   |
| 80            | Hysterectomy/trachelectomy for cervical cancer and any other specimens (cytology and lymph nodes are additional) <sup>b</sup>                          |

|            |  |
|------------|--|
| 100        | Hysterectomy/trachelectomy for cervical cancer with unilateral lymph node dissection and any other specimens (cytology and other lymph nodes are additional) <sup>b</sup>                    |
| 120        | Hysterectomy/trachelectomy for cervical cancer with bilateral lymph node dissection and any other specimens (cytology is additional) <sup>b</sup>  |
| <b>(D)</b> | <b>Uterus – biopsies and presumed benign excisions<sup>a</sup></b>   |
| 12         | Endometrial biopsy/chips/polyps  |
| 12         | Products of conception (if no clinical suspicion of molar pregnancy)   |
| 16         | Fibroid/myomectomy   |
| 24         | Molecular classification of endometrial cancer (including administration time of arranging and interpreting all relevant investigations) – on biopsy material                                |
| 24         | Hysterectomy – benign (+/- tubes and ovary)  |
| 24         | Singleton placenta   |
| 40         | Products of conception – clinically suspected molar pregnancy (including referral process to specialist units)   |
| 40         | Singleton intra-uterine death placenta only  |
| 40         | Twin placenta – dichorionic diamniotic (DCDA) <sup>d</sup>   |
| 40         | Pregnancy-related hysterectomy   |
| 60         | Triple or higher birth order placenta  |
| 60         | Prophylactic hysterectomy due to Lynch syndrome  |
| <b>(E)</b> | <b>Uterus – presumed malignant excisions<sup>a</sup></b>   |
| 60         | Hysterectomy for endometrial hyperplasia or cancer and any other specimens (cytology and lymph nodes are additional) <sup>b</sup>  |
| 80         | Hysterectomy for endometrial cancer with unilateral block dissection of pelvic lymph nodes and any other specimens (cytology and other lymph nodes are additional) – whole case <sup>b</sup> |
| 100        | Hysterectomy for uterine sarcoma and any other specimens (cytology and any lymph nodes are additional) – whole case <sup>b</sup>   |
| 100        | Hysterectomy for endometrial cancer with bilateral block dissection of pelvic lymph nodes and any other specimens (cytology is additional) – whole case <sup>b</sup>                         |
| 120        | Hysterectomy for uterine sarcoma with lymph nodes and any other specimens (cytology is additional) – whole case <sup>b</sup>   |
| <b>(F)</b> | <b>Fallopian tubes and ovaries</b>   |
| 6          | Fallopian tube (1 or 2) for sterilisation  |
| 12         | Fallopian tube (including ectopic pregnancy) – not for sterilisation   |
| 18         | Ovarian biopsy, not for suspected malignancy   |
| 24         | Ovarian core biopsy +/- IHC for suspected tumour   |

|            |  |
|------------|--|
| 24         | Ovary +/- fallopian tube – benign/simple cyst – not suspicious of malignancy (such as simple, endometriotic or dermoid cysts) +/- hysterectomy (cytology is additional) <sup>b</sup> |
| 40         | Ovary(s) and fallopian tube(s) – prophylactic (including syndromes), and any other specimens (cytology is additional) <sup>b</sup>   |
| 80         | Ovary/fallopian tube for possible/suspected ovarian cancer and all other specimens (cytology and lymph nodes are additional) – whole case <sup>b</sup>                               |
| 100        | Ovary/fallopian tube for possible/suspected ovarian cancer, with any lymph nodes and all other specimens (cytology is additional) – whole case <sup>b</sup>                          |
| 100        | Post-chemotherapy resection for ovary/fallopian tube cancer (cytology is additional) – whole case <sup>b</sup>   |
| <b>(G)</b> | <b>Omentum and peritoneum</b>  |
| 8          | Peritoneal/omental biopsy (not for suspected tumour)   |
| 12         | Omentectomy  |
| 12         | Parametrium  |
| 24         | Peritoneal/omental core biopsy for suspected tumour  |
| <b>(H)</b> | <b>Lymph nodes (see Table C1 for sentinel lymph nodes)<sup>a</sup></b>   |
| 8          | Lymph node excision <sup>e</sup>   |
| 24         | Lymph node core biopsy   |
| 40         | Pelvic lymph node dissection(s) without resection – whole case   |
| 40         | Groin unilateral lymph node dissection   |
| 80         | Groin bilateral lymph node dissection  |
| <b>(I)</b> | <b>Exenterations</b>   |
| 120        | Pelvic exenteration for gynaecological malignancy – whole case <sup>b</sup>  |
| <b>(J)</b> | <b>Ancillary investigations</b>  |
| 3          | Interpretation of each IHC for mismatch repair proteins (that is not reported as part of primary diagnosis/therapeutic specimens)  |
| <b>(K)</b> | <b>Miscellaneous specimens</b>   |
| 6          | Specimen margins (when submitted separately)   |

## Notes

- a. Sentinel lymph nodes should be added on top of the main specimen scores, due to different protocols being applied depending on local factors and on the site of the original primary tumour.
- b. Accompanying cytology specimens (such as peritoneal washings) are to be added on top if reported with the rest of the case. Simple ovarian cysts include things such as suspected simple cysts, endometriotic cysts and dermoid cysts.

- c. LLETZ specimen should be scored per separate pot.
- d. DCDA – dichorionic diamniotic.
- e. Single lymph node samples that are sent separately and are not part of the resection specimens are given 8 points.

**Table C9: Haematolymphoid pathology.**

| Points | Specimens  |
|--------|--|
| 16     | Wedge resection of spleen  |
| 24     | Spleen for trauma  |
| 24     | Triage (initial sections and possible limited IHC panel) of suspected lymphoma <sup>a</sup>                                |
| 40     | Bone marrow aspirate (without trephine), including integrating any molecular investigations <sup>b</sup>                   |
| 80     | Bone marrow trephine, including integrating any molecular investigations <sup>b</sup>                                      |
| 80     | Lymph node biopsy/node/other tissue of suspected lymphoma, including integrating any molecular investigations <sup>b</sup> |
| 80     | Splenic core biopsy/splenectomy for suspected lymphoma, including integrating any molecular investigations <sup>b</sup>    |
| 100    | Bone marrow aspirate (with trephine), including integrating any molecular investigations <sup>b</sup>                      |

## Notes

- a. The 24 points for ‘trriage of suspected lymphoma’ is to be used by the non-haematology pathologist, who may deal with a case when it comes into the laboratory, before being ultimately referred to the specialist haematological service in their region. This includes any specimen type with suspected lymphoma (lymph node core biopsy, resection, spleen or other organ tissue).
- b. The points for specialist reporting of suspected lymphoma cases are inclusive of any molecular/ancillary investigations undertaken, as the definition of what constitutes these tests is open to subjective interpretation. Thus, an all-inclusive approach is favoured.

**Table C10: Head and neck pathology.**

| <b>Points</b> | <b>Specimens</b>   |
|---------------|--|
| <b>(A)</b>    | <b>Biopsies</b>  |
| 24            | Head & neck mucosal biopsy (1–2 pots)  |
| 24            | Lymph node core biopsy/excision <sup>a</sup>   |
| 40            | Head and neck mucosal biopsy (3+ pots)   |
| 40            | Salivary gland core biopsy   |
| <b>(B)</b>    | <b>Excisions</b>   |
| 12            | Tonsil(s) for tonsillitis  |
| 40            | Laryngeal cordectomy   |
| 40            | Parotid/submandibular gland (non-neoplastic/benign)  |
| 40            | Oral mucosal excision/wide local excision for dysplasia/cancer   |
| 40            | Tonsil(s) for suspected malignancy   |
| 60            | Transoral robotic mucosal resection  |
| 60            | Oral resection without bone  |
| 60            | Glossectomy  |
| 80            | Laryngectomy or maxillectomy – whole case  |
| 80            | Oral resection with bone – whole case  |
| 80            | Pinnectomy – whole case  |
| 80            | Parotid gland/submandibular gland resection for tumour – whole case  |
| 80            | Pharyngolaryngectomy/pinnectomy for malignancy (not wedge)/rhinectomy – whole case   |
| 80            | Sino-nasal malignant tumour resection – whole case   |
| 120           | Pinnectomy and unilateral neck dissection – whole case   |
| 120           | Laryngectomy/maxillectomy/oral resection/pharyngolaryngectomy and unilateral neck dissection – whole case                          |
| 120           | Parotid gland/submandibular gland for tumour and unilateral neck dissection – whole case   |
| 160           | Laryngectomy/maxillectomy/oral resection/pharyngolaryngectomy and bilateral neck dissection (and any other specimens) – whole case |
| 160           | Parotid gland/submandibular for tumour and bilateral neck dissection (and any other specimens) – whole case                        |
| 160           | Pinnectomy and bilateral neck dissection (and any other specimens) – whole case  |
| <b>(C)</b>    | <b>Lymph nodes (see Table C1 for sentinel lymph nodes)</b>   |
| 24            | Lymph node core biopsy/excision <sup>a</sup>   |
| 40            | Unilateral neck dissection (without gland resection)   |

|     |   |
|-----|---|
| 80  | Bilateral neck dissection (without gland resection) |
| (D) | Miscellaneous                                       |
| 6   | Specimen margins (when submitted separately)        |
| 6   | Polyps/mucocele/cholesteatoma/cysts                 |
| 8   | Miscellaneous tissue accompanying resections        |
| 12  | Nasal polyps (whole case)                           |
| 12  | Tonsil(s) for tonsillitis                           |
| 16  | Dental cysts  |
| 40  | Tooth   |

## Notes

- a. Lymph node samples that are sent separately and are not part of the resection specimens are given 24 points.

**Table C11: Liver, biliary and pancreas pathology.**

| Points     | Specimens  |
|------------|--|
| <b>(A)</b> | <b>Liver and biliary tract biopsies</b>  |
| 24         | Urgent medical liver biopsy provisional report (given to the clinicians on the day)  |
| 24         | Liver biopsy (metastases)  |
| 40         | Bile duct or endo-biliary diagnostic biopsy  |
| 80         | Liver biopsy (malignant – primary liver tumour)                                      |
| 100        | Liver biopsy (medical)   |
| <b>(B)</b> | <b>Liver and biliary tract, presumed benign excisions</b>                            |
| 6          | Bile duct margin   |
| 6          | Portal vein/artery/blood vessels   |
| 8          | Gallbladder (not for suspected tumour)   |
| 16         | Cyst/de-roofing/abscess specimens  |
| 40         | Liver resection for primary benign tumour/nodules (excluding adenoma) <sup>a</sup>   |
| <b>(C)</b> | <b>Liver and biliary tract, presumed malignant excisions</b>                         |
| 24         | Liver resection for metastases (wedge or non-anatomical resection) – 1 specimen      |
| 40         | Liver resection for metastases (anatomical or non-anatomical) – 2 separate specimens |
| 40         | Liver resection for primary benign tumour/nodules (excluding adenoma) <sup>a</sup>   |

|            |   |
|------------|---|
| 60         | Liver resection for metastases (anatomical or non-anatomical) – 3–6 separate specimens  |
| 60         | Gallbladder/bile duct resection (for suspected malignancy)  |
| 80         | Liver resection primary tumour (including adenoma), including any lymph node dissection   |
| 80         | Liver resection for metastases – 7 or more separate specimens   |
| 80         | Gallbladder/biliary tract carcinoma resection, with accompanying lymph nodes and any other specimens  |
| <b>(D)</b> | <b>Pancreas</b>   |
| 24         | Pancreatic resection for presumed benign disease  |
| 40         | Pancreas diagnostic biopsy  |
| 60         | Partial pancreatic resection for malignancy   |
| 80         | Partial pancreatic resection for malignancy, including any lymph node dissections (and any other specimens) – whole case  |
| 100        | Whipple’s pancreatic-duodenectomy/total pancreatectomy for suspected malignancy and for post-chemotherapy specimens, including any lymph node dissections (and any other specimens) |
| <b>(E)</b> | <b>Lymph nodes</b>  |
| 8          | Lymph node <sup>b</sup>   |
| 24         | Lymph node core biopsy  |
| <b>(F)</b> | <b>Miscellaneous specimens</b>  |
| 6          | Specimen margins (when submitted separately)  |

## Notes

- a. Lymph node samples that are sent separately and are not part of the resection specimens are given 8 points.
- b. Adenoma needs to be differentiated from malignant tumour on resection and is therefore included in the malignant category (80 points). Benign tumours, such as haemangioma, focal nodular hyperplasia and bile duct hamartoma, are included in the benign category (40 points).

**Table C12: Lung pathology.**

| Points     | Specimens  |
|------------|--|
| <b>(A)</b> | <b>Pleura</b>  |
| 16         | Pleural plaques  |
| 24         | Pleural – all diagnostic biopsies/excision (for non-suspected neoplasia) |

|            |   |
|------------|---|
| 80         | Pleural excision (suspected neoplasia) – whole case   |
| <b>(B)</b> | <b>Lungs and airways</b>  |
| 16         | Pulmonary thromboendarterectomy   |
| 24         | Tracheal/bronchial/lung needle core biopsy  |
| 40         | Wedge excision of lung (neoplastic)/completion lobectomy after previous surgery                 |
| 60         | Video-assisted thoracoscopic surgery/open biopsy (neoplastic and non-neoplastic)                |
| 60         | Lung lobectomy/pneumonectomy – neoplastic/non-neoplastic  |
| 80         | Lung lobectomy/pneumonectomy – neoplastic/non-neoplastic, with any lymph nodes – whole case     |
| 100        | Malignant resection of lung and chest wall, including any accompanying lymph nodes – whole case |
| <b>(C)</b> | <b>Mediastinum and thymus</b>   |
| 8          | Thymus – benign/incidental  |
| 24         | Thymectomy (often received in hyperparathyroid cases)   |
| 60         | Mediastinal needle biopsy   |
| 60         | Excision of primary disease other than thymus – whole case                                      |
| 80         | Excision of thymus – neoplastic – whole case  |
| <b>(D)</b> | <b>Lymph nodes</b>  |
| 8          | Lymph node excision <sup>a</sup> or lymph nodes for staging, without resection (per pot, 1–4)   |
| 24         | Lymph node core biopsy  |
| 40         | Lymph nodes for staging, without accompanying resection (5 or more pots)                        |
| <b>(E)</b> | <b>Ancillary investigations</b>   |
| 12         | Molecular/biomarker tests: ALK-1 (in-house reporting)   |
| 16         | Molecular/biomarker test: PDL-1 (in-house reporting) – TPS                                      |
| 24         | Molecular/biomarker test: PDL-1 (in-house reporting) – CPS                                      |
| <b>(F)</b> | <b>Miscellaneous specimens</b>  |
| 6          | Specimen margins (when submitted separately)  |

## Notes

- a. Lymph node samples that are sent separately and not part of staging should receive 8 points.

**Table C13: Ophthalmic pathology.**

| <b>Points</b> | <b>Specimens</b>  |
|---------------|---|
| <b>(A)</b>    | <b>Lymph nodes (see Table C1 for sentinel lymph nodes)</b>  |
| 24            | Triage (initial sections and possible limited IHC panel) of suspected lymphoma                                |
| 80            | Lymph node biopsy/node/other tissue of suspected lymphoma, including integrating any molecular investigations |
| <b>(B)</b>    | <b>Eyelid skin specimens (see Table C5 if there are missing specimens)</b>                                    |
| 12            | Non-neoplastic excision (chalazion, pterygium, pingueculum, cysts, etc.)                                      |
| 12            | Benign eyelid skin excluding inflammatory/atypical pigmented/malignant  |
| 16            | Non-melanocytic eyelid skin tumour – small samples (punch/curettage/incision/shave)                           |
| 24            | Non-melanocytic eyelid skin tumour – excision   |
| 24            | Re-excision skin after diagnosis of malignancy  |
| 40            | Melanocytic eyelid skin lesion – atypical   |
| 40            | Melanoma/lentigo maligna eyelid – punch/incision  |
| 40            | Eyelid skin excision for adnexal or Merkel cell carcinoma   |
| 40            | Eyelid skin lesion – inflammatory   |
| 60            | Eyelid skin melanoma/lentigo maligna – excision   |
| 60            | Eyelid skin wedge excision for neoplasia  |
| <b>(C)</b>    | <b>Conjunctiva and cornea (including exenteration, enucleation and evisceration)</b>                          |
| 12            | Epiretinal membrane/inner limiting membrane/posterior hyaloid membrane  |
| 12            | Benign, non-neoplastic, such as chalazion, pterygium, pingueculum and cysts                                   |
| 16            | Conjunctiva – benign tumour   |
| 16            | Cornea – button/biopsy/donor cornea-scleral ring  |
| 16            | Lacrimal sac – inflammatory   |
| 16            | Lens and intra-ocular lens; trabecular tissue   |
| 24            | Conjunctiva – inflammatory  |
| 24            | Conjunctiva – malignant biopsy/excision   |
| 24            | Impression cytology cornea  |
| 24            | Lacrimal sac – benign tumour  |
| 24            | Conjunctiva map biopsy (1 container)  |
| 40            | Conjunctiva map biopsy (2 containers)   |
| 40            | Chorio-retinal biopsy/FNA   |

|     |   |
|-----|---|
| 40  | Cornea – complex cornea   |
| 40  | Cornea – non-neoplastic enucleation/evisceration  |
| 40  | Lacrimal sac – malignant  |
| 40  | Local resection of intraocular tumour   |
| 40  | Ophthalmic cytopathology – core biopsy/pars vitreous specimen   |
| 40  | Ophthalmic cytopathology FNA/vitrector specimen of intraocular tumour/anterior chamber tap  |
| 40  | Orbit (optic nerve and lacrimal gland) – non-neoplastic and neoplastic biopsy   |
| 60  | Conjunctiva map biopsy (3 containers)   |
| 60  | Conjunctiva special investigations (e.g. direct immunofluorescence for ocular surface autoimmune disorder, polymerase chain reaction [PCR], etc.) |
| 60  | Evisceration – malignant  |
| 80  | Conjunctiva map biopsy (4 or more containers)   |
| 80  | Cornea special investigations (e.g. electron microscopy, PCR)   |
| 80  | Enucleation – neoplastic  |
| 100 | Exenteration  |

**Table C14: Renal pathology.**

| <b>Points</b> | <b>Specimens</b>  |
|---------------|---|
| 8             | Lymph node excision (renal)   |
| 16            | Wedge of kidney   |
| 24            | Benign nephrectomy (including polycystic kidney disease)                              |
| 24            | Urgent provisional renal biopsy report for immediate management purposes <sup>a</sup> |
| 24            | Electron microscopy interpretation (taken by electron microscopist)                   |
| 40            | AV fistula resection  |
| 100           | Re-examination of a malignant nephrectomy from a medical renal pathology perspective  |
| 120           | Renal biopsy (medical and transplant)   |

## Notes

- a. This only applies if a provisional report is required on the same day as the specimen is received.

**Table C15: Soft tissue and bone pathology.**

| <b>Points</b> | <b>Specimens</b>   |
|---------------|--|
| <b>(A)</b>    | <b>Bone</b>  |
| 24            | Femoral head/osteochondroma  |
| 24            | Bone excision/curettings metastases  |
| 24            | Non-specialist bone curettings/open biopsy/trephine  |
| 40            | Amputation for infection   |
| 80            | Specialist bone curettings/open biopsy/trephine/benign bone resections                               |
| 100           | Excision for primary bone tumour – whole case  |
| 120           | Excision/amputation of bone tumour following neoadjuvant therapy – whole case                        |
| 120           | Amputation for bone – whole case   |
| <b>(B)</b>    | <b>Soft tissue</b>   |
| 6             | Excision for ganglia, bursae, rheumatoid nodules, neuromas   |
| 12            | Lipomas  |
| 12            | Tendon   |
| 16            | Mesenteric cysts/lesions   |
| 24            | Resection for presumed benign disease, myxoma, schwannomas, giant cell tumour of tendon sheath, etc. |
| 24            | Vascular malformation – biopsy   |
| 24            | Re-excision post-inadvertent resection   |
| 40            | Diagnostic core/open biopsy (including ancillary investigations)                                     |
| 40            | Vascular malformation – resection  |
| 80            | Specialist soft tissue biopsy including lipomatous/myxoid tumours                                    |
| 100           | Excision for an intermediate/malignant soft tissue tumour – whole case                               |
| 120           | Amputation for soft tissue sarcoma – whole case  |
| <b>(C)</b>    | <b>Joints</b>  |
| 16            | Synovial biopsy  |
| 24            | Soft tissue from joint revision surgery  |
| <b>(D)</b>    | <b>Miscellaneous</b>   |
| 8             | Lymph node excision <sup>a</sup>   |
| 12            | Soft tissue from joint revision surgery – extra samples  |
| 24            | Re-excision post-inadvertent resection   |
| <b>(E)</b>    | <b>Ancillary investigations</b>  |
| 40            | Interpretation of MDM2, c-MYK, NTRK etc., in situ hybridisation, including integrated reports        |

|     |  |
|-----|--|
| 100 | Interpretation and integrating molecular/next-generation sequencing investigations of paediatric and adult soft tissue and bone tumours (such as Ewing's, small round blue cell tumours, myxoid tumours, etc.) |
|-----|--|

## Notes

- a. Lymph node excision taken.

**Table C16: Transplant pathology.**

| Points     | Specimens   |
|------------|---|
| <b>(A)</b> | <b>Cardiac</b>  |
| 40         | Cardiac (endomyocardial) transplant biopsy, including urgent provisional reports  |
| 80         | Explanted heart (ischaemic)   |
| 160        | Failed cardiac allograft or explanted heart (non-ischaemic) <sup>a</sup>  |
| <b>(B)</b> | <b>Lung</b>   |
| 80         | Lung transplant biopsies (bronchial, cryobiopsy, video-assisted thoracoscopic biopsies), including urgent provisional reports |
| 100        | Explanted single lung   |
| 120        | Failed single lung allograft  |
| 120        | Explanted bilateral lungs   |
| 160        | Failed double lung allograft  |
| <b>(C)</b> | <b>Liver and biliary tract</b>  |
| 16         | Bile duct biopsy – pre- or post-reperfusion   |
| 100        | Explant liver resection   |
| 100        | Liver transplant biopsy   |
| 120        | Failed liver allograft or explant liver with hepatocellular carcinoma/focal lesion allograft                                  |
| <b>(D)</b> | <b>Pancreas</b>   |
| 100        | Pancreas transplant biopsy  |
| 120        | Transplant pancreatectomy   |
| <b>(E)</b> | <b>Kidney</b>   |
| 60         | Unused donor kidney   |
| 60         | Baseline renal transplant biopsy (pre-implantation/post-reperfusion/time zero)  |
| 80         | Transplant nephrectomy  |
| 120        | Renal transplant biopsy   |
| <b>(F)</b> | <b>Intestinal</b>   |

|            |  |
|------------|--|
| 8          | Skin transplant punch biopsy (combined small intestine and abdominal wall transplant)                                  |
| 100        | Stoma biopsy/small intestine transplant biopsy   |
| 120        | Endoscopic series if it includes transplant biopsies   |
| 120        | Resection of parts of failed intestinal allograft, e.g. strictures   |
| 160        | Resection of whole intestinal allograft  |
| <b>(G)</b> | <b>Administrative</b>  |
| 24         | Urgent provisional report for same day management – prior to final report, if it is not included in the specimen score |

## Notes

- a. Referred autopsy heart may be booked under post-mortem histology and is, therefore, not part of surgical workload data. See post-mortem section for further details.

**Table C17: Uro pathology.**

| Points     | Specimens   |
|------------|---|
| <b>(A)</b> | <b>Bladder and ureter</b>   |
| 6          | Ureter sent separately with radical cystectomy  |
| 16         | Bladder biopsy  |
| 24         | Cystectomy/ureterectomy (non-neoplastic)  |
| 24         | Transurethral resection of a bladder tumour (TURBT) – 1–6 standard blocks (whole case) <sup>a</sup>   |
| 40         | TURBT – 7 or more standard blocks (whole case) <sup>a</sup>   |
| 80         | Radical cystectomy – whole case   |
| 120        | Radical cystectomy with lymph node block dissection(s) – whole case   |
| 120        | Radical cystoprostatectomy – whole case   |
| 160        | Radical cystoprostatectomy with lymph nodes block dissection(s) – whole case  |
| <b>(B)</b> | <b>Prostate</b>   |
| +8         | For every whole/part group of 5 core prostate biopsies, beyond first 10 cores (transrectal ultrasound guided [TRUS], transperineal, templates, targeted) <sup>b</sup> |
| 24         | Needle core biopsies of prostate (TRUS, transperineal, templates, targeted) first 1–5 cores <sup>b</sup>  |
| 24         | Transurethral resection of the prostate (TURP) – 1–6 standard blocks  |
| 40         | Needle core biopsies of prostate (transrectal ultrasound guided [TRUS], transperineal, templates, targeted) 6–10 cores <sup>b</sup>                                   |
| 40         | TURP – 7–12 standard blocks   |

|            |   |
|------------|---|
| 60         | TURP – 13 or more standard blocks   |
| 80         | Radical prostatectomy – whole case  |
| 120        | Radical prostatectomy with lymph node block dissection(s) – whole case                |
| <b>(C)</b> | <b>Kidney</b>   |
| 16         | Renal pelvis/ureter (benign)  |
| 24         | Benign nephrectomy (including polycystic kidney disease)                              |
| 24         | Partial nephrectomy (benign)  |
| 24         | Renal core biopsy for tumour  |
| 40         | Partial nephrectomy (malignant)   |
| 60         | Renal pelvis/ureter (malignant)   |
| 80         | Nephrectomy (malignant) – whole case  |
| <b>(D)</b> | <b>Penis</b>  |
| 8          | Foreskin (non-neoplastic circumcision)  |
| 24         | Penile biopsy   |
| 40         | Foreskin for tumour/lesion  |
| 80         | Penectomy – whole case  |
| 160        | Penectomy with lymph node block dissections – whole case                              |
| <b>(E)</b> | <b>Testis and appendages</b>  |
| 6          | Non-neoplastic epididymis, testicular appendages, vasa deferentia (both) <sup>c</sup> |
| 24         | Orchidectomy (benign)   |
| 40         | Testicular biopsy for infertility (including Johnsen's index): 1–2 specimens          |
| 80         | Orchidectomy (malignant/tumour) – whole case  |
| 100        | Orchidectomy (malignant/tumour) and biopsy of opposite testis – whole case            |
| <b>(F)</b> | <b>Lymph nodes (see Table C1 for sentinel lymph nodes)</b>                            |
| 8          | Lymph node excision   |
| 24         | Lymph node core biopsy  |
| 40         | Pelvic node dissections (whole case)  |
| 40         | Pelvic node dissections (in total) – penile cancer                                    |
| 160        | Retroperitoneal node dissection (for germ cell tumour) – whole case                   |
| <b>(G)</b> | <b>Omentum and peritoneum</b>   |
| 8          | Omental/peritoneal biopsy not for suspected tumour                                    |
| 12         | Omentectomy   |
| 24         | Omental/peritoneal biopsy for suspected tumour  |
| <b>(H)</b> | <b>Miscellaneous specimens</b>  |
| 6          | Specimen margins (when submitted separately)  |

## Notes

- a. This includes any associated bladder bed biopsy that are often submitted with TURBTs.
- b. It is recommended that departments ask the test requestor to document on the specimen request form the number of prostatic needle core biopsies taken during the procedure. They have been categorised based on groups of 5 core biopsies, as there will be a relatively linear relationship between the number of cores examined and the overall time taken for reporting, ancillary investigations, second opinions and any administration. This document recommends 24 points for the first 5 core biopsies and 40 points for between 6 and 10 core biopsies, followed by 8 points for each batch of 5 cores after the first 10 cores. For example, 11–15 core biopsies would attract  $40 + 8 = 48$  points and 16–20 core biopsies would attract  $40 + 8 + 8 = 56$  points.
- c. The vasa deferentia together are scored 6 points. However, in rare cases, departments receive a single side, which should also be scored 6 points.

## Appendix D Examples of how to score cases

Here are some illustrative examples of how to score complex cases. The total points include the time for any ancillary investigations, second opinions and any associated administrative duties with regards to the individual case (at the time or later).

| Area of interest | Specimens   | Scoring  | Total points |
|------------------|---|--|--------------|
| General          | 2 x sentinel LN (4 sections each)   | 2 x 3 x 4  | 24           |
| General          | 1 x sentinel LN (2 blocks, each 8 sections)<br>1 x sentinel LN (1 block, 12 sections)   | 2 x 8 x 3<br>1 x 12 x 3  | 84           |
| General          | 2 x sentinel LN (1 block, 6 sections each)<br>2 x non-sentinel LN   | 2 x 6 x 3<br>2 x 8   | 52           |
| General          | 1 x sentinel LN (1st block 8 sections, 2nd block 10 sections, 3rd block 8 sections)<br>1 x sentinel LN (1st block 12 sections, 2nd block 10 sections) | 1 x 8 x 3<br>1 x 10 x 3<br>1 x 8 x 3<br>1 x 12 x 3<br>1 x 10 x 3 | 144          |
| General          | 3 x single lymph nodes  | 3 x 8  | 24           |
| General          | 1 x granulation tissue<br>1 x cyst<br>2 x lymph nodes   | 1 x 6<br>1 x 6<br>2 x 8  | 28           |
| General          | 20 x gastric HER2 IHC batch   | 20 x 6   | 120          |
| General          | 15 x ER and PR IHC cases<br>15 x HER2 IHC cases   | 15 x 6<br>15 x 6   | 180          |
| General          | 10 x mis-match repair IHC cases (4-antibody panels)   | 10 x 12  | 120          |
| General          | Report in-house 3 x PDL-1 TPS IHC   | 3 x 16   | 48           |
| General          | 2 x frozen section episodes (including macro) – 3 and 4 sections, respectively  | 2 x 40   | 80           |
| Breast           | 1 x pot breast Bx with no IHC   | 1 x 24   | 24           |
| Breast           | 1 x pot breast Bx with predictive markers<br>1 x FISH HER2 counting by pathologist  | 1 x 24<br>1 x 40   | 64           |
| Breast           | 1 x pot vacuum-assisted Bx with IHC<br>Oncotype Dx report integration   | 1 x 40<br>1 x 3  | 43           |
| Breast           | 3 x pot vacuum-assisted Bx & IHC  | 1 x 60   | 60           |
| Breast           | 2 x vacuum assisted Bx & IHC<br>1 x FISH HER2 report integration  | 1 x 40<br>-  | 40           |

|                |  |                                      |     |
|----------------|--|--------------------------------------|-----|
| Breast         | 4 x sentinel nodes (single sections, without IHC)  | 4 x 1 x 3                            | 12  |
| Breast         | 1 x mastectomy for DCIS<br>1 x lymph node  | 1 x 80<br>1 x 8                      | 88  |
| Breast         | 1 x WLE for unifocal, invasive, cancer and IHC<br>2 x sentinel nodes<br>4 x cavity shave margins   | 1 x 80<br>-<br>1 x 40                | 120 |
| Breast         | 1 x mastectomy for unifocal malignancy and ANC<br>1 x contralateral nipple Bx  | 1 x 100<br>1 x 24                    | 124 |
| Cardiovascular | 1 x cardiac valve<br>1 x lymph node excision   | 1 x 16<br>1 x 8                      | 24  |
| Cardiovascular | 2 x non-ischaemic cardiac Bx<br>1 x thrombus   | 2 x 80<br>1 x 6                      | 166 |
| Cardiovascular | 1 x pericardial tissue<br>1 x thymus (incidental)<br>1 x lymph node excision<br>1 x cardiac valve  | 1 x 16<br>1 x 8<br>1 x 8<br>1 x 16   | 48  |
| Cytology       | 1 x urine cytology<br>1 x ureteric washings  | 1 x 8<br>1 x 12                      | 20  |
| Cytology       | 1 x thyroid FNA (4 slides)<br>1 x lymph node FNA (2 slides)  | 1 x 24<br>1 x 24                     | 48  |
| Cytology       | 1 x pancreatic FNA (4 slides)<br>1 x needle washings from FNA<br>1 x ascitic fluid (3 slides)  | 1 x 24<br>1 x 12<br>1 x 24           | 60  |
| Cytology       | 1 x thyroid FNA (4 slides)<br>1 x pleural fluid (2 slides)<br>1 x lymph node FNA (1 slide)   | 1 x 24<br>1 x 24<br>1 x 24           | 72  |
| Cytology       | 2 x EBUS lymph node FNA (2 slides each)<br>2 x needle washings with FNAs<br>2 x bronchial brushings (2 slides each)<br>2 x bronchial washings (1 slide each) | 2 x 24<br>2 x 12<br>2 x 16<br>2 x 16 | 136 |
| Cytology       | 1 x lung FNA (4 slides)<br>3 x EBUS lymph node FNAs (2 slides each)  | 1 x 24<br>3 x 24                     | 96  |
| Cytology       | 1 x parotid gland FNA (4 slides)<br>1 x thyroid cyst FNA (1 slide)<br>1 x lymph node FNA (1 slide)   | 1 x 24<br>1 x 24<br>1 x 24           | 72  |
| Cytology       | 1 x biliary brushing (2 slides)  | 1 x 16                               | 64  |

|           |  |                                      |     |
|-----------|--|--------------------------------------|-----|
|           | 1 x pancreatic FNA (4 slides)<br>1 x lymph node FNA (2 slides)   | 1 x 24<br>1 x 24                     |     |
| Cytology  | 1 x bronchial brush (3 slides)<br>1 x bronchial brush (1 slide)<br>1 x bronchial wash (1 slide)<br>1 x bronchial wash (2 slides) | 1 x 24<br>1 x 16<br>1 x 16<br>1 x 16 | 72  |
| Endocrine | 1 x thyroid lobectomy for Thy 3f<br>1 x single lymph node excision   | 1 x 60<br>1 x 8                      | 68  |
| Endocrine | 1 x thyroidectomy for malignancy<br>1 x bilateral neck dissection  | 1 x 120<br>-                         | 120 |
| Endocrine | 1 x thyroidectomy (prophylactic)<br>1 x lymph node excision<br>1 x skin cyst excision  | 1 x 40<br>1 x 8<br>1 x 6             | 54  |
| GI        | 4 x colon Bx   | 1 x 24                               | 24  |
| GI        | 1 x oesophagectomy<br>2 x donuts<br>1 x HER-2 IHC<br>2 x frozen sections (1 section each)  | 1 x 80<br>-<br>-<br>2 x 24           | 128 |
| GI        | 1 x colectomy synchronous cancer<br>1 x ascitic fluid  | 1 x 100<br>1 x 24                    | 124 |
| GI        | 1 x gallbladder<br>1 x appendix for appendicitis<br>1 x duodenal Bx  | 1 x 8<br>1 x 8<br>1 x 8              | 24  |
| GI        | 1 x partial gastrectomy for presumed GIST  | 1 x 40                               | 40  |
| GI        | 6 x colon Bx and 3 x polyps (<2 cm)<br>1 x polyp (>2 cm)   | 1 x 40<br>1 x 24                     | 64  |
| GI        | 3 x colon Bx and 1 x polyp (<2 cm)<br>1 x polyp (>2 cm)  | 1 x 24<br>1 x 24                     | 48  |
| GI        | 3 x polyps (each <2 cm)<br>1 x polyp (>2 cm)   | 1 x 16<br>1 x 24                     | 40  |
| GI        | 5 x polyps (>2 cm each)  | 5 x 24                               | 120 |
| GI        | 1 x colectomy for cancer 1 x HER2 IHC with case<br>1 x mis-match repair IHC with case  | 1 x 80<br>-                          | 80  |
| GI        | 1 x colon Bx<br>1 x HER2 IHC with above  | 1 x 8<br>-                           | 8   |
| GI        | 1 x colectomy for IBD  | 1 x 80                               | 80  |
| Gynae     | 1 x endometrial Bx<br>1 x cervical Bx  | 1 x 12<br>1 x 12                     | 24  |

|       |  |                            |     |
|-------|--|----------------------------|-----|
| Gynae | 2 x LLETZ pots (5 blocks each, total 10 blocks)  | 2 x 24                     | 48  |
| Gynae | 1 x TAHBSO for endometrial cancer<br>1 x peritoneal washings   | 1 x 60<br>1 x 8            | 68  |
| Gynae | 1 x endometrial Bx with molecular classification administration  | 1 x 12<br>1 x 24           | 36  |
| Gynae | 1 x TAH for endometrial cancer<br>2 x pelvic lymph node dissections<br>1 x omentum   | 1 x 100<br>-<br>-          | 100 |
| Gynae | 1 x endometrial Bx<br>1 x LLETZ (5 blocks)<br>5 x vulval Bx  | 1 x 12<br>1 x 24<br>1 x 40 | 76  |
| Gynae | 1 x cervical amputation<br>1 x endometrial Bx  | 1 x 8<br>1 x 12            | 20  |
| Gynae | 1 x radical hysterectomy + BSO for cervical cancer<br>2 x pelvic lymph nodes (dissections)<br>1 x omentum<br>1 x peritoneal washings | 1 x 120<br>-<br>-<br>1 x 8 | 128 |
| Gynae | 8 x vulval mapping Bx  | 1 x 60                     | 60  |
| Gynae | 1 x TAHBSO for ovarian cyst  | 1 x 24                     | 24  |
| Gynae | 1 x TAHBSO for suspected ovarian cancer<br>1 x pelvic lymph nodes<br>1 x para-aortic lymph nodes<br>1 x peritoneal washings          | 1 x 100<br>-<br>-<br>1 x 8 | 108 |
| Gynae | 1 x TAHBSO for endometrial cancer<br>1 x pelvic nodal dissection<br>1 x sentinel lymph node (6 sections)                             | 1 x 80<br>-<br>1 x 6 x 3   | 98  |
| Gynae | 1 x TAHBSO for endometrial cancer<br>2 x pelvic lymph node dissections<br>1 x omentum  | 1 x 100<br>-<br>-          | 100 |
| Haem  | 1 x lymph node – H&E & some IHC (triaging)   | 1 x 24                     | 24  |
| Haem  | 1 x lymph node – specialist Dx, with IHC, in situ hybridisation and flow cytometry   | 1 x 80                     | 80  |
| Haem  | 1 x bone marrow aspirate and trephine<br>1 x lymph node Bx, PCR and flow cytometry   | 1 x 100<br>1 x 80          | 180 |
| Haem  | 1 x spleen for trauma<br>1 x lymph node excision (triage)  | 1 x 24<br>1 x 24           | 48  |

|                    |   |                          |     |
|--------------------|---|--------------------------|-----|
| Head and neck      | 1 x laryngectomy<br>2 x neck dissections  | 1 x 160<br>-             | 160 |
| Head and neck      | 1 x lymph node excision   | 1 x 24                   | 24  |
| Head and neck      | 1 x salivary gland excision<br>1 x neck dissection<br>3 x mucosal Bx  | 1 x 120<br>-<br>1 x 40   | 160 |
| Head and neck      | 2 x tonsils for possible malignancy<br>4 x mucosal Bx   | 1 x 40<br>1 x 40         | 80  |
| Head and neck      | 1 x parotid gland Bx for neoplasia<br>2 x tonsils for infection   | 1 x 40<br>1 x 12         | 52  |
| Liver and pancreas | 1 x medical liver Bx<br>1 x urgent same day report for management   | 1 x 100<br>1 x 24        | 124 |
| Liver and pancreas | 3 x liver resections  | 1 x 60                   | 60  |
| Liver and pancreas | 8 x liver resections<br>1 x lymph node excision<br>1 x gallbladder  | 1 x 80<br>1 x 8<br>1 x 8 | 96  |
| Liver and pancreas | 1 x gallbladder cancer resection<br>1 x lymph node dissection   | 1 x 80<br>-              | 80  |
| Liver and pancreas | 1 x pancreas diagnostic Bx<br>1 x gallbladder<br>1 x duodenal Bx  | 1 x 40<br>1 x 8<br>1 x 8 | 56  |
| Liver and pancreas | 1 x Whipple's procedure and nodes<br>2 x frozen sections (3 sections each)  | 1 x 100<br>1 x 80        | 180 |
| Liver and pancreas | 1 x liver excision for presumed adenoma   | 1 x 80                   | 80  |
| Liver and pancreas | 1 x liver Bx for presumed HCC<br>1 x gallbladder  | 1 x 80<br>-              | 80  |
| Liver and pancreas | 3 x frozen section episodes for margins (including macroscopy) – each 1 section<br>1 x liver for cholangiocarcinoma and lymph nodes | 3 x 24<br>1 x 80         | 152 |
| Lung               | 1 x frozen section (including macroscopy) – 3 sections<br>1 x lobectomy for cancer and LNs  | 1 x 40<br>1 x 80         | 120 |
| Lung               | 2 x frozen sections (including macroscopy) – 2 sections each<br>1 x pleural excision for neoplasia                                  | 2 x 40<br>1 x 80         | 160 |
| Lung               | 1 x bronchial Bx  | 1 x 24                   | 40  |

|       |  |                             |     |
|-------|--|-----------------------------|-----|
|       | 1 x PDL-1 in-house reporting (TPS)   | 1 x 16                      |     |
| Lung  | 1 x frozen section (including macroscopy)<br>– 3 sections<br>1 x pneumonectomy, chest wall and lymph nodes | 1 x 40<br>1 x 120           | 160 |
| Lung  | 1 x frozen section (including macroscopy)<br>– 3 sections<br>1 x wedge excision for neoplasia              | 1 x 40<br>1 x 40            | 80  |
| Lung  | 20 x PDL-1 IHC batch reporting (TPS)   | 20 x 16                     | 320 |
| Lung  | 2 x bronchial Bx<br>1 x lymph node excision<br>1 x pleural Bx  | 2 x 24<br>1 x 8<br>1 x 40   | 96  |
| Lung  | 4 x lymph nodes for staging  | 1 x 8                       | 32  |
| Renal | 1 x medical renal biopsy<br>1 x EM for interpretation  | 1 x 120<br>1 x 24           | 144 |
| Renal | 1 x transplant renal biopsy<br>1 x urgent same day provisional report<br>1 x EM                            | 1 x 120<br>1 x 24<br>1 x 24 | 168 |
| Skin  | 5 x skin cysts   | 5 x 6                       | 30  |
| Skin  | 2 x BCC excision (therapeutic)   | 2 x 24                      | 48  |
| Skin  | 1 x punch Bx for BCC (non-therapeutic)<br>1 x punch Bx for inflammatory skin                               | 1 x 8<br>1 x 40             | 48  |
| Skin  | 15 x skin cysts – therapeutic  | 15 x 6                      | 90  |
| Skin  | 2 x atypical naevi excisions   | 2 x 24                      | 48  |
| Skin  | 1 x punch Bx for lentigo maligna<br>1 x punch Bx for BCC (non-therapeutic)<br>1 x skin cyst                | 1 x 40<br>1 x 8<br>1 x 6    | 54  |
| Skin  | 1 x inflammatory skin<br>1 x immunofluorescence  | 1 x 40<br>1 x 40            | 80  |
| Skin  | 2 x skin excisions for BCC (therapeutic)<br>2 x skin excisions for SCC (therapeutic)<br>1 x skin Bx for AK | 2 x 24<br>2 x 24<br>1 x 8   | 104 |
| Skin  | 1 x skin excision for melanoma (therapeutic)   | 1 x 60                      | 60  |
| Skin  | 1 x benign skin excision<br>1 x inflammatory skin Bx   | 1 x 6<br>1 x 40             | 46  |
| Skin  | 2 x benign skin excisions<br>1 x punch Bx for lentigo maligna  | 2 x 6<br>1 x 40             | 52  |
| Skin  | 1 x excision for dysplastic naevus found to be melanoma  | 1 x 24                      | 24  |

|             |   |  |     |
|-------------|---|--|-----|
| Skin        | 1 x benign skin excision found to be dysplastic naevus  | 1 x 6  | 6   |
| Skin        | 3 x sentinel nodes for known melanoma<br>1st is 1 block (8 sections)<br>2nd is 2 blocks (8 and 16 sections)<br>3rd is 1 block (12 sections) | 1 x 3 x 8<br>1 x 3 x 8<br>1 x 3 x 16<br>1 x 3 x 12 | 120 |
| Soft tissue | 2 x lipomas<br>2 x lymph node excisions   | 2 x 12<br>2 x 8                                    | 40  |
| Soft tissue | 1 x specialist Bx of soft tissue mass<br>1 x lymph node excision  | 1 x 80<br>1 x 8                                    | 88  |
| Soft tissue | 1 x core Bx of soft tissue mass with in situ hybridisation and cytogenetics   | 1 x 80   | 80  |
| Soft tissue | 2 x bone curettings for metastases  | 2 x 24   | 48  |
| Soft tissue | 1 x primary bone excision for cancer  | 1 x 10   | 100 |
| Urology     | 15 x prostatic Bx   | 1 x 40<br>1 x 8                                    | 48  |
| Urology     | 45 x prostatic Bx   | 1 x 40<br>7 x 8                                    | 96  |
| Urology     | 1 x radical nephrectomy<br>1 x TURBT (8 blocks)   | 1 x 80<br>1 x 40                                   | 120 |
| Urology     | 1 x radical cystectomy and nodes<br>1 x vulval Bx   | 1 x 120<br>1 x 16                                  | 136 |
| Urology     | 1 x bladder Bx<br>60 x prostatic Bx   | 1 x 16<br>1 x 40<br>10 x 8                         | 136 |
| Urology     | 1 x TURP (5 blocks)   | 1 x 24   | 24  |
| Urology     | 1 x TURP (7 blocks)<br>1 x bladder Bx   | 1 x 40<br>1 x 16                                   | 56  |
| Urology     | 1 x TURBT (10 blocks)<br>1 x bladder bed Bx (1 block)<br>10 x prostatic Bx  | 1 x 40<br>-<br>1 x 40                              | 80  |
| Urology     | 1 x radical prostatectomy and nodes<br>1 x skin cyst<br>1 x frozen section (including macroscopy)<br>– 1 section                            | 1 x 120<br>1 x 6<br>1 x 24                         | 150 |
| Transplant  | 1 x cardiac transplant Bx<br>1 x on the day urgent provisional report   | 1 x 40<br>-  | 40  |
| Transplant  | 1 x lung transplant Bx (including urgent report)<br>1 x transplant BAL and special stains   | 1 x 80<br>1 x 40                                   | 120 |

|            |   |                   |     |
|------------|---|-------------------|-----|
| Transplant | 1 x pancreatic transplant Bx<br>1 x on the day urgent provisional report        | 1 x 100<br>1 x 24 | 124 |
| Transplant | 1 x small bowel stoma transplant Bx<br>1 x on the day urgent provisional report | 1 x 100<br>1 x 24 | 124 |

## Appendix E      Quality assurance direct clinical care activities

In the previous edition of this document, it was recommended that QA should be recorded as a separate DCC session in the job plan for full-time posts. These activities will now be incorporated in the microscopy points and within the recommended work rate.

A few examples of the types of activities included in a QA session are:

- telephone or email conversations with clinicians or other professionals regarding a specimen/patient
- finding up-to-date information on a case, looking in textbooks and conducting a literature search
- conferral time – presenting the case for a second opinion or discussing a case with another pathologist
- reviewing previous biopsies for comparison with those more recent
- administration time related to specimens
- discussion with laboratory about QA matters relating to specific cases; for example, if a case requires repeat immunostaining or the need to re-orientating a block
- time taken in reassessing a complex case.

The QA session has been removed as a discrete entity in this guidance as the pilot study confirmed it was not fully implemented in numerous departments, resulting in a significant lack of equity between pathologists' workloads. Instead, the QA time has been integrated into the workload points and recommended work rate, thus ensuring every pathologist gets similar administration time per point (which includes time to give, and to receive, internal opinions).

Any local decisions made to automatically retain the previous QA session in the job plans (despite the contrary recommendations in this document) would require those departments to implement a higher working rate for the remaining diagnostic reporting sessions. This would be a backstop position to ensure that fairness and equality is maintained across all pathologists (retaining the same time value of 1 workload point). This would be needed as additional times have already been accommodated in these workload points.

This could only be achieved fairly by increasing the recommended work rate directly in line with the impact of the QA session, as illustrated below in Table E1.

There may be circumstances, however, where additional administration time may still be required and job planned appropriately; for example, if a department has to outsource a significant proportion of the low complexity, routine specimens, while retaining the high complexity workload, due to insufficient capacity. Not reporting the full spectrum of work for a specialty generally results in additional work being requested, as well as additional internal opinions and other administrative work. Another example could be where an individual in a department receives a much higher than average (to their other colleagues) number of internal consultations from their colleagues, perhaps due to their specific regional experience in that diagnostic area, vacancies and other adverse factors within the department. Significant deviations from the recommended DCC/SPA splits may also require workload rate amendments, dependent on group diary exercises.

**Table E1: Examples of recommended work rates depending on the inclusion, or exclusion, of QA sessions in job plans in new guidance.**

| <b>Number of diagnostic sessions</b> | <b>Recommended work rate if no separate QA DCC session given (as recommended)<sup>a</sup></b> | <b>Recommended work rate with 1 separate QA session still given in DCC total<sup>a</sup></b> |
|--------------------------------------|---|--|
| 5.0                                  | 240 points per PA   | 300 points per PA exc. QA  |
| 5.5                                  | 240 points per PA   | 293 points per PA exc. QA  |
| 6.0                                  | 240 points per PA   | 288 points per PA exc. QA  |
| 6.5                                  | 240 points per PA   | 284 points per PA exc. QA  |
| 7.0                                  | 240 points per PA   | 280 points per PA exc. QA  |

## Notes

- a. This uses the recommended work rate for substantives based on appropriate working conditions of 60 points per hour. A reduced departmental rate after group diary exercises due to suboptimal conditions would be similarly represented in the adjusted rate if a QA session was retained.

## Why is this backstop position important?

As an illustrative example only, in the 3rd and 4th editions of this document, a specimen worth 3 points (4th edition) would get 20 minutes average time for reporting. If a pathologist has a standard QA session on top, in an adequately resourced department, it would mean between 20 and 25 minutes may be given for that case, depending on job plans.

**Table E2: How the job plan and QA session could affect allocated time.**

| <b>Diagnostic PA (including any QA PA included)</b> | <b>Time per 3-point case if no QA session is given</b> | <b>Time per 3-point case if QA session is given</b> |
|---|--|---|
| 5.0   | 20 minutes   | 25 minutes  |
| 6.0   | 20 minutes   | 24 minutes  |
| 7.0   | 20 minutes   | 23 minutes  |

If, under the new recommendations, specimen type was felt to have been underscored for its typical complexity, it could now be given 40 points, which translates into 40 minutes of time for the reporting, QA activities and administration (when working at 60 points per hour). This indicates a 60–100% increase on the time given on the 4th edition of this document, depending on the inclusion/exclusion of a QA session and the number of sessions in the job plans.

If some units were still keen to retain a QA session, they would be allocating 47–50 minutes of time for a 40-point case (depending on the number of diagnostic sessions in the job plans). This situation would result in the same inequity issues with the QA session as seen in the 4th edition, if kept in this document: some pathologists would receive 40 minutes for each case, while others could receive 47–50 minutes for the same specimen type (18–25% increase).

To prevent this situation from happening, an increased work rate would be required for retaining a separate QA session, to ensure that the specimen maintains a 40-minute value per case across all departments.

It must be remembered that the workload points for each specimen type assume that many of the cases take less time to complete than the absolute points value, but also that a reasonable minority of cases will take slightly more time than the absolute points value. A further small proportion will take a significant amount of time (greatly more than their allocated values), due to their complexity, need for extensive additional investigations, administration and second opinions.

A specimen's value is an average value that tries to encompass this huge variation in the time needed to report individual cases and should also be measured over an extended period of time.

## Appendix F      Workload distribution examples

There is, without doubt, great variation in how departmental workloads are distributed in departments across the UK. Such variation is often multifactorial and often involves historical aspects, as well as local practical operational issues, the nature of the work, the degree of specialisation, local turnaround pathway expectations and the overall capacity to demand balance.

The 3 main categories of workload distribution include 'pull', 'pull-push' and 'push', depending on who initiates the distribution of the work to the pathologist.

The pure pull method usually depends on the pathologist reporting cases at times, and volumes, that best suit them. The push method relies on the laboratory allocating work out for reporting, with the amount and timing dependent on the 'house rules' of the department, taking to account their sessional commitments, specialty interests, urgency of the work and the number of staff in work.

A hybrid pull-push model is more of an intermediate position, where a proportion of work (usually core work, such as urgent biopsies and resections) is allocated to the pathologists by the laboratory. This is then 'topped up' by the non-urgent, routine biopsies, as determined by pathologists, depending on their other commitments.

Pulling all the work at the discretion of the pathologists allows them to report diagnostic work at the time most convenient time for them, i.e. when they have no other commitments, resulting in less 'dead time' once they have received the work. This can, at times, lead to better staff morale and a more rapid 'at the desk' turnaround, given that the load and frequency can be better controlled by the pathologist. Close monitoring of such a system is sometimes required, to ensure that all urgent work is continuously reported and that all pathologists are cognisant of keeping ahead of where they should be using workload points over the year, while encouraging day-to-day flexibility.

Pushing all the work onto the pathologists in a rigid manner can be problematic, especially when there are unpredictable volumes and the timing of work has no bearing on the pathologist's other commitments, resulting in longer 'at the desk' turnaround. However, it does take the responsibility of trying to determine whether sufficient workload points have been received for contracted sessions away from the pathologist, as all work is usually covered on a more rostered basis.

A hybrid pull–push method is often a way of benefiting from the best of both ends of the distribution spectrum, as well as minimising suffering from any of their potential disadvantages.

The WG at this specific time has no specific preference or recommendation to fellows regarding how their departmental workload should be distributed, as all systems have pros and cons with regards to flexibility, safety and efficiency issues.

Further guidance on how to distribute workload in departments is likely to appear when this document is evaluated within 12 months.

The key aspect that measures the success of any workload distribution system is whether it delivers maximum throughput for the given clinical sessions in the department, while at the same time fully protecting pathologists from the dangers of overwork and enabling them to deliver all their job-planned sessions (both DCC and SPA) within their contracted time.

Workload points are most effective when they are used over a long reference period. This gives pathologists the flexibility to work intensively, depending on their other commitments and the amount of leave taken in the department.

An extended period (such as 6 or 12 months) eliminates any need for minimum or maximum points to be completed on a daily or weekly basis. This recognises the continuous variation that exists in the ability of individuals to report a specific number of workload points, with some weeks having more workload points reported than the expected weekly average, and other weeks having fewer workload points reported than the expected weekly average. When the time-based diaries and the points worked are significantly discordant with each other (for example, more than 10%) over an agreed reference period, a job planning review meeting would be recommended to either amend the expected working rate or the number of expected weekly reporting diagnostic sessions.

The WG does not feel that there is any justification for departments to mandate daily minimum point outputs by pathologists, or for individual pathologists to rigidly cap their daily points output, due to this wide variation in what can be reasonably achieved on a daily basis.

## Examples to illustrate principles of workload points distribution

The following examples illustrate several potential ways of distributing workload points based on the individual sessions of pathologists and their areas of interests. These are not meant to be comprehensive or exhaustive and do not represent any specific individual's job plan.

A robust internal system to record and monitor daily workload allocation, appropriately adjusted when individuals deviate above or below agreed thresholds, can result in maximum productivity for the employer. It can also deliver maximum flexibility and alignment with the job plans of individuals and, as a result, better staff morale.

### Example A: Diagnostic reporting sessions (6 PA per week [pw])

Expected annualised workload points (42 working weeks in the year):

$$6 * 240 * 42 = 60,480 \text{ points}$$

Expected workload points over 3 months (typically 10.5 working weeks):

$$60,480 * (3/12) = 15,120 \text{ points}$$

Running workload points over 3 months at a time, with a 'pull system'.

Average workload points to do per working day (pathologists are expected to pull all their work when they are free to take work, rather than receive it in a rigid manner):

$$15,120 / (13 * 5 * 42/52) = 288 \text{ points, average, per day, if not on leave}$$

*There is likely to be a wide range of how many points are actually done per working day*

### Example B: Diagnostic reporting sessions (5 PA pw)

'House rules' are that weekly points are to be completed over 3 months, with 10% margin either side.

Expected average weekly points to be done, assuming a 42-week year

$$5 * 240 * 42 / 4 = 10,080 \text{ points expected (9,164 to 11,088 points with a 10% margin)}$$

### Example C: Diagnostic reporting sessions (6 PA pw)

Expected points over 3 months (assuming no leave taken):

$$6 * 240 * 13 = 18,720 \text{ points}$$

4 weeks are taken for study and annual leave, leaving 9 full working weeks.

Expected points over 9 full working weeks:

Average sessional commitment: GI 2 PA pw, Skin 1 PA pw, Breast 3 PA pw (with 10% margin).

$$9 \text{ weeks of work} = 12,960 \text{ points}$$

*Expected range with 10% margin would be 11,664 to 14,256 points (GIT 4,320 points, skin 2,160 points, breast 6,480 points) typically worked over a full 3-month period, with weekly fluctuations in the proportions*

*(GIT 3,888 to 4,752 points range, skin 1,944 to 2,376 points and breast 5,832 to 7,128 points typically expected to be worked over 3 months, with 10% margin to respond to departmental needs and leave cover in the different specialties)*

### Example D: All pathologists on 7.5 PA pw (2.5 SPA contracts in the department)

Expected annualised DCC points (all activities):

$$\text{Expected annualised DCC points (all activities)} = 7.5 * 42 * 240 = 75,600 \text{ points}$$

$$\text{Gynae} = 2.5 / 7.5 * 75,600 = 25,200 \text{ points over 12 months}$$

$$\text{Lung} = 2.5 / 7.5 * 75,600 = 25,200 \text{ points over 12 months}$$

$$\text{Head and neck} = 2.5 / 7.5 * 75,600 = 25,200 \text{ points over 12 months}$$

Gynae 2.5 PA pw, lung 2.5 PA pw, head and neck 2.5 PA pw (includes all reporting and MDT meetings)

Gynae MDT meeting: 5 hours for preparation, attendance and post-meeting administration:

$$5 * 60 = 300 \text{ points}$$

Lung MDT meeting: 3 hours for preparation, attendance and post-meeting administration:

$$3 * 60 = 180 \text{ points}$$

Head and neck MDT meeting: 4 hours for preparation, attendance and post-meeting administration:

$$4 * 60 = 240 \text{ points}$$

A 42-week year should aim to have an average of 360 points (120 for gynae, 120 for lung and 120 for head and neck), all MDTs included, for each working day. However, the day-to-day work will vary, dependent on matters such as colleagues on leave and fluctuating specialty workloads, with all urgent work pushed out to the pathologists but routine biopsies being pulled when convenient.

Table F1 illustrates how cumulative daily monitoring could be used to ensure pathologists receive enough workload for each of their interests over time.

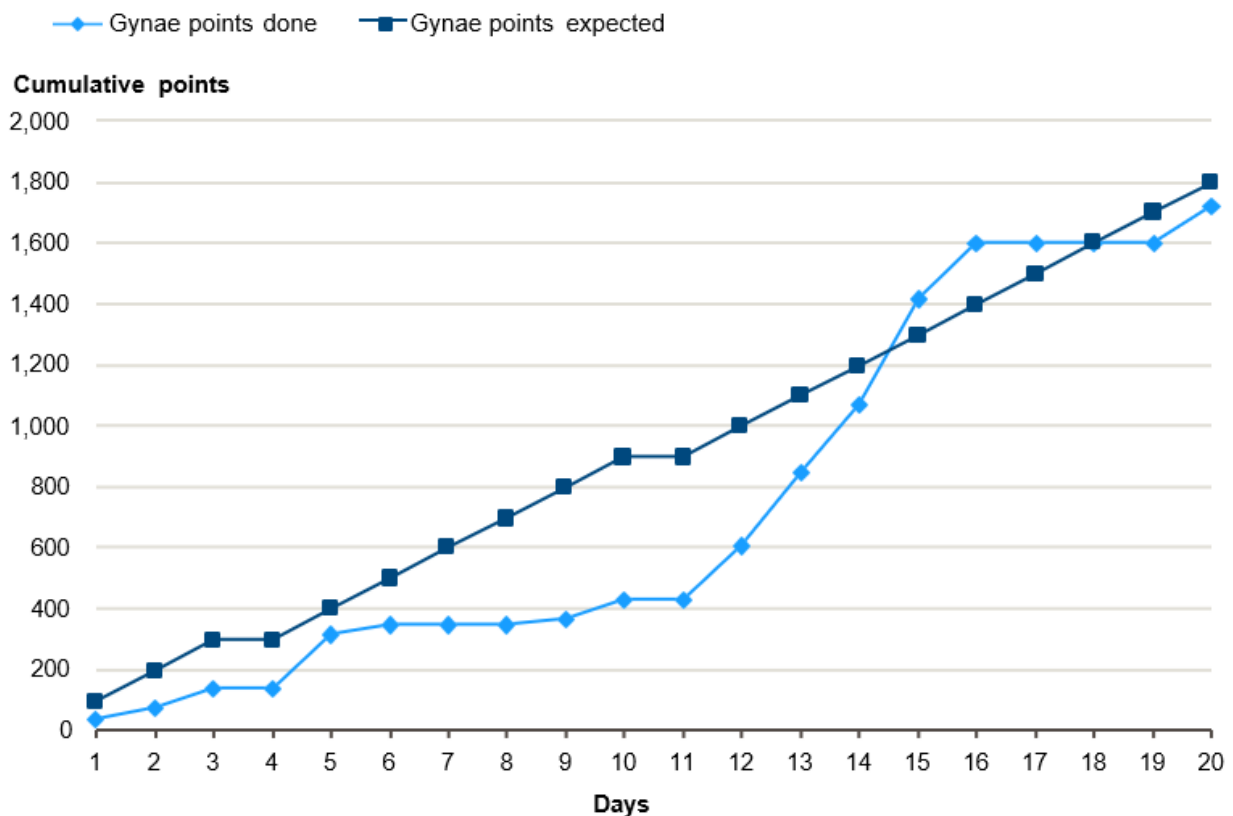
**Table F1: Daily cumulative subspecialty total data. H&N: Head and neck.**

| Day | Gynae points done | Gynae cumulative balance | Lung points done | Lung cumulative balance | H&N points done | H&N cumulative balance |
|-----|-------------------|--------------------------|------------------|-------------------------|-----------------|------------------------|
| 1   | 40                | -80                      | 0                | -120                    | 250             | 130                    |
| 2   | 40                | -160                     | 40               | -200                    | 220             | 230                    |
| 3   | 60                | -220                     | 60               | -260                    | 260             | 370                    |
| 4   | LEAVE             | LEAVE                    | LEAVE            | LEAVE                   | LEAVE           | LEAVE                  |
| 5   | 180               | -160                     | 20               | -360                    | 180             | 430                    |
| 6   | 30                | -250                     | 0                | -480                    | 320             | 630                    |
| 7   | 0                 | -370                     | 150              | -450                    | 180             | 690                    |
| 8   | 0                 | -490                     | 20               | -550                    | 240             | 810                    |
| 9   | 20                | -590                     | 100              | -570                    | 360             | 1050                   |
| 10  | 60                | -650                     | 60               | -630                    | 120             | 1050                   |
| 11  | LEAVE             | LEAVE                    | LEAVE            | LEAVE                   | LEAVE           | LEAVE                  |
| 12  | 180               | -590                     | 0                | -750                    | 50              | 980                    |
| 13  | 240               | -470                     | 20               | -850                    | 150             | 1010                   |
| 14  | 220               | -370                     | 60               | -910                    | 100             | 990                    |
| 15  | 350               | -140                     | 40               | -990                    | 0               | 870                    |
| 16  | 180               | -80                      | 20               | -1090                   | 220             | 970                    |
| 17  | 0                 | -200                     | 100              | -1110                   | 100             | 950                    |
| 18  | 0                 | -320                     | 180              | -1050                   | 80              | 910                    |
| 19  | 0                 | -440                     | 220              | -950                    | 60              | 850                    |
| 20  | 120               | -440                     | 340              | -730                    | 100             | 830                    |

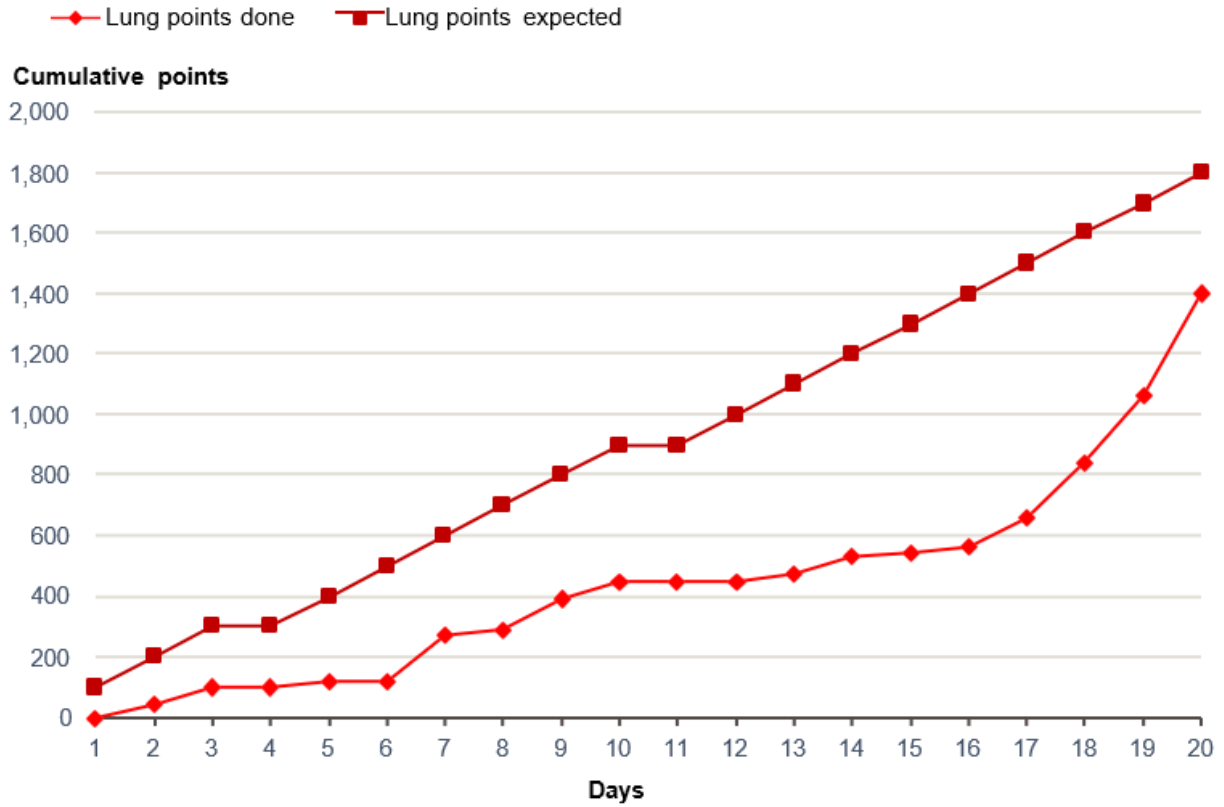
Including MDT work means better representation of real-time work of pathologists, reflected with usually less surgical work when covering MDT-related work and more surgical work when not covering MDT-related work.

Figures F1–F3 show that head and neck work was the main focus at the start of the roster, due to covering large resections and MDT meetings, with less gynae and lung work undertaken. This then pivots more towards gynae resections and finally lung resections. After 4 weeks the table shows more lung and gynae work will be done at some point, to recalibrate the points balance and monitoring this over 3 months would ensure the job plan split was appropriately maintained.

**Figure F1: Cumulative gynae points worked versus expected for job plan.**



**Figure F2: Cumulative lung points worked versus expected for job plan.**



**Figure F3: Cumulative head and neck (H&N) points worked versus expected for job plan.**

