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Unveiling documentation deficiencies: a clinical audit of histopathology request forms at a tertiary care hospital

Muhammad Daoud Tariq, MBBS^a, Hafiz Muhammad Hamza, MBBS^b, Areeba Ahsan, MBBS^a, Tariq Sarfraz, FCPS, FRCPath^c, Muhammad Muiz Malik, MBBS^a, Saba Aneeqa, FCPS^c, Ayaz Ahmed Awan, MBBS^a, Digbijay Kunwar, MBBS^d, Haissan Iftikhar, MSc, MRCS, FCPS, FRCS, FEBORL^e

Introduction: Accurate histopathology request forms are essential for effective diagnosis and treatment. This audit assessed the completeness of these forms at Fauji Foundation Hospital, aiming to identify and address documentation gaps.

Methods: A retrospective review of 300 histopathology request forms from January to June 2024 was conducted. Forms were evaluated for completeness in patient details, hospital admission, biopsy information, and clinical notes. SPSS software was used for data analysis, and an educational intervention was implemented based on initial findings.

Results: The audit revealed high compliance for patient profile details but low reporting of patient contact information (39.7%). While hospital admission and biopsy details were well-documented, clinical notes were incomplete in 27.3% of cases. Post-intervention improvements included better documentation of patient contact details and biopsy nature.

Conclusion: The audit highlights the need for thorough and accurate histopathology request forms. Improved documentation practices, supported by ongoing education, are crucial for enhancing diagnostic accuracy and patient care.

Keywords: histopathology, histopathology request forms, operative findings, quality improvement study, surgically resected

Introduction

Pathological examination of surgically resected tumors remains the definitive method for diagnosing various conditions, including cancers, autoimmune diseases, infections, and other disorders where lab tests or imaging alone are inconclusive. These forms serve as a vital communication tool between the surgical team and the pathology department, ensuring that pathologists receive all necessary clinical and procedural information to accurately assess the specimen^[1]. In many healthcare settings, the filling of histopathology request forms is often seen as

^aDepartment of Internal Medicine, Foundation University Medical College, Islamabad, Pakistan, ^bDepartment of General Surgery, Foundation University Medical College, Islamabad, Pakistan, ^cDepartment of Pathology, Foundation University Medical College, Islamabad Pakistan, ^dDepartment of Medicine, Bagahi Primary Healthcare Center, Birgunj, Nepal and ^eNHS Foundation Trust, University Hospitals Northamptonshire, Northampton, United Kingdom

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M.D.T. and H.M.H. contributed equally to this work.

Corresponding author. Address: Bagahi Primary Healthcare Center, Birgunj, Nepal. E-mail: singhsamsher164@gmail.com (D. Kunwar).

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HIGHLIGHTS

- The audit revealed a significant gap in the documentation of patient contact details. This shortfall can hinder effective follow-up and continuity of patient care.
- There was notable inconsistency in documenting clinical notes and the nature of the biopsy, which affects the completeness of the clinical context provided to pathologists and may impact diagnostic accuracy.
- Following the implementation of an educational intervention, there was a significant improvement in the documentation of patient contact details and biopsy nature, demonstrating the effectiveness of targeted training and awareness initiatives.
- The audit highlights the necessity of standardized templates and ongoing training to ensure all essential information is accurately recorded, which is crucial for high-quality pathology reports and optimal patient management.

a routine task. However, the importance of this task cannot be overstated, especially in the context of surgically resected tumors where the diagnostic process is highly dependent on the detailed clinical background, precise specimen identification, and specific requests outlined by the surgeon^[2].

Key elements that should be included in these forms range from patient demographics and clinical history to details about the tumor's anatomical location, type of surgical procedure performed, and any prior treatments such as chemotherapy or radiotherapy^[3]. Inadequate or incomplete filling of these forms can lead to significant delays in diagnosis, misinterpretation of the pathological findings, or even incorrect diagnosis, all of

which can adversely affect patient care^[4]. The incomplete filling of histopathology request forms may be due to several factors, including a lack of awareness about the importance of this information for accurate diagnosis, the pressures of a heavy clinical workload, and insufficient training in how to correctly complete the forms. These shortcomings can have serious implications for patient care, as inadequate information on request forms can lead to subpar pathology reports and delays in starting treatment^[5]. The issue of incomplete histopathology request forms has been highlighted in various studies across different healthcare systems. Research indicates that errors or omissions in these forms are not uncommon, with reported inadequacies ranging from missing patient information to the lack of essential clinical details. Such lapses can compromise the diagnostic process, leading to suboptimal patient outcomes^[1,6].

The objective of this clinical audit was to evaluate the completeness and adequacy of histopathology request forms submitted to the pathology department for the examination of surgically removed tumor specimens. By identifying gaps and inconsistencies in the information provided, the audit aims to enhance the quality of pathological diagnoses and improve overall patient management.

Material and methods

This clinical audit was carried out at the Department of Pathology, Fauji Foundation Hospital (FFH), Rawalpindi, Pakistan. Ethical approval of the study was obtained from the Ethical Review Committee of FFH, Rawalpindi, Pakistan. Histopathology request forms submitted to the Pathology laboratory between January and June 2024 were retrospectively reviewed to assess the extent to which referring clinicians properly completed the forms. The department primarily processes histopathology requests from an 850-bed tertiary care teaching hospital. This study was conducted based on the guidelines issued by the Directorate of Laboratory Medicine, The Newcastle upon Tyne Hospital, NHS Foundation Trust, United Kingdom (UK), and a detailed summary of the guidelines is depicted in the Supplemental Digital Content File, available at: http://links.lww.com/MS9/A738.

These histopathology request forms were evaluated for their completeness, accuracy, and consistency. Each request form was assessed for the presence and completeness of the information requested therein, which included:

1. Patient profile: Patient's name, age, gender, MR Number/Lab ID, and contact details.

Name: Assessed for accurate recording to avoid identification errors.

Age and gender: Verified to ensure demographic data were correctly documented for accurate clinical correlation.

MR number/lab ID: Evaluated for completeness to facilitate proper specimen tracking.

Contact details: Checked for availability to ensure communication with the patient or referring clinician, if required.

2. Hospital admission details: Admitted ward name, referral doctor name, referral doctor contact info/stamp.

Ward name: Determined to link the patient to the appropriate clinical unit.

Referring doctor's name and contact information/stamp: Verified for the presence of identifiable details to enable direct communication regarding any discrepancies or clarifications.

3. Biopsy specimen details: Date of biopsy taken, date of sending the specimen to lab, specimen received in formalin by lab, nature of biopsy, site of biopsy, size of biopsy, clinical notes by the referring doctor, reporting time by lab, nature of the lesion by histology, any operative findings provision and any clinical history and examination provision.

Date of biopsy taken: Assessed to confirm that the procedure and sample processing timeline adhered to standard practices.

Date of specimen sent to lab: Evaluated to calculate any delay between sample collection and submission.

Specimen receipt in formalin: Verified to ensure proper preservation of the specimen.

Nature and site of biopsy: Checked for accuracy and completeness, as these details are crucial for histopathological interpretation.

Size of biopsy: Recorded to assess adequacy of the sample for diagnosis.

Clinical notes: Marked complete if at least three critical elements (e.g. differential diagnosis, relevant clinical history, or preoperative findings) were provided.

Reporting time: Evaluated for adherence to standard turnaround times.

Nature of lesion: Compared with the histological findings to assess alignment with the clinical diagnosis.

Operative findings: Recorded if provided, to enhance the pathologist's understanding of the clinical context.

Provision of clinical history/examination: Checked for sufficiency to guide diagnostic interpretation.

The data on clinical notes by the referring doctor was marked complete if a minimum of three parameters were reported. The data were entered and processed using SPSS software (version 25.0; IBM Corp., Armonk, NY, USA). The confidentiality of patients' data was maintained. Categorical variables were summarized using frequencies and percentages, which were utilized to determine the completion rates of various sections of the request forms.

Results

In this audit, we examined a total of 300 histopathology request forms from various hospital departments to assess the completeness of key elements in the documentation. The average reporting time observed was 5–7 days. The gender distribution was 91.3% female, 6.7% male, and 2% missing. The forms covered a range of biopsy sites, with the most common being breast (18.9%), followed by endometrium (14.4%), gastrointestinal tract (GIT) (14.6%), and others such as gallbladder, uterus, and thyroid (Table 1). The majority of patients were admitted to the surgery (38%) and gynecology (30%) departments, with smaller percentages from medicine (9.7%), pediatrics (4.1%), and other departments. Regarding the type of lesion by histology, nonmalignant lesions were the most common, recorded in 44.3% of cases, followed by benign lesions at 37.3%, and premalignant or malignant lesions at 18.4% (Table 1)

Table 1

Distribution of biopsy sites, admitted department, and types of lesion on histopathology request forms.

	Overall distribution (n = 300)	
Histopathology request forms	N (%)	
Site of biopsy		
Breast	18.9	
Endometrium	14.4	
Gallbladder	10	
Uterus	8.7	
ENT	3.1	
GIT	14.6	
Chest	5.7	
Skin	5.7	
Ovary	4.4	
Bone marrow	7.9	
Thyroid	3.3	
Cervix	3.3	
Admitted department names		
Gynecology	30	
Surgery	38	
Medicine	9.7	
Dermatology	2.3	
Pediatrics	4.1	
Otolaryngology	5.9	
Not mentioned	10	
Type of lesion by histology		
Nonmalignant	44.3	
Benign	37.3	
Premalignant/malignant	18.4	

Result of the first audit cycle

The initial audit of histopathology request forms revealed a mixed picture of compliance across various elements. Patient profile documentation was generally strong, with patient name recorded in 100% of the forms, medical record number/lab ID in 99.5%, and age in 99%. Gender was documented in 98% of the cases, but patient contact details were notably underrepresented, appearing in only 39.7% of the forms, leaving 60.3% incomplete. Hospital admission details were well-documented, with the referral doctor's name and contact information or stamp achieving full compliance (100%). However, the admitted ward name was recorded in 90% of the forms, indicating some room for improvement. The biopsy section details showed excellent compliance, with 100% of forms documenting essential information such as the date of biopsy taken, the date of specimen submission to the lab, specimen receipt in formalin by the lab, and the site and size of the biopsy. Reporting time by the lab also achieved 100% compliance. However, the nature of the biopsy was documented in only 72% of the forms, showing an area needing improvement. The clinical notes by the referring doctor were included in 72.7% of the forms, but 27.3% lacked this information, highlighting the need for better communication and documentation practices (Table 2). The analysis of the clinical notes section reveals a more nuanced picture of documentation practices. The most prevalent combination in reporting included presenting symptoms, site, and size of the resected part, which accounted for 51.3% of cases. Additionally, 25.7% of reports focused exclusively on presenting symptoms. Other comprehensive combinations – encompassing symptoms, site,

Table 2

Compliance rates of histopathological forms report elements.

	Compliance rate (n = 300)	
Histopathology form elements	Yes, n (%)	No, n (%)
Patient profile		
Patient name	300 (100)	0 (0)
MR number/Lab ID	298 (99.5)	2 (0.5)
Gender	294 (98)	$6^{[2]}$
Age	297 (99)	3 ^[1]
Patient contact details	119 (39.7)	181 (60.3)
Hospital admission details		
Admitted ward name	270 (90)	30 ^[9]
Referral doctor name	300 (100)	0 (0)
Referral doctor contact info/stamp	300 (100)	0 (0)
Biopsy section details		
Date of biopsy taken	300 (100)	0 (0)
Date of sending the specimen to lab	300 (100)	0 (0)
Specimen received in formalin by lab	300 (100)	0 (0)
Nature of biopsy	216 (72)	84 (28)
Site of biopsy	300 (100)	0 (0)
Size of biopsy	300 (100)	0 (0)
Clinical notes by the referring doctor	218 (72.7)	82 (27.3) ^a
Reporting time by lab	300 (100)	0 (0)
Nature of the lesion by histology	300 (100)	0 (0)
Any operative findings provision	300 (100)	0 (0)
Any clinical history and examination provision	286 (95.3)	14 (4.7)

alncompletely filled or absent.

size, duration, lymph nodes, and risk factors – were included in 9.3% of the forms (Fig. 2). These results suggest a need for enhanced training and awareness to ensure comprehensive documentation of clinical history and examination findings.

Educational intervention and its impact on the second cycle

Following the audit results, an educational intervention was implemented to address the identified gaps in documentation. The intervention involved informing the heads of departments (HODs) of the concerned departments about the audit findings and emphasizing the importance of complete and accurate form documentation. Additionally, awareness flyers highlighting the key elements that required improvement were posted on all department notice boards to serve as a constant reminder to the staff.

As a result of this intervention, notable improvements were observed in the subsequent forms filling. The documentation of patient contact details increased significantly, reducing the previous 60.3% incompletion rate. Similarly, the reporting of the nature of the biopsy, which was previously documented in only 72% of forms, showed marked improvement. Clinical notes (examination and clinical history) reporting, including critical elements such as lymph node involvement, spread to adjacent structures, and risk factors, also saw enhanced compliance. This improvement underscores the effectiveness of targeted educational initiatives in enhancing the quality and completeness of histopathology request forms.

The distribution of detailed gross appearance descriptions included in histopathology reports is shown in Fig. 1. The majority of reports (54.7%) provided information on both gross appearance and size, while 17.3% detailed gross appearance alone. A combined description of gross appearance, site, and extent was found in 14.3% of reports, and 4.7% each

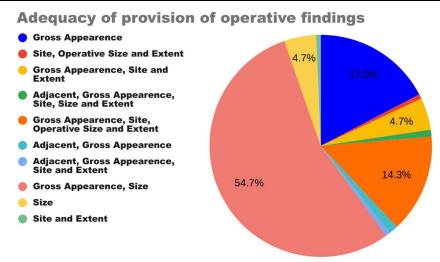


Figure 1. Assessment of operative findings provision in histopathology reports (n = 300)

included gross appearance with site, and size alone. Moreover, the distribution of reported details in histopathology forms concerning various clinical parameters is illustrated in Fig. 2. The most common combination included presenting symptoms, site, and size of the resected part, accounting for 51.3% of cases. Additionally, 25.7% of reports focused solely on presenting symptoms, while other combinations such as symptoms, site, size, duration, lymph nodes, and risk factors were noted in 9.3% of the forms.

Discussion

This clinical audit has identified a number of important gaps in the completion and quality of histopathology request forms. Histopathology request forms must be both detailed and accurate in order to direct diagnostic assessments and to achieve the

Adequacy of filling of clinical history and examination Symptoms, Site, Size, Duration, **Lymph Nodes and Risk Factors** Site. Size Site Not Mentioned 25.7% Size Symptoms, Site, Size Symptoms Size, Risk Factors Symptoms, Duration Symptoms, Size Symptoms, Risk Factors 51.3%

Figure 2. Adequacy of clinical history and examination documentation in histopathology request forms (n = 300)

best care for patients. The results of this audit show that there is substantial variability in compliance among various form items, indicating the need for specific measures to improve report writing as a whole.

The patient profile information (including the name, MR number, sex, and age of the patient) revealed that most parameters had high compliance rates above 98%. Nonetheless, patient contact data was very less reported (39.7% compliance). This is worrying since accurate contacts are necessary for follow-up and continuity of care. In addition, previous studies have noted that there is a disconnect in recording patient contact details which could lead to delayed notification and continuity of care for the patients^[7]. Auditors also discovered elevated adherence levels for information recording regarding hospital admission data and biopsy section particulars like biopsy date, specimen dispatch date, and state of the specimen upon receipt. Elements such as biopsy type and clinical notes written by the referring doctor were reported inconsistently with compliance rates at 72% and 72.7%, respectively. This finding is consistent with earlier audits in which technical details concerning processing of biopsies are often documented although clinical contextual information is often incomplete^[1]. Such a gap may impede pathologists from providing an all-rounded understanding of biopsy results^[8].

The most prevalent combination in reporting included presenting symptoms, site, and size of the resected part, which accounted for 51.3% of cases. Additionally, 25.7% of reports focused exclusively on presenting symptoms. Other comprehensive combinations - encompassing symptoms, site, size, duration, lymph nodes, and risk factors - were included in 9.3% of the forms. This is essential for staging cancer and evaluating prognosis, hence highlighting the need for detailed clinical documentation^[9]. Inadequate clinical records may result in poor or imprecise diagnoses that affect patient outcome. Studies recommend improving training and developing standard templates to include all possible clinical information in histopathology forms^[10]. Diversity in biopsy sites can be seen in Table 2 where breast (18.9%), endometrium (14.4%), and GIT (14.6%) were the most common. Such distribution illustrates a wide range of conditions requiring histopathological

evaluation in clinical practice. Between them, surgery (38%) and gynecology (30%) supplied the largest number of samples, thus maintaining the importance of these specialties in management of cases that require biopsy^[11]. In order to maintain high standards of care, accuracy, and comprehensive documentation across these departments is essential^[12].

The most frequently reported lesions were nonmalignant, at 44.3%, followed by benign (37.3%) and then premalignant/ malignant (18.4%). This emphasizes the importance of careful histopathological assessment to distinguish between nonmalignant and malignant conditions, which helps in making appropriate treatment choices^[13]. According to previous studies, it is important to differentiate well between kinds of lesions as well as to document them accurately if one wishes to know whether further intervention or follow up is needed^[14]. Notably, no formal intervention was involved in this audit; rather, a direct and practical approach, with the aim of improving compliance, was adopted. The audit team visited different hospital departments, where they interacted with healthcare providers while stressing on the importance of filling in all parts of histopathology request forms completely. This hands-on strategy played a significant role in enhancing compliance rates observed during the second phase of the audit. Such direct engagement fosters better understanding and collaboration among clinicians as supported by results from other quality improvement initiatives^[15].

The audit findings reveal gaps that require targeted actions in order to improve the quality of histopathology request forms, especially the clinical documentation and patient contact details. Establishing standardized templates for pathologists and clinicians and conducting periodic training sessions may enable them to include all relevant data. Similarly, feedback systems whereby doctors receive periodic reports on their form-completion rates have been found to enhance compliance as well as documentation quality^[16]. The findings of this audit emphasize the significance of comprehensive histopathology request forms in improving diagnostic accuracy and patient care. Proper documentation facilitates accurate clinical-pathological correlation and minimizes diagnostic delays or errors, aligning with the conclusions of prior studies that highlight the role of structured scoring systems, such as Surgical Tool for Auditing Records (STAR) and CRABEL, in evaluating and improving clinical documentation^[17,18]. Similar to the effectiveness of the STAR scoring system in identifying areas for improvement in surgical notes, this audit revealed specific deficiencies, particularly in the documentation of clinical notes and operative details, which are critical for accurate diagnosis and patient management^[17].

Moreover, the inclusion of detailed referral information, as highlighted in previous studies, fosters better communication and coordination among healthcare professionals, ultimately enhancing continuity of care and patient outcomes^[19]. Incomplete forms disrupt laboratory workflows, delay diagnosis, and impede effective communication between clinicians and pathologists. These deficiencies underline the need for implementing standardized templates and structured scoring systems to assess and improve documentation practices.

Integrating digital solutions, such as electronic histopathology request systems, could ensure the inclusion of essential patient and clinical details, similar to the proposed improvements in surgical record documentation using CRABEL scoring^[18]. Future audits should focus on assessing the impact of such interventions on diagnostic turnaround times and overall

patient care quality. Addressing documentation gaps will not only enhance the comprehensiveness and accuracy of patient records but also improve communication among healthcare professionals, ultimately leading to better patient outcomes and quality of life.

Limitations and potential improvements

In our hospital, histopathology requisition forms are manually filled and function independently, with no integration or relation to other patient records such as admission files or radiology reports. This independent approach necessitates the inclusion of all relevant clinical information directly on the requisition form to ensure accurate and comprehensive evaluation by the pathologist. While this system ensures that essential details are provided, the absence of a link to other patient records increases the potential for redundancy and documentation errors. Future initiatives could explore the feasibility of integrating histopathology requisition forms with electronic health records to streamline documentation and reduce manual entry errors, thereby improving the overall efficiency of the diagnostic process.

Conclusion

This audit highlights the need for comprehensive and accurate documentation in histopathology request forms as a prerequisite to optimal patient management. By addressing gaps like poor clinical details reporting and insufficient patient contacts, health workers can ensure that histopathological evaluations are made based on complete and correct information. Further audits should keep monitoring these parameters in order to ascertain if changes made had an effect or not; thereby ensuring histopathology reporting remains of high standard.

Ethical approval

Ethics approval was taken from the Ethical Review Committee of Fauji Foundation Hospital Rawalpindi. A copy of the ethical approval is available for review by the Editor-in-Chief of this journal on request.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

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Author contribution

Conceptualization, visualization, writing – review and editing, writing – original draft: M.D.T.; conceptualization, data curation, formal analysis: H.M.H.; writing – original draft, methodology, writing – review and editing: A.A.; writing – original draft, project administration: T.S.; writing – original draft,

methodology, investigation: M.M.M.; writing – original draft, project administration: S.A.; writing – original draft, methodology, investigation: A.A.A.; writing – original draft, writing – review and editing, supervision: D.K.; writing – original draft, writing – review and editing, supervision: H.I.

Conflicts of interest disclosure

Not applicable.

Guarantor

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Provenance and peer review

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Data availability statement

The data that support the findings of this study are available on request from the corresponding author.

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