

REVIEWER'S REPORT

Manuscript No.: IJAR-53207

Date: 08-08-2025

Title: Diagnostic Performance and Safety of Ultrasound-Guided Percutaneous Liver Biopsy

Recommendation:

Accept as it is

Accept after minor revision.....

Accept after major revision ☒

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		<input checked="" type="checkbox"/>		
Techn. Quality			<input checked="" type="checkbox"/>	
Clarity		<input checked="" type="checkbox"/>		
Significance		<input checked="" type="checkbox"/>		

Reviewer Name: Shashi Prakash

Date: 09-08-2025

Reviewer's Comment for Publication.

(To be published with the manuscript in the journal)

The reviewer is requested to provide a brief comment (3-4 lines) highlighting the significance, strengths, or key insights of the manuscript. This comment will be Displayed in the journal publication alongside with the reviewers name.

This is a useful, clinically relevant five-year single-center series showing that ultrasound-guided percutaneous liver biopsy (UG-PLB) retains high diagnostic yield for tumor indications and a very low serious complication rate. Strengths include a sizeable real-world cohort and practical technical details (cores, needle gauges). Major issues are data inconsistencies, incomplete methodological/statistical reporting, and missing ethical/funding statements — these must be fixed before publication.

Detailed Reviewer's Report

1. Use an informative but uniform title in acronyms; select one standard format (e.g., "Ultrasound-Guided Percutaneous Liver Biopsy: Diagnostic Performance and Safety — A Five-Year Single-Center Series"). In the abstract provide study design (retrospective descriptive), dates, N=233, ethics approval, primary endpoints (diagnostic yield, complications), exact numeric results with 95% CIs, and the conclusion may be minimized to a single clear take-home message regarding diagnostic yield and safety profile. Correct inconsistencies that currently exist in the abstract (duplicate biopsy numbers and yields).

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2. The introduction is good background but does duplicate material. Shorten background to 3–4 paragraphs: the role of biopsy at present, diagnostic limitations despite non-invasive investigation, and rationale for this study. Clearly state objectives: (1) outline indications, (2) calculate diagnostic yield by indication, (3) note complications and technical considerations related to yield.
3. The methodology section requires much clarification. Include the number of charts screened and excluded with precision and the reason (lack of data). Mention institutional review board approval and whether or not consent was obtained/waived. Define operator experience and number of operators, needle type and model (16G/18G brand), technique employed, whether CEUS or fusion imaging was utilized/available, and handling of specimens (fixative, immunohistochemistry use). Define how "conclusive" was defined (pathologist criteria). Outline the statistical plan clearly: which comparisons of yields were done (chi-square or Fisher exact for small numbers), p-value cutoff, confidence intervals of proportions, and any multivariable analysis performed. Specify software utilized (e.g., SPSS/Stata/R).
4. The result section are inconsistencies within that need to be resolved (e.g., counts/% for repeat biopsies, second opinions, conclusive rates vary at points). Offer descriptive statistics with SD/IQR and 95% CIs (mean age $52.6 \pm \text{SD}$; yield 74.25% [CI]). Reconcile 2.1% loss in handling with "no sampling failures". Provide a breakdown of final histological diagnoses (metastasis types, HCC, autoimmune, steatohepatitis) and specify how frequently histology altered management. For complications, provide details (time since procedure, Hb decrease, interventions). For small subgroups (HCV n=3) state low power for comparisons explicitly.
5. In discussion section strengthen comparisons to current literature and explain why tumor indications performed best (lesion targeting on ultrasound, tumor cellularity). Interpret the practical significance of a 25.7% non-contributive rate and re-review vs repeat biopsy role. Highlight sample adequacy parameters (length, portal tracts) and their relation to definitive diagnosis; if not performed, recommend including them or noting as a limitation. Balanced critique on safety and generalizability.
6. Condense the conclusion and it must be proportional to results: UG-PLB continues to be safe and diagnostically useful especially for tumor

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staging; specimen quality and strict indications enhance yield. Don't repeat numbers already in the Results.

7. Record statistical tests and cutoff values, give 95% confidence limits for all significant proportions, and consider a simple logistic regression to determine predictors of non-conclusive biopsy (indication, fragment length, number of cores, needle gauge). If not possible, indicate why.