

Department of Health and Human Services

**OFFICE OF  
INSPECTOR GENERAL**

**LIVER BIOPSIES**



AUGUST 1992    OEI-12-88-00900

# EXECUTIVE SUMMARY

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## PURPOSE

The Office of Inspector General (OIG) conducted this study to review the performance, coding, and financing of liver biopsies paid for by the Medicare program.

## BACKGROUND

Liver biopsies are used to diagnose liver disorders, such as cancer, hepatitis, and cirrhosis. Physicians can biopsy livers in a number of ways:

- 1) A needle may be inserted through the skin and between the ribs to draw a sample (a closed needle biopsy);
- 2) A surgical incision may be made into the abdomen, and a needle used to obtain a specimen (an open needle biopsy);
- 3) Following a surgical incision into the abdomen, a wedge of tissue may be excised (an open wedge biopsy).

Physicians and hospitals use two different coding systems to submit claims to Medicare for these procedures. Hospitals, using the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM), describe the biopsies as "open (wedge)" or "closed (needle)," while physicians, using a version of Physicians' Current Procedural Terminology (CPT-4) describe them as "needle" or "wedge." Neither system fully describes an open needle procedure. Coding instructions for physicians instruct them not to bill for open biopsies unless they are "separate procedures," not performed incident to another procedure.

Only open procedures contribute to determining payment to hospitals. Knowing that this is a potential area for abuse, the Health Care Financing Administration (HCFA) requires Medicare's fiscal intermediaries to review operative reports for each open biopsy claim submitted.

## METHODS

The OIG randomly selected 329 physician claims for liver biopsies, representing a 1 percent sample of 1986 claims. We obtained hospital records for 88 percent of these claims, and subjected them to medical review and coding validation.

## FINDINGS

- Liver biopsies in which the abdomen is opened but only a needle sample is taken cannot be described correctly under the current coding systems. These procedures represent 14 percent of all liver biopsies.

- Thirteen percent of physician claims for liver biopsies were miscoded.
- Thirty-one percent of payments to physicians should not have been made, either because they did not perform the procedure as billed (\$256), or because it was performed in the course of a more major procedure (\$12,618). This generalizes to \$1,287,400 in overpayments to physicians for liver biopsies in 1986.
- In only one case was payment made incorrectly to a hospital, indicating that the fiscal intermediary review of operative reports is successful.

## RECOMMENDATIONS

The HCFA should ensure that payment for all biopsies can be made correctly, by:

- Recommending that the coding structures be changed so that all biopsies, particularly open needle biopsies, can be properly classified.
- Ensuring that carriers adjust payment for open biopsies performed in the course of more major procedures.

In commenting on the draft version of this report, HCFA indicated that codes have been created to indicate biopsies performed in the course of more major surgery, with a reduction in payment. They do not believe that carriers should adhere to CPT guidelines, since HCFA can issue guidelines which supercede CPT guidelines. HCFA's comments are attached in their entirety.

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# INTRODUCTION

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## PURPOSE

The Office of Inspector General (OIG) conducted this study to review the performance, coding, and financing of liver biopsy procedures for patients covered under Medicare. This inspection analyzed a random sample of liver biopsies to determine:

- the accuracy of procedural codes assigned to liver biopsies, by physicians and by hospitals,
- the medical necessity of biopsies, and
- the accuracy of Diagnosis-Related Groups (DRGs) assigned to hospital stays in which a liver biopsy was performed.

## BACKGROUND

The Health Care Financing Administration (HCFA), recognizing the potential for misrepresentation of the procedure performed, requires Medicare fiscal intermediaries (FIs) to review the hospital operative report for each claim for an open (i.e., surgical) biopsy. Only open biopsies increase the payment a hospital receives for a patient's care.

Liver biopsy is a common procedure used to diagnose various medical conditions, including liver cancer, hepatitis, and alcoholic and biliary cirrhosis. Physicians and surgeons employ three distinct methods for performing a liver biopsy:

- 1) A needle may be inserted the skin and between the ribs to draw a sample;
- 2) A surgical incision may be made into the abdomen, and a needle used to obtain a specimen;
- 3) A wedge of tissue may be excised, through a surgical incision into the abdomen.

If a biopsy is incidental to the primary reason for opening the abdomen, Medicare would not normally pay separately for it. The guidelines given to surgeons in Physicians' Current Procedural Terminology (CPT-4), issued by the American Medical Association, discuss when a procedure may be considered a "separate procedure" for billing purposes. A wedge biopsy, when performed independently of, and not immediately related to, other services, may be listed as a separate service. The guidelines do not address open needle biopsies. The "separate procedure" guidelines

also apply to laparotomies, or incisions into the abdomen, which may be billed for only when it is performed independently of other surgery.

All three biopsy methods involve the risk of internal bleeding, and both open biopsy methods involve the additional risks of general anesthesia and surgery. Open biopsies always require general anesthesia and sometimes require the assistance of a second surgeon for the operation.

### *Coding Concerns*

When submitting claims for Medicare Part B reimbursement, physicians use the HCFA Common Procedure Coding System (HCPCS), a version of the CPT-4 coding system referred to above. The HCPCS system classifies liver biopsies as either "percutaneous needle" (47000) or "wedge (separate procedure)" (47100). This requires, in effect, that physicians misclassify open needle biopsies into one of these two categories.

When records staffs submit hospital claims for Medicare Part A reimbursement, they use the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM). That system classifies liver biopsies as either "closed (percutaneous) [needle]" (50.11) or "open biopsy of liver, wedge biopsy" (50.12). The open biopsy code was formerly referred to as "other." Thus, hospital staff could at one time properly code all liver biopsies using ICD-9-CM codes. They would have coded closed needle biopsies as "percutaneous needle" and both open needle and wedge biopsies as "other." However, this coding scheme failed to distinguish between open needle and wedge biopsies, and has now been changed so that open needle biopsies do not fit in either code. Coding instructions have been issued (through the Coding Clinic, an official source of coding information) that instruct coders to use both the needle biopsy code, 50.11 and the code for exploratory laparotomy, 54.11, for an open needle biopsy. This, however, is an exception to the general rule, cited in ICD-9-CM, which states that the exploratory laparotomy code should be omitted when the procedure is incidental to intra-abdominal surgery.

### *Financial Concerns*

The average amount allowed to the surgeon/internist in our sample for a needle biopsy was \$100.66; the average for a wedge biopsy was \$296.04.

Medicare pays hospitals based on a series of Diagnosis-Related Groups (DRGs), which are weighted by their relative resource consumption. The average DRG has a theoretical weight of 1.0000. On average, the more resource-intensive a typical case is, the higher the weight and reimbursement. In 1986, DRGs which included closed liver biopsies and a diagnosis of liver disease ranged in weight from 0.5794 to 1.1662. Those which included open liver biopsies ranged in weight from 0.7623 to 2.7760. Thus miscoding of the hospital or physician claim could have a significant impact on payment.

## METHODS

The OIG selected the sample records analyzed in this study from the 1986 BMAD procedure file containing all Part B claims for a 5 percent systematic sample of Medicare beneficiaries. The OIG selected 20 percent (or a random 1 percent sample overall) of claims for procedure codes 47000 and 47100. This process identified 329 claims, representing 273 patients and 290 biopsies. All Part B claims related to each biopsy were identified. Thirty-three patients who had only one biopsy had a second claim and three a third claim, usually for an anesthesiologist, radiologist, or assistant at surgery. Seventeen patients had two claims on different dates, so presumably had two biopsies.

In all but 17 cases, the OIG was able to identify the hospital in which the biopsy took place. (In two of the 17 cases, the physician's office confirmed that he/she had not performed a biopsy, and the Part B claim was in error.) The OIG requested the entire medical record for the admission in which the biopsy took place from each of the hospitals. In 88 percent of the sampled cases, we were able to obtain the medical record. The final sample consisted of 289 claims for 237 patients representing 253 procedures.

The Health Data Institute (HDI) of Lexington, Massachusetts, recoded the records, determined the correct DRG, and extracted clinical information. Physicians reviewed the indications for the surgery, adequacy of the workup, the post-operative monitoring, etc. The BOTEK Analysis Corporation of Cambridge, Massachusetts, analyzed the data and reported findings to the OIG.

# FINDINGS

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## PHYSICIANS MISCODE 13 PERCENT OF CLAIMS

Thirteen percent (39 of 289 claims) were miscoded, claiming a wedge was performed when actually a needle sample was taken, or vice versa, or billing when no biopsy, or no procedure at all, was performed. Of the 91 claims for wedge procedures for which records were obtained, 70 were correctly coded, 15 were actually needle procedures and 6 were liver resections. Of the 198 claims for needle procedures for which records were obtained, 180 were correctly coded, 9 were actually wedge procedures, 3 were liver aspirations, and 3 were lung biopsies. In three cases, no procedure at all was performed.

## CODING SYSTEMS DO NOT ADEQUATELY DESCRIBE 14 PERCENT OF BIOPSIES

Both coding systems provide conceptually inadequate descriptions of open biopsies. For example, medical record staff code an open needle biopsy procedure as "closed (percutaneous)[needle]," but add a code showing that the abdomen was opened. A physician performing the same procedure might have categorized it as "wedge" to emphasize that the procedure was open, and thereby created a misleading impression that a needle biopsy had not occurred.

This creates two concerns. The first, and most important, is that open needle and wedge procedures may require different amounts of medical resources. If this is true, then we may be reimbursing physicians and hospitals for these procedures incorrectly. A second concern is that distinctions which are important for research purposes cannot be made based on these codes.

## THIRTY-ONE PERCENT OF PAYMENTS TO PHYSICIANS SHOULD NOT HAVE BEEN MADE

We estimate that over \$1.2 million in overpayments for liver biopsies were made to physicians in 1986. These overpayments were due to several incorrect uses of the CPT coding system.

When a surgeon opens the abdomen only to biopsy an organ, s/he may bill either the biopsy code or a code for "laparotomy with or without biopsy(s)." If the surgeon uses the biopsy code, the laparotomy should not be coded, as its only purpose was to provide access to the organ biopsied. The laparotomy code includes all the biopsies performed in that episode. Surgeons violated this principle in 14 claims, in which both the biopsy and laparotomy were coded and paid. These 14 claims involved payments



of \$4,494 for biopsies, \$6,344 for laparotomies, and \$7659 for primary and secondary surgeries.

In 90 cases, the surgeon billed for a biopsy incidental to a more major procedure. In six claims for a resection of the liver, the liver tissue was removed because it was cancerous or damaged. A pathologist would examine it and bill for his or her services. The surgeon, however, billed twice for removing the same piece of tissue.

In those cases where the major procedure was not on the liver, a surgeon may feel that he or she should use a biopsy code to indicate one was done. This should not confer additional reimbursement, however. In the 82 claims of this type, carriers allowed \$12,618 for liver biopsies.

Of 20 claims by primary surgeons for biopsies as primary procedures, the average amount allowed was \$339. Of the 59 claims by primary surgeons for biopsies as secondary procedures, the average allowed was \$149. Thus the claims for biopsies as secondary procedures appear to reflect an acknowledgement that the biopsy is less resource-intensive than when performed as the only procedure.

We arrived at the overpayment by totaling the payments made for procedures not performed (\$256) and those that were secondary to more major procedures (\$12,618). This is 31 percent of all payments made for cases for which we obtained records (\$41,187). This implies \$1,287,400 in overpayments every year for liver biopsies.

We did not calculate overpayments for all erroneous claims, since we did not always know the correct payment amount.

#### **IN ONLY ONE CASE WAS A HOSPITAL PAID IMPROPERLY**

We obtained medical records for 47 hospital claims for open biopsy procedures. In all but one case, the medical record confirmed that an open biopsy had been performed. In one case, a closed biopsy had been done, and in three cases, while other information in the chart confirmed that an open procedure had been done, the operative report did not describe the biopsy.

This finding suggests that the FIs generally have been successful in obtaining and evaluating operative reports. In the one case referred to above, the hospital coded open biopsies of both the kidney and the liver, when in fact both biopsies were closed. Correcting the codes changed the case from DRG 442, with a weight of 1.8156, to DRG 452, with a weight of 0.8080. This is a difference in payment to the hospital of more than \$2,500.

## **MEDICAL NECESSITY OF LIVER BIOPSIES CONFIRMED**

Medical review provided little evidence of unnecessary or inappropriate biopsies. Our review found that:

- 98 percent of all biopsies were appropriate in the context of the patients' illnesses and medical histories.
- 91 percent of open needle biopsies were appropriate.
- 100 percent of all wedge biopsies were appropriate.
- 98 percent of all closed needle biopsies were appropriate.

Internists prescribed 70 percent of biopsy procedures, while surgeons prescribed the remainder (often incidental to direct observation of the liver during another procedure).

However, while the procedures were clinically appropriate in the abstract, they were questionable considering the patient's chance of survival. In virtually all the patients determined to have cancer, the physicians knew that almost to certainty based on diagnostic imaging and laboratory analysis (such as carcinoembryonic antigen (CEA) determinations). The physicians performed biopsies for absolute confirmation, and in a few cases to determine if a shunt should be inserted to deliver chemotherapy directly to the liver. In only one instance was the cancer in an early enough stage to insert a shunt. In 15 of 66 cases the patient died in the hospital. Of the 51 remaining cancer patients, 21 died within a month of discharge.

In those patients without liver cancer, the probability of survival 1 year past the biopsy was 75 percent. In the patients with cancer, however, the probability of their surviving a year was only 25 percent.

## **DRG CODING ACCURACY FLAWED**

The 289 cases for which records were obtained represented 241 unduplicated hospital stays. Only 71 percent of the cases were assigned to the correct DRG. Sixty-eight percent of the closed needle biopsies, 74 percent of the open needle biopsies, and 76 percent of the wedge biopsies were correct. This is a higher rate of incorrect coding than found in previous OIG studies, and may be related to the fact that these patients generally had multiple, complex diagnoses.

## RECOMMENDATIONS

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The HCFA should ensure that payment for all biopsies can be made correctly, by:

- Recommending that the coding structures be changed so that all biopsies can be properly classified.
- Ensuring that carriers adjust payment for open biopsies performed in the course of more major procedures.

The HCFA's policy requiring Medicare fiscal intermediaries to review operative reports for open biopsies has generally been successful and should be continued.

In commenting on the draft version of this report, HCFA indicated that codes have been created to indicate biopsies performed in the course of more major surgery, with a reduction in payment. They do not believe that carriers should adhere to CPT guidelines, since HCFA can issue guidelines which supercede CPT guidelines.

# APPENDIX

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## HCFA's Comments



JUN 10 1992

# Memorandum

Date *William Toby, Jr.*  
William Toby, Jr.  
From Acting Administrator

Subject OIG Draft Report - "Liver Biopsies," OEI-12-88-00900

To Inspector General  
Office of the Secretary

IG	<input checked="" type="checkbox"/>
PDIG	<input checked="" type="checkbox"/>
DIG-AS	<input type="checkbox"/>
DIG-EI	<input checked="" type="checkbox"/>
DIG-OI	<input type="checkbox"/>
AIG-MP	<input checked="" type="checkbox"/>
OGC/IG	<input type="checkbox"/>
EX SEC	<input checked="" type="checkbox"/>
DATE SENT	<i>6/10</i>

We reviewed the subject draft report concerning coding and payment for liver biopsies billed to the Medicare program. Liver biopsies are used to diagnose liver disorders, such as cancer, hepatitis, and cirrhosis. The coding of the method used to obtain the biopsy determines the amount that Medicare will pay the hospital or provider.

OIG found that 13 percent of the claims for liver biopsies reviewed in the study were miscoded by physicians, and that 31 percent of the payments made to physicians for these biopsies were not appropriate. OIG estimated that \$1.2 million in overpayments for liver biopsies were made to physicians in 1986. However, OIG only found one case in which a hospital was paid improperly for a biopsy procedure. The report noted that this finding suggests that Medicare fiscal intermediaries have been successful in obtaining and evaluating operative reports.

OIG recommends that coding structures for liver biopsies be changed so that all biopsies can be properly classified. OIG also recommends that the Health Care Financing Administration (HCFA) should ensure that carriers adhere to existing guidelines in the Physicians' Current Procedural Terminology (CPT-4) which provide for exclusion of open biopsies performed during the course of more major procedures. OIG states that HCFA's policy requiring Medicare fiscal intermediaries to review operative reports for open biopsies has generally been successful and should be continued. We concur with the recommended coding structure changes and the statement regarding Medicare fiscal intermediaries' review of operative reports for open biopsies. We do not agree that HCFA should ensure that carriers adhere to existing CPT-4 guidelines. Our specific comments on the recommendations are attached for your consideration.

Thank you for the opportunity to review and comment on this report. Please advise us if you agree with our position on the report's recommendations at your earliest convenience.

Attachment

JUN 11 1992

RECEIVED  
OFFICE OF THE SECRETARY  
DEPARTMENT OF HEALTH & HUMAN SERVICES

Comments of the Health Care Financing Administration  
(HCFA) on the OIG Draft Report - "Liver Biopsies,"  
OEI-12-88-00900

Recommendation 1

HCFA should recommend that coding structures be changed so that all biopsies, particularly open needle biopsies, can be properly classified.

HCFA Response

We concur. We believe changes made in 1992 to the Physicians' Current Procedural Terminology (CPT-4) complete all necessary corrective actions for this recommendation. Procedure codes were added to the CPT-4 for open needle biopsies of the liver. Different codes were established to indicate if the open needle biopsy was done separately or during a major procedure. The relative value of an open needle biopsy performed during the course of a major procedure does not include the value attributed to opening and closing the abdomen.

Recommendation 2

HCFA should ensure that carriers adhere to existing CPT-4 guidelines which provide for the exclusion of open biopsies performed during the course of more major procedures.

HCFA Response

We do not concur that payment for open needle biopsies performed during the course of more major procedures should be fully denied. The carrier medical directors have advised us that obtaining a needle biopsy of the liver during a larger procedure involves additional work and that additional payment is appropriate. However, the relative value established for add-on code 47001 (open needle biopsy performed during the course of a major procedure) does not include the relative value of the work of opening and closing the abdomen. We do agree, however, that payment should be excluded for open biopsies billed as "separate procedures" which were performed during the course of major surgery.

It should also be noted that, as of January 1, HCFA has the authority to establish uniform national definitions of services, codes to represent services, and payment modifiers to the codes. Therefore, HCFA can issue guidelines that are different from those in the CPT-4 manual. To the extent that instructions in the CPT-4 manual are

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unclear or are contrary to payment policy associated with the physician payment reform rules, HCFA will issue instructions that are different from or will clarify those in the CPT-4 manual. These HCFA guidelines would supersede any CPT-4 manual instructions. In order to ensure uniform payment policy, HCFA will annually issue a Medicare Fee Schedule data base tape which will include payment policy indicators for each code to the carriers.