



# 2023 NanoKnife Inpatient Hospital Reimbursement Guide

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# BACKGROUND

Reimbursement policies are emerging for irreversible electroporation (IRE) for the treatment of various conditions, including pancreatic cancer and liver cancer. As with all emerging medical innovations, reimbursement (codes, payment, and coverage) varies widely from payor to payor. Some payors have no reimbursement policies for these procedures, while others have non-coverage policies. Hospitals and physicians should confirm the appropriate codes for claims submission with the patient's health payor. This reimbursement information is intended to help hospitals and physicians stay up to date with reimbursement policies and properly use codes related to IRE for pancreas and liver procedures associated with the NanoKnife System.

Centers for Medicare and Medicaid Services (CMS) has assigned most of these codes under the Medicare hospital inpatient prospective payment system (IPPS), to specific MS-DRGs, reflecting the procedure along with the severity of the patient's condition and the presence of any complications and comorbidities. CMS has not established payment levels for all codes. Continued refinement in reimbursement policies occurs on an annual basis. ICD-10-PCS codes for IRE in pancreas and liver, MS-DRG assignment, and current, national average Medicare payment levels are presented in the following charts.

## OTHER RESOURCES

For NanoKnife System Physician CPT billing codes information, please refer to the [NanoKnife System CPT Billing Codes Guide](#).

For other reimbursement educational materials, guides, and resources, please visit: [Reimbursement Resources](#) website.

For information about **DIRECT**, a clinical study for stage III pancreatic cancer sponsored by AngioDynamics, Inc., please visit the [DIRECT Study](#) website. This comprehensive clinical study will evaluate the effects of irreversible electroporation (IRE) ablation technology on the treatment of stage III pancreatic cancer. Medicare has established coverage for the DIRECT clinical trial for IRE, ClinicalTrials.gov Identifier: NCT03899649.

# IRE PANCREAS PROCEDURE CODES AND MS-DRGS

## ICD-10-PCS Procedure Codes (OCT 1, 2022 to SEPT 30, 2023)

The listed ICD-10-PCS procedure codes are examples of codes that may apply for pancreas tumor ablation procedures<sup>1</sup>. Each ICD-10-PCS may be grouped under a Medicare Severity-Diagnosis Related Group (MS-DRGs)<sup>2</sup>.

ICD-10-PCS code <sup>1</sup>	ICD-10-PCS Description (Procedure Codes) <sup>1</sup>	MS-DRGs <sup>2</sup>	Surgical Category <sup>2</sup>
0F5G0ZF	Destruction of Pancreas using Irreversible Electroporation, Open Approach	405-407	Pancreas, Liver and Shunt Procedures
		628-630	Other Endocrine, Nutritional and Metabolic Procedures
0F5G3ZF	Destruction of Pancreas using Irreversible Electroporation, Percutaneous Approach	405-407	Pancreas, Liver and Shunt Procedures
		628-630	Other Endocrine, Nutritional and Metabolic Procedures
0F5G4ZF	Destruction of Pancreas using Irreversible Electroporation, Percutaneous Endoscopic Approach	-	-

## Medicare Severity Diagnosis Related Groups (MS-DRGs) (OCT 1, 2022 to SEPT 30, 2023)

The following MS-DRGs may apply to pancreatic tumor ablation procedures for Medicare patients depending on the ICD-10-PCS code<sup>2</sup>. If significant additional procedures are performed during the same inpatient admission, other MS-DRGs may apply.

MS-DRG <sup>2</sup>	MS-DRG Description <sup>2</sup>	2022 Relative Weights <sup>3</sup>	2022 National Average Payment Rates <sup>3</sup>
405	PANCREAS, LIVER & SHUNT PROCEDURES W MCC	5.5419	\$38,014.66
406	PANCREAS, LIVER & SHUNT PROCEDURES W CC	2.9297	\$20,096.28
407	PANCREAS, LIVER & SHUNT PROCEDURES W/O CC/MCC	2.2257	\$15,267.19
628	OTHER ENDOCRINE, NUTRIT & METAB O.R. PROC W MCC	3.6448	\$25,001.51
629	OTHER ENDOCRINE, NUTRIT & METAB O.R. PROC W CC	2.2438	\$15,391.35
630	OTHER ENDOCRINE, NUTRIT & METAB O.R. PROC W/O CC/MCC	1.4042	\$9,632.11

W MCC: Major Complications and Comorbidities; W CC: With Complications and Comorbidities; W/O CC/MCC: Without Complications and without Comorbidities or Major Complications and Comorbidities

## ICD-10-CM Diagnosis Codes (OCT 1, 2022 to SEPT 30, 2023)

Diagnosis codes are used by physicians and hospitals to document all patient conditions associated with the hospitalization. Secondary diagnosis codes corresponding to additional conditions at the time of admission, or developed subsequently, and which had an effect on the treatment received or the length of stay should be reported. The ICD-10-CM codes below are examples of diagnosis codes that may apply for pancreatic tumor indications<sup>5</sup>. The provider should refer to a complete coding authority to check, confirm, and report all codes that accurately describe all the patient's conditions.

Code <sup>4</sup>	ICD-10-CM Description (Diagnosis Codes) <sup>4</sup>
C25	Malignant neoplasm of pancreas
C25.0	Malignant neoplasm of head of pancreas
C25.1	Malignant neoplasm of body of pancreas
C25.2	Malignant neoplasm of tail of pancreas
C25.3	Malignant neoplasm of pancreatic duct
C25.4	Malignant neoplasm of endocrine pancreas
C25.7	Malignant neoplasm of other parts of pancreas
C25.8	Malignant neoplasm of overlapping sites of pancreas
C25.9	Malignant neoplasm of pancreas, unspecified

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# IRE LIVER PROCEDURE CODES AND MS-DRGS

## ICD-10-PCS Procedure Codes (OCT 1, 2022 to SEPT 30, 2023)

The listed ICD-10-PCS procedure codes are examples of codes that may apply for liver tumor ablation procedures<sup>1</sup>. Each ICD-10-PCS may be grouped under a Medicare Severity-Diagnosis Related Group (MS-DRGs)<sup>2</sup>.

ICD-10-PCS code <sup>1</sup>	ICD-10-PCS Description (Procedure Codes) <sup>1</sup>	MS-DRGs <sup>2</sup>	Surgical Category <sup>2</sup>
0F500ZF	Destruction of Liver using Irreversible Electroporation, Open Approach	356-358	Other Digestive System O.R. Procedures
		405-407	Pancreas, Liver and Shunt Procedures
0F503ZF	Destruction of Liver using Irreversible Electroporation, Percutaneous Approach	356-358	Other Digestive System O.R. Procedures
		405-407	Pancreas, Liver and Shunt Procedures
0F504ZF	Destruction of Liver using Irreversible Electroporation, Percutaneous Endoscopic Approach	356-358	Other Digestive System O.R. Procedures
		405-407	Pancreas, Liver and Shunt Procedures
0F510ZF	Destruction of Right Lobe Liver using Irreversible Electroporation, Open Approach	356-358	Other Digestive System O.R. Procedures
		405-407	Pancreas, Liver and Shunt Procedures
0F513ZF	Destruction of Right Lobe Liver using Irreversible Electroporation, Percutaneous Approach	356-358	Other Digestive System O.R. Procedures
		405-407	Pancreas, Liver and Shunt Procedures
0F514ZF	Destruction of Right Lobe Liver using Irreversible Electroporation, Percutaneous Endoscopic Approach	356-358	Other Digestive System O.R. Procedures
		405-407	Pancreas, Liver and Shunt Procedures
0F520ZF	Destruction of Left Lobe Liver using Irreversible Electroporation, Open Approach	356-358	Other Digestive System O.R. Procedures
		405-407	Pancreas, Liver and Shunt Procedures
0F523ZF	Destruction of Left Lobe Liver using Irreversible Electroporation, Percutaneous Approach	356-358	Other Digestive System O.R. Procedures
		405-407	Pancreas, Liver and Shunt Procedures
0F524ZF	Destruction of Left Lobe Liver using Irreversible Electroporation, Percutaneous Endoscopic Approach	356-358	Other Digestive System O.R. Procedures
		405-407	Pancreas, Liver and Shunt Procedures

## Medicare Severity Diagnosis Related Groups (MS-DRGs) (OCT 1, 2022 to SEPT 30, 2023)

The following MS-DRGs may apply to liver tumor ablation procedures for Medicare patients depending on the ICD-10-PCS code<sup>2</sup>. If significant additional procedures are performed during the same inpatient admission, other MS-DRGs may apply.

MS-DRG <sup>2</sup>	MS-DRG Description <sup>2</sup>	2023 Relative Weights <sup>2</sup>	2023 National Average Payment Rates <sup>3</sup>
356	OTHER DIGESTIVE SYSTEM O.R. PROCEDURES W MCC	4.2225	\$28,964.24
357	OTHER DIGESTIVE SYSTEM O.R. PROCEDURES W CC	2.2462	\$15,407.81
358	OTHER DIGESTIVE SYSTEM O.R. PROCEDURES W/O CC/MCC	1.3872	\$9,515.50
405	PANCREAS, LIVER & SHUNT PROCEDURES W MCC	5.5419	\$38,014.66
406	PANCREAS, LIVER & SHUNT PROCEDURES W CC	2.9297	\$20,096.28
407	PANCREAS, LIVER & SHUNT PROCEDURES W/O CC/MCC	2.2257	\$15,267.19

W MCC: Major Complications and Comorbidities; W CC: With Complications and Comorbidities; W/O CC/MCC: Without Complications and without Comorbidities or Major Complications and Comorbidities

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# IRE LIVER PROCEDURE CODES AND MS-DRGS cont.

## ICD-10-CM Diagnosis Codes (OCT 1, 2022 to SEPT 30, 2023)

Diagnosis codes are used by physicians and hospitals to document all patient conditions associated with the hospitalization. Secondary diagnosis codes corresponding to additional conditions at the time of admission, or developed subsequently, and which had an effect on the treatment received or the length of stay should be reported. The ICD-10-CM codes below are examples of diagnosis codes that may apply for liver tumor indications<sup>5</sup>. The provider should refer to a complete coding authority to check, confirm, and report all codes that accurately describe all the patient's conditions.

Code <sup>4</sup>	ICD-10-CM Description (Diagnosis Codes) <sup>4</sup>
<b>C22</b>	Malignant neoplasm of liver and intrahepatic bile ducts
<b>C22.0</b>	Liver cell carcinoma
<b>C22.1</b>	Intrahepatic bile duct carcinoma
<b>C22.2</b>	Hepatoblastoma
<b>C22.3</b>	Angiosarcoma of liver
<b>C22.4</b>	Other sarcomas of liver
<b>C22.7</b>	Other specified carcinomas of liver
<b>C22.8</b>	Malignant neoplasm of liver, primary, unspecified as to type
<b>C22.9</b>	Malignant neoplasm of liver, not specified as primary or secondary
<b>C78</b>	Malignant neoplasm of liver and intrahepatic bile ducts
<b>C78.7</b>	Secondary malignant neoplasm of liver and intrahepatic bile duct
<b>C7B</b>	Secondary neuroendocrine tumors
<b>C7B.02</b>	Secondary carcinoid tumors of liver
<b>C7B.8</b>	Other secondary neuroendocrine tumors

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# REFERENCES

1. CMS, 2023 ICD-10 Procedure Coding System (ICD-10-PCS). <https://www.cms.gov/medicare/icd-10/2023-icd-10-pcs>. Accessed November 7, 2022.
2. CMS, 2023 ICD-10-CM/PCS MS-DRG v40, Definitions Manual. [https://www.cms.gov/icd10m/FY2023-version40-fullcode-cms/fullcode\\_cms/P0001.html](https://www.cms.gov/icd10m/FY2023-version40-fullcode-cms/fullcode_cms/P0001.html). Updated October 1, 2022. Accessed November 8, 2022.
3. CMS, [CMS-1771-F] 2023 Medicare Hospital Inpatient Prospective Payment System (IPPS) Final Rule; Federal Register. <https://www.cms.gov/medicare/acute-inpatient-pps/fy-2023-ipps-final-rule-home-page>. Accessed November 7, 2022. Payment is calculated based on the national adjusted standardized amount (\$6,859.50). Actual Medicare payment rates will vary from adjustments by Wage Index and Geographic Adjustment Factor depending on geographic locality. Also note that any applicable coinsurance, deductible, and other amounts that are patient obligations are included in the payment amount shown.
4. Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS). 2022 release of International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) <https://www.cdc.gov/nchs/icd/icd-10-cm.htm>. Updated October 17, 2022. Accessed November 7, 2022.

# REIMBURSEMENT TERMINOLOGY

Term	Description
CMS	Centers for Medicare and Medicaid Services
IRE	Irreversible Electroporation (NanoKnife System)
ICD-10-CM	International Classification of Diseases, 10th Revision, Clinical Modification
ICD-10-PCS	International Classification of Diseases, 10th Revision, Procedure Coding System
IPPS	Inpatient Prospective Payment System
MS-DRG	Medicare Severity Diagnosis Related Group
W MCC	Major Complications and Comorbidities
W CC	With Complications and Comorbidities
W/O CC/MCC	Without complications or comorbidities, and without major complications and comorbidities.

# REIMBURSEMENT SUPPORT

For questions regarding coding, payment, coverage, and other reimbursement information, please contact us at: [Reimbursement@Angiodynamics.com](mailto:Reimbursement@Angiodynamics.com)

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# Indications For Use

US: The NanoKnife System with six outputs is indicated for surgical ablation of soft tissue.

## Contraindications

Ablation procedures using the NanoKnife System are contraindicated in the following cases: • Ablation of lesions in the thoracic area in the presence of implanted cardiac pacemakers or defibrillators • Ablation of lesions in the vicinity of implanted electronic devices or implanted devices with metal parts • Ablation of lesions of the eyes, including the eyelids • Patient history of Epilepsy or Cardiac Arrhythmia • Recent history of Myocardial Infarction

## Potential Adverse Effects

Adverse effects that may be associated with the use of the NanoKnife system include, but are not limited to, the following:

- Arrhythmia • Atrial fibrillation or flutter • Bigeminy • Bradycardia • Heart block or atrioventricular block • Paroxysmal supraventricular tachycardia • Tachycardia • Reflex tachycardia • Ventricular tachycardia • Ventricular fibrillation • Damage to critical anatomical structure (nerve, vessel, and/or duct) • Fistula formation • Hematoma • Hemorrhage • Hemothorax • Infection • Pneumothorax • Reflex Hypertension • Unintended mechanical perforation • Vagal Stimulation, asystole • Venous Thrombosis

Refer to Directions for Use and/or User Manual provided with the product for complete Instructions, Warnings, Precautions, Possible Adverse Effects and Contraindications. Observe all instructions for use prior to use. Failure to do so may result in patient complications. CAUTION: Federal Law (USA) restricts this device to sale by or on the order of a physician.

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