

# NANOKNIFE SYSTEM

## INPATIENT HOSPITAL REIMBURSEMENT GUIDELINES

### 2022 Inpatient Hospital Coding and Reimbursement Guidelines for Irreversible Electroporation (IRE) (Using the NanoKnife System) EFFECTIVE OCT 1, 2021

This is general reimbursement information only and is intended to assist you to comply with complex and changing reimbursement policies. It is not legal advice, nor is it advice about how to code, complete, or submit any particular claim for payment, nor intended to increase or maximize reimbursement by any third-party payor. This information has been gathered from third-party sources and was correct at the time of publication and is subject to change without notice. It is the provider's responsibility to exercise independent clinical judgment to determine appropriate coding and charges that accurately reflect all the patient's conditions and services provided. These should be recorded in the patient's medical record. The information provided here is for informational purposes only and represents no statement, promise, or guarantee by AngioDynamics concerning levels of reimbursement, payment, or charges. Payers may have their own coding and reimbursement requirements and policies. If reimbursement questions arise for a particular patient, providers should contact the payor to confirm current requirements and billing policies. All decisions related to reimbursement, including amounts to bill, are exclusively that of the provider. Providers should check and confirm coding from complete and authoritative coding sources to ensure accuracy.

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# 2022 Inpatient Hospital Coding and Reimbursement Guidelines for Pancreatic Tumor Ablation with IRE

## 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) vary 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 with the patient's health payor the appropriate codes for claims submission. This reimbursement information is intended to help hospitals and physicians stay up to date with new reimbursement policies and properly use new codes related to IRE for pancreas and liver as well as some of the procedures associated with the NanoKnife System. Medicare has established coverage for the DIRECT clinical trial for IRE.

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 is expected over the coming months. IRE codes assigned to MS-DRGs and average Medicare payment levels for the open and percutaneous approaches in pancreas and liver are presented in the following charts.

## IRE PANCREAS PROCEDURE CODES AND MS-DRGS

### ICD-10-PCS Procedure Codes (OCT 1, 2021 to SEPT 30, 2022)

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>  | MSDRGs <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 | –                   | –   |

1. CMS, 2022 ICD-10 Procedure Coding System (ICD-10-PCS). <https://www.cms.gov/medicare/icd-10/2022-icd-10-pcs>. Accessed August 23, 2021.  
2. AAPC Codify, Cross-Reference "ICD-10-PCS - MS-DRG" Accessed August 23, 2021.

## Medicare Severity Diagnosis Related Groups (MS-DRGs) (OCT 1, 2021 to SEPT 30, 2022)

The following MS-DRGs may apply to pancreatic tumor ablation procedures for Medicare patients depending on the ICD-10-PCS code<sup>1</sup>. If significant additional procedures are performed during the same inpatient admission, other MS-DRGs may apply.

| MSDRG <sup>1</sup> | MS-DRG Description <sup>1</sup>                      | 2022 Relative Weights <sup>1</sup> | National Average Payment Rates <sup>1,2</sup> |             |          |
|--------------------|--|------------------------------------|---|-------------|----------|
|                    |  |                                    | 2021  | 2022        | % Change |
| 405                | PANCREAS, LIVER & SHUNT PROCEDURES W MCC             | 5.7376                             | \$36,832.27                                   | \$37,835.51 | +2.7%    |
| 406                | PANCREAS, LIVER & SHUNT PROCEDURES W CC              | 2.8809                             | \$18,491.66                                   | \$18,997.55 | +2.7%    |
| 407                | PANCREAS, LIVER & SHUNT PROCEDURES W/O CC/MCC        | 2.1180                             | \$13,600.40                                   | \$13,966.75 | +2.7%    |
| 628                | OTHER ENDOCRINE, NUTRIT & METAB O.R. PROC W MCC      | 3.6994                             | \$23,769.20                                   | \$24,263.10 | +2.1%    |
| 629                | OTHER ENDOCRINE, NUTRIT & METAB O.R. PROC W CC       | 2.3453                             | \$15,083.85                                   | \$15,465.64 | +2.5%    |
| 630                | OTHER ENDOCRINE, NUTRIT & METAB O.R. PROC W/O CC/MCC | 1.4093                             | \$9,042.72                                    | \$9,293.36  | +2.8%    |

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

1. CMS, [CMS-1752-F] 2022 Medicare Hospital Inpatient Prospective Payment System (IPPS) Final Rule; Federal Register, Vol. 85, FR 58432. Accessed August 23, 2021. <https://www.cms.gov/medicare/acute-inpatient-pps/fy-2022-ipp-pps-final-rule-home-page>. Payment is calculated based on the national adjusted standardized amount \$6,594.31). 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.
2. [CMS-1735-F] 2021 Medicare Hospital Inpatient Prospective Payment System (IPPS) Final Rule. CMS Website. Federal Register, 85 FR 58432. <https://www.cms.gov/medicare/acute-inpatient-pps/fy-2021-ipp-pps-final-rule-home-page> Accessed Sep 18, 2020.

## ICD-10-CM Diagnosis Codes (OCT 1, 2021 to SEPT 30, 2021)

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>1</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>1</sup> | ICD-10-CM Description (Diagnosis Codes) <sup>1</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          |

1. 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) . Updated June 30, 2021. Accessed August 23, 2021. <https://www.cdc.gov/nchs/icd/icd10cm.htm#FY%202020%20release%20of%20ICD-10-CM>

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# 2022 Inpatient Hospital Coding and Reimbursement Guidelines for Liver Tumor Ablation with IRE

## IRE LIVER PROCEDURE CODES AND MS-DRGS

### ICD-10-PCS Procedure Codes (OCT 1, 2021 to SEPT 30, 2022)

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>  | MSDRGs <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   |

1. CMS, 2022 ICD-10 Procedure Coding System (ICD-10-PCS). <https://www.cms.gov/medicare/icd-10/2022-icd-10-pcs>. Accessed August 23, 2021.
2. AAPC Codify, Cross-Reference "ICD-10-PCS - MS-DRG" Accessed August 23, 2021.

### Medicare Severity Diagnosis Related Groups (MS-DRGs) (OCT 1, 2021 to SEPT 30, 2022)

The following MS-DRGs may apply to liver tumor ablation procedures for Medicare patients depending on the ICD-10-PCS code<sup>1</sup>. If significant additional procedures are performed during the same inpatient admission, other MS-DRGs may apply.

| MSDRG <sup>1</sup> | MS-DRG Description <sup>1</sup>                   | 2022 Relative Weights <sup>4</sup> | National Average Payment Rates <sup>1,2</sup> |             |          |
|--------------------|---|------------------------------------|---|-------------|----------|
|                    |   |                                    | 2021  | 2022        | % Change |
| 356                | OTHER DIGESTIVE SYSTEM O.R. PROCEDURES W MCC      | 4.3078                             | \$27,582.59                                   | \$27,406.97 | 3.0%     |
| 357                | OTHER DIGESTIVE SYSTEM O.R. PROCEDURES W CC       | 2.2685                             | \$14,485.45                                   | \$14,959.19 | 3.3%     |
| 358                | OTHER DIGESTIVE SYSTEM O.R. PROCEDURES W/O CC/MCC | 1.3491                             | \$8,606.30                                    | \$8,896.38  | 3.4%     |
| 405                | PANCREAS, LIVER & SHUNT PROCEDURES W MCC          | 5.7376                             | \$36,832.27                                   | \$37,835.51 | 2.7%     |
| 406                | PANCREAS, LIVER & SHUNT PROCEDURES W CC           | 2.8809                             | \$18,491.66                                   | \$18,997.55 | 2.7%     |
| 407                | PANCREAS, LIVER & SHUNT PROCEDURES W/O CC/MCC     | 2.1180                             | \$13,600.40                                   | \$13,966.75 | 2.7%     |

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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1. CMS, [CMS-1752-F] 2022 Medicare Hospital Inpatient Prospective Payment System (IPPS) Final Rule; Federal Register, Vol. 85, FR 58432. Accessed August 23, 2021. <https://www.cms.gov/medicare/acute-inpatient-pps/fy-2022-ipp-final-rule-home-page>. Payment is calculated based on the national adjusted standardized amount \$6,594.31). 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.
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| Code <sup>1</sup> | ICD-10-CM Description (Diagnosis Codes) <sup>1</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                              |

1. 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) . Updated June 30, 2021. Accessed August 23, 2021. <https://www.cdc.gov/nchs/icd/icd10cm.htm#FY%202020%20release%20of%20ICD-10-CM>

# 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. |

## 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.

## 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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