

**North American Association of Central Cancer Registries**

**GUIDELINES FOR ICD-O-3  
IMPLEMENTATION**

**Prepared by the**

**NAACCR ICD-O-3 Implementation Work Group**

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## 1 INTRODUCTION

These consensus guidelines, developed by the North American Association of Central Cancer Registries (NAACCR) ICD-O-3 Work Group and approved by the NAACCR Board of Directors, address implementation of ICD-O-3 for cases diagnosed on or after January 1, 2001. Members of the work group are listed below and they include standard setting organizations, central registries, and cancer registry software vendors.

Implementation of new standards is never 100 percent problem-free. The concept of ICD-O-3 was first presented to the Uniform Data Standards Committee in February 2000. The need for a revised morphology section to more accurately code current diagnoses described in the terms of the World Health Organization's Classification of Hematopoietic Neoplasms was recognized. At this time, the new manual and electronic tables were projected to be available in the summer of 2000. Unfortunately, unforeseen delays occurred at the international level that affects preparations for data collection, software upgrades, and data reporting.

NAACCR revisited the implementation issue in August 2000 and concluded that it would be better to proceed with the understanding that a coordinated plan for implementation would be developed and distributed to reporting facilities, cancer registry software vendors, and central and state cancer registries. The ICD-O-3 Work Group was formed for this purpose and it will also act as the clearinghouse for review and resolution of ICD-O-3 implementation questions during 2001 and for updates on training opportunities. If there are any questions, email them to JoAnne Sylvester at [jsylvester@facs.org](mailto:jsylvester@facs.org). Updates will be posted on NAACCR's web site ([www.naacr.org](http://www.naacr.org)), SEER's web site ([www.seer.cancer.gov](http://www.seer.cancer.gov)), and the American College of Surgeon's web site ([www.facs.org](http://www.facs.org)). The work group will advise about updates through email notices using the NAACCR listserv and mailing lists of all organizations involved.

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## 2 BACKGROUND AND IMPLEMENTATION ISSUES

### 2.1 Why ICD-O-3?

Development of ICD-O-3, an international coding scheme, has been underway for more than two years. It is an update of the morphology codes because lymphoma and leukemia codes were not adequate to code current diagnoses described in terms used by the World Health Organization's Classification of Hematopoietic Neoplasms. Topography codes have not changed. Approximately 750 new morphology terms and synonyms have been added. About one-third of these are benign and borderline conditions that do not affect most cancer registries. Of the malignant terms, 44 percent of the changes occur in the lymphomas, leukemias and lymphoreticular diseases.

### 2.2 How sweeping is the change?

The change from ICD-O-2 to ICD-O-3 is less drastic than that from ICD-O-1 to ICD-O-2.

§ About 95 percent of all cancer codes (morphology and behavior) will not change.

§ None of the coding rules will change.

§ No topography codes will be added.

§ Most of the new morphology terms will be hematopoietic and lymphoreticular, estimated at approximately 4 percent of all cancers. Many of these cases are rare and only seen at tertiary care facilities.

§ Eighteen terms will be changed from malignant to borderline and 24 codes from borderline to malignant. This change may affect some reporting requirements for cancer registries. New reportable cancers are a subset of hematopoietic cancers which are estimated to account for approximately 0.5 percent of all cancers.

§ Other changes include terms that will change morphology codes and will delete a few terms from ICD-O-2.

### 2.3 When will the ICD-O-3 manual be available?

The hard copy version of the ICD-O-3 manual has been sent to WHO for printing and is scheduled to be available in January 2001. Publication price is \$54.00 U.S. and the World Health Organization is accepting orders now. Books ordered now will be shipped as soon as they are available. SEER is checking with WHO on availability of an electronic version. Bulk purchases of ICD-O-3 are encouraged by WHO with quantity discounts up to 60%. To order in the U.S., contact:

WHO Publications Center, USA  
49 Sheridan Ave  
Albany, NY 12210  
Tel: (518) 436-9686  
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### 2.4 What about training for data collectors?

NCI SEER program staff have developed training materials in a variety of formats, including in-person workshops and print, electronic, video, and web-based training materials. Specifically:

- SEER staff and other qualified speakers are making in-person presentations about ICD-O-3 to registry professional groups throughout the country. Completed and scheduled presentations will reach registrar organizations in at least 32 states and metropolitan areas and Canadian provinces and territories. No reasonable request for an ICD-O-3 presentation will be declined if staff time and funds are available during this implementation period.

- The November issue of *Journal for Registry Management* has a detailed technical overview of ICD-O-3 for continuing education credit (CE). The Fall 2000 issue of the *NAACCR Narrative* also has a brief overview.
  - The SEER Program is developing a web-based training module to introduce the new terms and describe other features of ICD-O-3. The module is available on SEER's web site at [www.training.seer.cancer.gov](http://www.training.seer.cancer.gov) and has unrestricted and free access. A request to grant continuing education (CE) credits for this training is pending with the National Cancer Registrars Association. When approved, the CEs should be retroactive.
- § A satellite teleconference on ICD-O-3, sponsored by the SEER Program, is scheduled for January 9, 2001. It will be broadcast through the hospital satellite network. This broadcast will be heavily publicized. Information has already been released in order for registrars to identify a host location or to coordinate with other facilities or organizations to share downlink expenses. This broadcast will also be videotaped for future use in training data collectors.

## **2.5 What impact does the delayed release of the ICD-O-3 manual have on case finding on or after January 1, 2001?**

By December 31, 2000, reporting facilities are expected to develop their approved reportable list. It must include the new morphologies and exclude the morphologies that are no longer reportable.

By January 1, 2001, reporting facilities are expected to implement the new, approved reportable list for cases diagnosed on or after January 1, 2001.

The ICD-O-3 Work Group developed a detailed **ICD-O-3 Supplemental Reportable Case List** to assist reporting facilities with case finding and abstracting consistent with ICD-O-3. This list is included in Appendix A. A document entitled, Y2001 Case Finding List, can be found in Appendix B. This document, also available on the SEER Program's web site, lists ICD-9-CM codes that should be reviewed in case finding beginning in 2001, and shows the new ICD-O-3 terms that may be found under those codes.

## **2.6 What impact does the delayed release of the ICD-O-3 manual have on cancer registry software development and release?**

SEER is taking the lead to develop ICD-O-3 program conversions that will be made available to cancer registry software vendors. To assure forward and backward testing and accuracy, the release date is January 1, 2001. This schedule delays development and release of cancer registry software upgrades. Although July 1, 2001 has been estimated as the release date for software upgrades, some facilities and central/state registries may be able to move forward sooner.-

## **2.7 What are the conversion issues?**

Backward conversion of submitted data will in most cases result in the loss of the newer, more specific morphology codes.

For certain morphologies with site-specific codes, not all subgroups under the morphology heading in ICD-O-2 will be able to be forward converted (from ICD-O-2 to ICD-O-3). To ensure an accurate conversion, all terms that have changed codes should be manually reviewed. New morphology codes in ICD-O-3 that had been converted backward to ICD-O-2 will be lost in any future forward conversion to ICD-O-3.

## **2.8 How should reporting facilities and central/state registries abstract and report cases coded to ICD-O-3 in the interim?**

To facilitate a more uniform approach, the NAACCR ICD-O-3 Work Group developed consensus recommendations. These are described in detail in Section IV, NAACCR Consensus Recommendations.

**2.9 What about the 2001 Calls for Data?**

The 2001 Calls for Data for NAACCR, NPCR and SEER has occurred and is requested in Version 6 or 7. Next year the 2002 call will require submission in NAACCR Data Exchange Record Version 9. The ability of population based registries to submit data in Version 9 is dependent upon the implementation issues that are outlined in this document.

**2.10 What is the relationship between the implementation of ICD-O-3 and NAACCR's data exchange record layout, version 9?**

Version 9 of the NAACCR layout is the first version to contain data items for the new ICD-O-3 morphology codes. NAACCR decided to implement ICD-O-3 by setting up new data fields [items 522 and 523] for the ICD-O-3 histology and behavior codes, designating the old histology and behavior fields [items 420 and 430] to be used for ICD-O-2 codes only. It would be incorrect to place ICD-O-3 codes in items 420 and 430. Furthermore, all cases diagnosed in 2001 and later should have ICD-O-3 histology and behavior codes, but will probably not have ICD-O-2 codes. Pre-2001 cases, however, will likely have codes in both sets of fields: ICD-O-2 codes directly coded, and ICD-O-3 codes derived through computer conversion programs.

State cancer registry systems using the NAACCR data exchange record to send and receive abstracts will be required to use the NAACCR 9 layout in order to send and receive ICD-O-3-coded records.

### **3 STATEMENTS FROM STANDARD-SETTING ORGANIZATIONS ABOUT ICD-O-3 IMPLEMENTATION**

#### **3.1 The American College of Surgeons Commission on Cancer (CoC) Approved Hospital Registries**

Hospital programs approved the CoC will be required to use ICD-O-3 codes beginning with cases diagnosed on or after January 1, 2001. Because implementation of codes for all sites and the majority of morphologies will not change, abstracts for these cases can continue to be completed in a timely manner. Review and comparison of morphology for each case should be done prior to abstracting. If the morphology codes are the same in both the ICD-O-2 and ICD-O-3 manuals, the case may be completed using existing registry software. Only cases with codes not consistent with ICD-O-2 are impacted by the change.

Software updates may not be available to accept the standard codes until later in 2001. This may impact the CoC six-month abstracting standard. Hospitals surveyed during the first six months of 2001 will need to be current with abstracting. However, hospitals scheduled for survey in July 2001 or later will have an approved extended abstracting delay based on the month that the conversion software was made available to the registry. These hospitals will be given an additional six-month period to be fully compliant within the six-month interval.

ROADS replacement pages for general rules, morphology, and behavior codes will be available on the American College of Surgeons web site in early 2001.

#### **3.2 Centers for Disease Control and Prevention, National Program of Cancer Registries (NPCR)**

NPCR funded programs are expected to implement ICD-O-3 with cancers diagnosed on or after January 1, 2001. The implementation of SEER Summary Stage 2000 will be the same: cases diagnosed on or after January 1, 2001.

NPCR recognizes that the implementation of these new data items will be challenging. Backlogs will be likely to occur that will impact the registry's ability to process and publish data in a timely manner. NPCR encourages registries to develop appropriate plans, with input from quality control and data processing staff, to address these challenges. The goal is for a smooth implementation of ICD-O-3. **Refer to Appendix D**, NPCR-State (Territory) Specific Planning Points, for suggestions about implementing ICD-O-3 reporting at an NPCR registry.

As NPCR-funded registries develop plans and corresponding case finding lists, they need to realize in mind that the NPCR definition for a reportable cancer is identical to the SEER definition. Refer to Section 3.3 below for more information on reporting changes.

### 3.3 National Cancer Institute, SEER Registries

ICD-O-3 will be required for SEER registries on or after January 1, 2001. Details were presented to Program Directors in October 2000. A summary follows in Table 1.

<b>Term</b>	<b>ICD-O-3</b>	<b>ICD-9</b>
Polycythemia vera	9950/3	238.4
Chronic myeloproliferative disease	9960/3	238.7
Myelosclerosis with myeloid metaplasia	9961/3	238.7
Essential thrombocythemia	9962/3	238.7
Chronic neutrophilic leukemia	9963/3	205.1
Hypereosinophilic syndrome	9964/3	<b>288.3</b>
Refractory anemia	9980/3	<b>284.9</b>
Refractory anemia with sideroblasts	9982/3	<b>285.0</b>
Refractory anemia with excess blasts	9983/3	<b>285.0</b>
Refractory anemia with excess blasts in transformation [obs]	9984/3	<b>285.0</b>
Refractory cytopenia with multilineage dysplasia	9985/3	238.7
Myelodysplastic syndrome with 5q- syndrome	9986/3	238.7
Therapy related myelodysplastic syndrome	9987/3	238.7

Note: Codes in Bold Type are from the neoplasm section of ICD-9-CM

- Prostatic Intraepithelial Neoplasia (PIN III) M-8148/2 will NOT be collected.
- Pilocytic/juvenile astrocytoma M-9421 which moves from /3 to /1 will CONTINUE to be collected as a /3.
- Borderline cystadenomas M8442, 8451, 8462, 8472, 8473, of the ovaries which move from /3 to /1 will not be collected as of 1/1/2001. Previous cases will continue to have to be submitted.
- The "Determination of Subsequent Primaries of Lymphatic (Nodal and Extranodal) and Hematopoietic Diseases" table will be updated to reflect the new codes and new diseases.
- The WHO diagnosis, *B-cell chronic lymphocytic leukemia/small lymphocytic lymphoma*, is coded as 9823/3, and cross-referenced to 9670/3, malignant lymphoma, small B lymphocytic. If this WHO term is diagnosed in blood or bone marrow, code 9823/3; if diagnosed in tissue, lymph nodes or any organ in combination with blood or bone marrow, code 9670/3.

All of the recodes and edits are being updated to reflect the new ICD-O-3 codes.

### 3.4 Statistics Canada

The Provincial/Territorial Cancer Registries (PTCRs) in Canada have agreed to implement the ICD-O-3 with cancers diagnosed on or after January 1, 2001. However, there are some issues that are likely to delay the implementation and these include: needing a French translation ; edits; conversions; training; and new case finding lists.

The Canadian Cancer Registry (CCR) recognizes that the implementation of this new classification system will provide significant challenges and backlogs may occur. The CCR encourages the PTCRs to develop appropriate plans to address these challenges in order to implement ICD-O-3 as smoothly as possible.

Statistics Canada will address the issue of the need for a French translation in a joint project with the Quebec Cancer Registry. Due to the delay in producing a final ICD-O-3 in English, it is unlikely that Quebec would be able to submit their 2001 cancer cases using the ICD-O-3.

It is the responsibility of the individual PTCRs to update their case finding lists in order to receive the appropriate cancer cases from their various reporting sources. The CCR will continue to receive all cases of cancer as stipulated previously (behavior of 1,2,3 and 0 only for brain and central nervous system (CNS)).

Training issues are being addressed as needed. A CCR Technical Workshop on ICD-O-3 was held in Toronto on October 23-25, 2000. A videotape of the session is being reproduced and will be distributed to each PTCR in Canada to use for registry personnel who did not attend the training.

The CCR will rely on the SEER Program for the edits and conversions, in order to update the National database. In particular, the ICD-O-3 to ICD-10 conversion may impact the PTCRs within two years, as the ICD-10 is being implemented for morbidity in 2002. There are some PTCRs that receive data from hospitals, where only the ICD-10 would be used. The CCR may publish the cancer data according to the ICD-10 at that time. This has not yet been determined.

The CCR will also need to update the rules for determining multiple primaries at the national level and will again rely on the SEER Program for guidance.

## 4 NAACCR CONSENSUS RECOMMENDATIONS

The work group has identified key components that need to be in place to facilitate coordinated implementation by reporting facilities, registry software vendors, and central registries. They are shown in a table format when possible. Consensus recommendations are then reported in a table format or narrative form.

### 4.1 Reporting facilities (includes CoC approved hospitals)

**Table 2: Hospital Level Implementation Needs and Availability**

<b>Implementation Need</b>	<b>Availability</b>
ICD-O-3 Supplemental Reportable Cast List	December 1, 2000
ICD-O-3 coding manual	Early 2001
Table to determine multiple primaries of lymphatic and hematopoietic system	December 1, 2000
Software upgrade to ICD-O-3 (see Appendix C for update to ICD-O-3 conversion flag)	July 2001
NAACCR Version 9 EDITS metafiles	Varies by state
State-specific Version 9 Edits metafiles	Varies by state. NAACCR Version 9 January 1, 2001

**Table 3: Implementation Options for Reporting Facilities Unable to Collect ICD-O-3 Codes When They Begin Abstracting 2001 Cases (Includes CoC Approved Hospitals)**

<b>Option 1: Recommended</b>	<b>Option 2: Not Recommended</b>	<b>Option 3: Not Recommended</b>
<p>Using new 2001 Case Reportable Lists in Appendix A and B, <u>enter cases diagnosed on or after January 1, 2001, with new or changed ICD-O-3 codes into a suspense file. Leave the ICD-O-2 histology and behavior fields blank. Additional detailed documentation for morphology should be recorded in appropriate text fields.</u> 2001 cases with morphology and behavior codes not changed by ICD-O-3 should be completed and transmitted to the state or central registry in a timely manner using the NAACCR 8 (or earlier) layout, and with morphology and behavior coded using ICD-O-2. When the ICD-O-3 software upgrade becomes available, and after the ICD-O-2-to-3 conversion has occurred, the previously suspended cases can be coded and completed using ICD-O-3. These cases can then be submitted to the state or central registry using the NAACCR Version 9 layout when the state or central registry is able to receive Version 9 records.</p>	<p>Abstract cases diagnosed on or after January 1, 2001 onto paper abstracts using ICD-O-3</p>	<p>Postpone abstracting of 2001 cases until software upgrade is available.</p>
<p><b>Issues:</b></p> <p>Cases in suspense file will not be able to be submitted until ICD-O-3 software becomes available.</p> <p>Abstracting should be completed except for morphology codes which should be documented in the text fields</p>	<p><b>Issues:</b></p>	<p><b>Issues:</b></p> <p>Requires flagging medical records for future abstracting.</p>
<p><b>Problem:</b></p> <p>Requires subsequent verification and coding of morphology fields. Additional information in text fields may be necessary to describe morphology completely.</p>	<p><b>Problem:</b></p> <p>Requires subsequent data entry when software upgrade is available.</p>	<p><b>Problem:</b></p> <p>May create a significant backlog.</p>
<p><b>Comments:</b></p> <p>Preferred option.</p>	<p><b>Comments:</b></p> <p>Not recommended by CoC--duplicative effort.</p>	<p><b>Comments:</b></p> <p>Not recommended by CoC--will cause a reporting delay for all.</p>

## 4.2 Vendors

**Table 4: Vendor Implementation Needs and Availability**

<b>Implementation Need</b>	<b>Availability</b>
ICD-O-3 change file for vendors	August 16, 2000 on SEER web site
SEER site/morphology validation list	December 15, 2000
Table to determine multiple primaries of lymphatic and hematopoietic systems	December 1, 2000
ICD-O conversion tables and programs, 2 to 3	January 1, 2001
ICD-O conversion tables and programs, 3 to 2	January 1, 2001
ICD-O-3 conversion tables and programs, 3 to ICD-10	January 1, 2001
NAACCR Version 9 EDITS metafile	January 1, 2001
NAACCR data exchange record* conversion (Version 9 to 8, 7 or 6)	March 2001
NAACCR data exchange record*conversion (Version 6, 7 or 8 to 9)	March 2001
SEER Edits	January 1, 2001
SEER Recodes	March 1, 2001
Software upgrade delivered for ICD-O-3	July 2001

\* required only if submitting and receiving registries are not compatible

### 4.2.1 Recommendations for Vendors

Development and release of software for each database change involves multiple steps: procuring and analyzing the standards; writing and reviewing the specifications; programming and coding the revisions; testing and programming modifications; training personnel; providing support; and attending to conversion issues.

After the new ICD-O-3 terms and codes were finalized, in mid-August an Excel file was made available to registry software vendors through the SEER web site. A password was required to control access to the copyrighted terms and codes in the file. However, while this file provided the changes to terms that were introduced, this table was not sufficient to produce the conversion program.

SEER is preparing text tables and program conversions. When the text tables are complete (target date December 1, 2000), the tables will be built into conversion algorithms written in C++. These conversion programs are currently programmed to require no manual review. Only a few codes will require review and their impact is very small. SEER is preparing three conversion programs: ICD-O-3 to ICD-10; ICD-O-2 to ICD-O-3; and ICD-O-3 to ICD-O-2. SEER has identified the codes and terms that will be split. Computer algorithms will be freestanding and can also be built into other applications. SEER is testing conversions forward (2 to 3) and backward (3 to 2) before release. The target date for release of all tested conversion documents and programs is January 1, 2001. These will be available electronically, at no charge, from the SEER web site. Printed copies of the conversion tables will also be available from SEER.

For vendors, this upgrade to ICD-O-3 comes at the same time as SEER Summary Stage 2000 and the CoC 2001 Patient Care Evaluation studies (PCEs) which are made available in a software upgrade. If the conversion programs are released by January 1, 2001, the schedule will facilitate vendor software upgrade releases during July 2001.

Vendors will not have to write their own conversions. However, they will need to determine how the conversion program or utility will work within their respective software upgrade. Also, although the standard SEER conversion program will not force manual review of any cases, it is expected that vendors

will incorporate this functionality into the implementation of their software. A list, or other conversion output, for cases that require manual review should be provided to the user. Active backward and forward conversions may also be considered for applicable cases during data entry even after the initial upgrade.

Because reporting requirements differ among central registries, vendors will need to obtain instructions from individual state/regional registries regarding reportable sites, morphologies, and behavior codes. Vendors will also need to review the impact of the new morphology and behavior codes on all data edits, standard reports, and ad-hoc filters that may be applied to the data. Furthermore, vendors will need to consult with their clients regarding follow-up requirements for tumors that have changed behavior codes (e.g., do any “/1” behaviors now need follow-up that did not previously require it?)

Pre-2001 morphology codes for affected cases should be stored in a separate field in a registry database. The Uniform Data Standards Committee approved new data items in the NAACCR Record Layout Version 9 for ICD-O-3 morphology and behavior codes (Data Items 522 and 523) as well as an administrative field that indicates how that field was coded, ICD-O-3 Conversion Flag (Data Item 2116). **Refer to Appendix C** for further specifications. In addition, the Morphology Coding System fields (Data Items 470 and 480) were updated to include a code for ICD-O-3. All cancer data collection systems must be able to import or export a NAACCR Version 9 record in order to store the new ICD-O-3 codes.

### 4.3 Population-Based Central/State Registries

**Table 5: Population -based Registry Implementation Needs and Availability**

<b>Implementation Need</b>	<b>Availability</b>
ICD-O conversion tables, 2 to 3 (see Appendix C for update to ICD-O-3 conversion flag)	January 1, 2001
ICD-O conversion tables, 3 to 2	January 1, 2001
NAACCR data exchange record conversion (Version 6, 7 or 8 to 9)	March 2001
NAACCR data exchange record conversion (Version 9 to 8, 7 or 6)	March 2001
Software upgrade to Version 9	July 2001
SEER site/morphology validation list	December 15, 2000
Table to determine multiple primaries of lymphatic and hematopoietic systems	December 1, 2000
Updated data acquisition manuals (including reportable list)	Varies by registry
Updated manual report forms	Varies by registry

**Table 6: Implementation Options for Population Based Cancer Registry****Conversion Status**

*Facility submissions are in Version 8 or earlier for all cases including those diagnosed January 1, 2001 or later; central cancer registry using Version 8 (or less) for processing all cases, including those diagnosed January 1, 2001 or later.*

*Facility submissions in Version 9 for all cases including those diagnosed January 1, 2001 or later; central cancer registry using Version 8 (or less) for processing all cases, including those diagnosed January 1, 2001 or later.*

**Issues:**

1. The reporting facility will be unable to report any cases with a new, changed or deleted ICD-O-3 code which are effective January 1, 2001.
2. The central cancer registry will be missing the accurate ICD-O-3 codes for some cases diagnosed on or after January 1, 2001.

**Issues:**

1. Requires backward conversion (from ICD-O-3 to ICD-O-2) of data submitted from the reporting facilities.
2. The central cancer registry will be required to forward convert (from ICD-O-2 to ICD-O-3) the central registry's database when upgrades become available. Some cases will thus have been converted twice, with loss of accuracy.

**Problem:**

Requires forward conversion of data when upgrade becomes available, and results in the permanent loss of appropriate morphology information for some cases diagnosed on or after January 1, 2001. Includes cases where behavior changes from borderline to malignant and cases where behavior changes from benign to borderline; combined codes.

**Problem:**

Backward conversion will result in the loss of any of the new ICD-O-3 codes and requires subsequent forward conversion when the ICD-O-3 upgrade becomes available for the CCR. The originally submitted new ICD-O-3 will be lost if backward/forward electronic conversion is applied without review of cases.

**Option 1: Recommended**

Instruct reporting facilities to continue submissions using ICD-O-2. Cases with morphology codes that have not changed from ICD-O-2 to ICD-O-3 should be submitted. When applying the forward conversion the morphology codes for these cases will not change. Cases diagnosed on or after January 1, 2001 with new ICD-O-3 codes, with changed terms or behaviors, or deleted codes should be put in suspense at the reporting facility and submitted when software at both the reporting facility and the central cancer registry have been upgraded.

**Option 1: Recommended**

- Accept submissions in Version 9.
- Review all manual submissions to identify cases with a 'new' ICD-O-3 code.
- Review electronic submissions to identify cases with a 'new' ICD-O-3 code. This requires the development of a filter to identify the appropriate cases.
- 'Strip' identified records from the submission file and store in a separate holding file.
- When software upgrade is loaded into the central cancer registry database, process records stored in holding file and add to central cancer registry database.

**Option 2: Not recommended**

Instruct reporting facilities to continue submissions using ICD-O-2 coding manual. Apply the appropriate forward conversion program when available. This will result in the permanent loss of appropriate morphology information for some cases diagnosed on or after January 1, 2001.

**Option 2: Not recommended**

Backward convert submitted data from ICD-O-3 to ICD-O-2 using the backward conversion software and load into existing central cancer registry database; apply forward conversion when central cancer registry upgrade is available. This will result in the permanent loss of appropriate morphology information for some cases diagnosed on or after January 1, 2001.

**Option 3: Not recommended**

Instruct reporting facilities to collect and submit full site/morphology text for cases diagnosed on or after January 1, 2001, whose morphology codes or behaviors have changed between ICD-O-2 and ICD-O-3. This will require some review by the central cancer registry

**Option 3: Not generally recommended**

Do nothing and hold for upgrade to become available for central cancer registry. May result in significant delays in timeliness and completeness.

Note: For some registries this might be a workable alternative based on caseload and expected implementation date for Version 9 software in their area.

**Option 4: Not generally recommended**

Do nothing and hold for software upgrade to become available for both reporting facilities and population-based registries. May result in significant delays in timeliness and completeness.

Note: For some registries this might be a workable alternative based on caseload and expected implementation date for Version 9 software in their area.

**4.4 Recommendations for EDITS Software Users**

The implementation of ICD-O-3 differs from the implementation of ICD-O-2 because when moving from ICD-O-1 to ICD-O-2, most registries that are not in the SEER program, converted their topography and morphology codes, and from that point on, entered all cases using ICD-O-2, regardless of diagnosis date.

This time, registries must code cases diagnosed before January 1, 2001 using ICD-O-2, then convert from ICD-O-2 to ICD-O-3, keeping the ICD-O-2 and ICD-O-3 codes in separate fields, collecting the appropriate code based on the diagnosis year. Consequently, it is necessary to have full sets of edits for both the old (ICD-O-2) and the new (ICD-O-3) codes. The NAACCR EDITS Subcommittee will review and revise the edits. Most of the edits using these fields will allow the fields to be blank, but there will be new edits to check that the fields are filled in appropriately by diagnosis year. The ICD-O-2 morphology will be required if the year of date of diagnosis is prior to 2001, and the ICD-O-3 morphology will be required if the year of date of diagnosis is 2001 or later. SEER, NPCR, and CoC Edits will also need to be reviewed for possible revisions.

## 5 QUESTIONS AND ANSWERS

**Question 1:** *How are SEER, CoC, and NPCR handling changes for tumors that have gone from behavior code /3 to behavior code /1 in ICD-O-3? If these cases are diagnosed after December 31, 2000 are they no longer reportable?*

**Answer:** These cases are no longer reportable for those registries only collecting cases with behavior codes of /2 and /3, as of January 1, 2001.

**Example:** A serous tumor of low malignant potential of the ovary, coded 8442/3 in ICD-O-2, is now 8442/1 in ICD-O-3. If diagnosed on or after January 1, 2001, a serous tumor of low malignant potential of the ovary is not reportable.

**Exception:** Juvenile astrocytoma, including piloid and pilocytic astrocytoma, (9421/1 in ICD-O-3) will be collected by the CoC approved hospitals, SEER and NPCR registries with a changed 5<sup>th</sup> digit ( /3 ) until such time as a decision on collection of benign brain tumors is made. **Refer to Appendix E** for rationale. For CoC hospitals, these tumors will be reportable by agreement.

**Question 2:** *Should tumors that have gone from behavior code /3 in ICD-O-2 to behavior code /1 in ICD-O-3 be deleted from registry files?*

**Answer:** For CoC, NPCR and SEER registries, cases diagnosed and reportable prior to January 1, 2001 are still reportable. For CoC, SEER registries, and other central registries that are full registries, these cases still require follow-up. NPCR registries are not required to perform active follow-up. All rules to a certain date should be maintained. If cancer committees request reporting of these cases, they are considered reportable by agreement.

**Question 3:** *How are cases that change behavior code from /1 in ICD-O-2 to /3 in ICD-O-3 handled?*

**Answer:** Cases diagnosed prior to January 1, 2001 would not be accessioned into the registry database. Cases diagnosed after January 1, 2001 should be included and, if part of a full registry, followed.

**Question 4:** *For cases diagnosed before January 1, 2001 that are accessioned after January 1, 2001 what ICD-O coding scheme should be used?*

**Answer:** The ICD-O-2 coding scheme should be used for any case diagnosed before January 1, 2001.

**Question 5:** *Will a case retain the behavior code, grade, sequence, summary stage and AJCC, etc. if they were originally coded in ICD-O-2?*

**Answer:** Yes.

**Question 6:** *Will SEER, CoC, NAACCR and NPCR expect old records to be converted to ICD-O-3 morphology codes, or can old records remain in ICD-O-2 with a version indicator?*

**Answer:** In NAACCR Standards Volume I, Version 9, separate fields have been created for ICD-O-2 and ICD-O-3 morphologies. A field has also been created for the version indicator associated with ICD-O-3. SEER is writing a conversion that will be available to everyone. Data will be

converted or copied from the ICD-O-2 to the ICD-O-3 field and left as is in the ICD-O-2 field. Then, the method used to put the data into the ICD-O-3 field will be coded.

When the morphologic type is coded according to the ICD-O-2, the morphology code must be reported in Data Item 420 --Morphology (92-00) (ICD-O-2) with behavior code in Data Item 430 --Behavior (92-00) (ICD-O-2). However, when the morphology type is coded according to the ICD-O-3, the morphology code must be reported in Data Item 522 --Morphologic type ICD-O-3 and Data Item-- 523 for Behavior Code ICD-O-3.

**Question 7:** *Is prostatic intra-epithelial neoplasia, grade 3 (ICD-O-3 code 8148/2) now reportable? This morphology code did not exist in ICD-O-2.*

**Answer:** This tumor is not reportable for those facilities and central/state registries following SEER, CoC or NPCR reporting requirements. The following table outlines reporting requirements for the most common /2 tumors.

**Table 7: Comparison of Cancer Reportability in ICD-O-3**

Type of Cancer	COC	SEER	NPCR	CCR
Skin cancers	Skin cancers (C440_) with morphology (8000-8110) and AJCC stage group 0 or I not reportable	Skin cancers (C44_) with morphology (8000-8110) not reportable	Basal cell and squamous cell carcinoma of the skin not reportable	Basal and squamous cell skin cancers (morphologies of 805_, -807_ and 809_-811)not reportable
CIS of the cervix and CIN III	Not reportable	CIS of the cervix and CIN III diagnosed after 1/1/96 not reportable	Not reportable	CIN not reportable
PIN III	Not reportable	Not reportable	Not reportable	
VIN III and VAIN III	Not reportable	Reportable	Reportable	
AIN	Not reportable	Reportable	Reportable	

**Question 8:** *Will a default code or conversion log be provided for cases that are manually reviewed?*

**Answer (According to SEER):** No. The conversion programs are currently programmed for no review. However, there are only a few codes which will require manual review, and their impact is VERY slight (these are rare tumors). Based on SEER data from 1992-1996 representing 15% of the US population, the changes are anticipated to impact the following :

- The impact of splitting thymoma, NOS from benign thymoma could not be assessed because SEER does not collect /0 and /1.
- Thymic carcinoma moves to a new number discrete from malignant thymoma. There were 288 cases in the SEER database in five years.
- Stromal sarcomas can be reviewed by site as part of the conversion program, since they were split out from endometrial stromal sarcoma. Gastrointestinal stromal sarcomas will also have a separate code.
- Medullary carcinomas can be reviewed by site as the thyroid cases are moved to another code.
- A skin tumor has been split from small cell sarcoma. This will require review of text description of the tumor, if available (these are very rare).

- Splitting out the periosteal and juxtacortical osteosarcomas will require review of 46 cases in SEER areas.
- Extramedullary (non-marrow) plasmacytomas comprise 333 cases out of 522 solitary plasmacytomas in SEER series. These can be reviewed by site with all non-bone/bone marrow tumors moving to the new code.
- Because SEER has not collected myeloproliferative disease to this point, it is not possible to estimate the burden of reviewing myeloproliferative disease, NOS, an obsolete term, and moving it to a new /1 code while chronic myeloproliferative disorder/disease remains at the current code and becomes /3.

## 6 APPENDIX A: ICD-O-3 SUPPLEMENTAL CASE LIST

**Source:** Adapted from lists of new and changed terms for ICD-O-3 on SEER web site  
URL: <http://seer.cancer.gov/admin>

### Preface Notes for Appendix A

1. This file is designed as a supplemental reportable list for cancer registries until such time as the ICD-O-3 Manuals are distributed. This list should be used in tandem with the ICD-O-2 Manual.
2. The purpose of this appendix is to list all new terms that will be reportable tumors for diagnoses on or after January 1, 2001. Before using this list registry staff need to review and verify reportability at the facility or central registry level. For example, the basal cell carcinomas (8091/3 & 8092/3) are listed because they are malignancies. Although these cancers could be reportable in a CoC facility, they are not typically reportable to a central cancer registry.
3. Appendix A contains two formats for the list of reportable tumors. Both lists contain the same information.
4. ALPHA is the *alphabetic sort* on the "Terms as they appear in ICD-O-3." This sort is strictly as the term is listed in the ICD-O-3 numeric list, not by key word.
5. In NUMERIC, the sort is on the ICD-O-3 code *number*.
6. If the term is a new synonym for a code that existed in ICD-O-2, the ICD-O-3 code number and the ICD-O-2 code number are identical.
7. Both sheets contain ICD-O-3 information from the SEER web site, [www.seer.cancer.org/Admin](http://www.seer.cancer.org/Admin).  
NOTE: This ICD-O-3 Supplement-Reportable file CONTAINS ONLY MALIGNANT DIAGNOSES. For new benign and borderline terms, download the complete file from the SEER web site.
8. Specifically, the following tables are included:  
NEW ICD-O-3 CODES  
NEW MORPHOLOGY TERMS AND SYNONYMS FOR EXISTING CODES  
TERMS THAT CHANGED FROM BORDERLINE TO MALIGNANT  
TERMS THAT CHANGED MORPHOLOGY CODE  
TERMS THAT HAVE CHANGED FROM TUMOR-LIKE LESIONS TO NEOPLASMS
9. Registries may need to make adjustments for other terms that are reportable by state requirement.

## ALPHABETIC SORT

## Containing:

**NEW ICD-O-3 CODES  
NEW MORPHOLOGY TERMS AND SYNONYMS  
TERMS THAT CHANGED FROM BORDERLINE TO MALIGNANT  
TERMS THAT CHANGED MORPHOLOGY CODE  
TERMS THAT CHANGED FROM TUMOR-LIKE LESIONS TO  
NEOPLASMS**

**Key:**

\* code used in United States (1995-2000) and in Canada (1997-2000)

\*\* code used in United States and Canada (1998-2000)

----- code did (does) not exist

Note: Code 9421/1: Juvenile astrocytoma, pilocytic astrocytoma, and piloid astrocytoma is reportable as 9421/3 for cases diagnosed 2001 and after.

Code 8148/2, however, is not reportable: Glandular intraepithelial neoplasia, grade III.

Prostatic intraepithelial neoplasia, grade III; & PIN III. This term is not included in this list.

ICD-O-2	Term as it appears in ICD-O-3	ICD-O-3
-----	Acinar cell cystadenocarcinoma	8551/3
9870/3	Acute basophilic leukemia	9870/3
-----	Acute bilineal leukemia	9805/3
-----	Acute biphenotypic leukemia	9805/3
9841/3	Acute erythremia [obs]	9840/3
9841/3	Acute erythremic myelosis [obs]	9840/3
9840/3	Acute erythroid leukemia	9840/3
9821/3	Acute lymphatic leukemia	9835/3
9828/3 **	Acute lymphoblastic leukemia, L2 type, NOS	9835/3
9826/3	Acute lymphoblastic leukemia, mature B-cell type	9826/3
9821/3	Acute lymphoblastic leukemia, NOS (See also M-9727/3)	9835/3
-----	Acute lymphoblastic leukemia, precursor-cell type	9835/3
-----	Acute lymphoblastic leukemia-lymphoma, NOS	9835/3
9821/3	Acute lymphocytic leukemia	9835/3
9821/3	Acute lymphoid leukemia	9835/3
-----	Acute mixed lineage leukemia	9805/3
9869/3 **	Acute myeloblastic leukemia	9872/3
9865/3 **	Acute myelocytic leukemia with maturation	9874/3
9932/3	Acute myelofibrosis	9931/3
-----	Acute myeloid leukemia with abnormal marrow eosinophils (includes all variants)	9871/3
-----	Acute myeloid leukemia with maturation	9874/3
-----	Acute myeloid leukemia with multilineage dysplasia (See also M-9984/3)	9895/3
-----	Acute myeloid leukemia with prior myelodysplastic syndrome	9895/3
-----	Acute myeloid leukemia without maturation	9873/3
-----	Acute myeloid leukemia without prior myelodysplastic syndrome	9895/3
-----	Acute myeloid leukemia, 11q23 abnormalities	9897/3
-----	Acute myeloid leukemia, AML1(CBF-alpha)/ETO	9896/3

-----	Acute myeloid leukemia, CBF-beta/MYH11	9871/3
-----	Acute myeloid leukemia, inv(16)(p13;q22)	9871/3
9840/3	Acute myeloid leukemia, M6 type	9840/3
-----	Acute myeloid leukemia, minimal differentiation	9872/3
-----	Acute myeloid leukemia, MLL	9897/3
9861/3	Acute myeloid leukemia, NOS (FAB or WHO type not specified) (See also M-9930/3)	9861/3
9866/3	Acute myeloid leukemia, PML/RAR-alpha	9866/3
-----	Acute myeloid leukemia, t(8;21) (q22;q22)	9896/3
9866/3	Acute myeloid leukemia, t(15;17)(q22;q11-12)	9866/3
-----	Acute myeloid leukemia, t(16;16)(p13;q11)	9871/3
-----	Acute myelomonocytic leukemia with abnormal eosinophils	9871/3
9931/3	Acute myelosclerosis	9931/3
9861/3	Acute non-lymphocytic leukemia	9861/3
9931/3	Acute panmyelosis with myelofibrosis (C42.1)	9931/3
9722/3	Acute progressive histiocytosis X	9754/3
9866/3	Acute promyelocytic leukemia, PML/RAR-alpha	9866/3
9866/3	Acute promyelocytic leukemia, t(15;17)(q22;q11-12)	9866/3
-----	Adenocarcinoma combined with other types of carcinoma	8255/3
-----	Adenocarcinoma of anal ducts (C21.1)	8215/3
-----	Adenocarcinoma of anal glands (C21.1)	8215/3
-----	Adenocarcinoma with mixed subtypes	8255/3
-----	Adenocarcinoma with neuroendocrine differentiation	8574/3
-----	Adenocarcinoma, endocervical type	8384/3
-----	Adenoid basal carcinoma (C53.~)	8098/3
8700/3	Adrenal medullary paraganglioma, malignant (C74.1)	8700/3
9827/3	Adult T-cell leukemia/lymphoma (HTLV-1 positive) Includes all variants	9827/3
-----	Aggressive NK-cell leukemia	9948/3
9961/3	Agnogenic myeloid metaplasia	9961/3
8077/2	AIN III (C21.1)	8077/2
9864/3	Aleukemic granulocytic leukemia [obs]	9860/3
9804/3	Aleukemic leukemia, NOS [obs]	9800/3
9824/3	Aleukemic lymphatic leukemia [obs]	9820/3
9824/3	Aleukemic lymphocytic leukemia [obs]	9820/3
9824/3	Aleukemic lymphoid leukemia [obs]	9820/3
9894/3	Aleukemic monocytic leukemia [obs]	9860/3
9864/3	Aleukemic myelogenous leukemia [obs]	9860/3
9864/3	Aleukemic myeloid leukemia [obs]	9860/3
9290/3	Ameloblastic fibrodentinosa sarcoma	9290/3
9290/3	Ameloblastic fibro-odontosarcoma	9290/3
9840/3	AML M6	9840/3
8077/2	Anal intraepithelial neoplasia (C21.1)	8077/2
9680/3	Anaplastic large B-cell lymphoma	9680/3
9714/3	Anaplastic large cell lymphoma, CD30+	9714/3
9714/3	Anaplastic large cell lymphoma, NOS	9714/3
9714/3	Anaplastic large cell lymphoma, T cell and Null cell type	9714/3
9382/3	Anaplastic oligoastrocytoma (C71.~)	9382/3
9713/3	Angiocentric T-cell lymphoma [obs]	9719/3
9712/3	Angioendotheliomatosis	9680/3
9680/3	Angiotropic lymphoma	9680/3
8803/3	Askin tumor	9365/3
9400/3	Astrocytoma, low grade (C71.~)	9400/3

-----	Atypical carcinoid tumor	8249/3
-----	Atypical chronic myeloid leukemia, BCR/ABL negative	9876/3
-----	Atypical chronic myeloid leukemia, Philadelphia chromosome (Ph1) negative	9876/3
-----	Atypical medullary carcinoma (C50._)	8513/3
-----	Atypical teratoid/rhabdoid tumor (C71._)	9508/3
9591/3	B cell lymphoma, NOS	9591/3
9826/3	B-ALL [obs]	9826/3
-----	BALT lymphoma	9699/3
-----	Basal cell carcinoma, desmoplastic type (C44._)	8092/3
-----	Basal cell carcinoma, micronodular (C44._)	8097/3
-----	Basal cell carcinoma, morpheic (C44._)	8092/3
-----	Basal cell carcinoma, nodular (C44._)	8097/3
-----	Basaloid squamous cell carcinoma	8083/3
9823/3	B-cell chronic lymphocytic leukemia/small lymphocytic lymphoma (See also M-9670/3)	9823/3
-----	Bellini duct carcinoma (C64.9)	8319/3
-----	Bronchial-associated lymphoid tissue lymphoma	9699/3
-----	Bronchiolo-alveolar carcinoma, Clara cell (C34._)	8252/3
-----	Bronchiolo-alveolar carcinoma, Clara cell and goblet cell type (C34._)	8254/3
-----	Bronchiolo-alveolar carcinoma, goblet cell type (C34._)	8253/3
-----	Bronchiolo-alveolar carcinoma, indeterminate type (C34._)	8254/3
-----	Bronchiolo-alveolar carcinoma, mixed mucinous and non-mucinous (C34._)	8254/3
-----	Bronchiolo-alveolar carcinoma, mucinous (C34._)	8253/3
-----	Bronchiolo-alveolar carcinoma, non-mucinous (C34._)	8252/3
-----	Bronchiolo-alveolar carcinoma, type II pneumocyte (C34._)	8252/3
-----	Bronchiolo-alveolar carcinoma, type II pneumocyte and goblet cell type (C34._)	8254/3
9826/3	Burkitt cell leukemia (See also M-9687/3)	9826/3
9687/3	Burkitt-like lymphoma	9687/3
8510/3	C cell carcinoma (C73.9)	8345/3
-----	C-ALL	9836/3
-----	Carcinofibroma	8934/3
-----	Carcinoma showing thymus-like differentiation	8589/3
-----	Carcinoma showing thymus-like element	8589/3
-----	Carcinoma with neuroendocrine differentiation	8574/3
-----	Carcinoma with osteoclast-like giant cells	8035/3
-----	CASTLE	8589/3
9391/3	Cellular ependymoma (C71._)	9391/3
9500/3	Central neuroblastoma (C71._)	9500/3
-----	Central osteosarcoma (C40._, C41._)	9186/3
9473/3	Central primitive neuroectodermal tumor, NOS (C71._)	9473/3
-----	Chondroid chordoma	9371/3
9390/3	Choroid plexus carcinoma (C71.5)	9390/3
-----	Chromophobe cell renal carcinoma (C64.9)	8317/3
-----	Chronic eosinophilic leukemia	9964/3
9842/3	Chronic erythremia [obs]	9950/3
-----	Chronic granulocytic leukemia, BCR/ABL	9875/3
-----	Chronic granulocytic leukemia, Philadelphia chromosome (Ph1) positive	9875/3
-----	Chronic granulocytic leukemia, t(9;22)(q34;q11)	9875/3
9961/3	Chronic idiopathic myelofibrosis	9961/3
9803/3	Chronic leukemia, NOS [obs]	9800/3

9823/3	Chronic lymphocytic leukemia, B-cell type (includes all variants of BCLL)	9823/3
9893/3	Chronic monocytic leukemia [obs]	9860/3
-----	Chronic myelogenous leukemia, BCR/ABL positive	9875/3
-----	Chronic myelogenous leukemia, Philadelphia chromosome (Ph1) positive	9875/3
-----	Chronic myelogenous leukemia, t(9;22)(q34;q11)	9875/3
-----	Chronic myelomonocytic leukemia in transformation [obs]	9945/3
9868/3	Chronic myelomonocytic leukemia, NOS	9945/3
-----	Chronic myelomonocytic leukemia, Type I	9945/3
-----	Chronic myelomonocytic leukemia, Type II	9945/3
9960/1	Chronic myeloproliferative disease, NOS	9960/3
9960/1	Chronic myeloproliferative disorder	9960/3
-----	Chronic neutrophilic leukemia	9963/3
9654/3	Classical Hodgkin lymphoma, lymphocyte depletion, diffuse fibrosis	9654/3
9653/3	Classical Hodgkin lymphoma, lymphocyte depletion, NOS	9653/3
9655/3	Classical Hodgkin lymphoma, lymphocyte depletion, reticular	9655/3
-----	Classical Hodgkin lymphoma, lymphocyte-rich	9651/3
9652/3	Classical Hodgkin lymphoma, mixed cellularity, NOS	9652/3
9664/3	Classical Hodgkin lymphoma, nodular sclerosis, cellular phase	9664/3
9665/3	Classical Hodgkin lymphoma, nodular sclerosis, grade 1	9665/3
9667/3	Classical Hodgkin lymphoma, nodular sclerosis, grade 2	9667/3
9663/3	Classical Hodgkin lymphoma, nodular sclerosis, NOS	9663/3
8313/3	Clear cell adenocarcinofibroma (C56.9)	8313/3
-----	Clear cell chondrosarcoma (C40._, C41._)	9242/3
8313/3	Clear cell cystadenocarcinofibroma (C56.9)	8313/3
9391/3	Clear cell ependymoma (C71._)	9391/3
-----	Collecting duct carcinoma (C64.9)	8319/3
8045/3	Combined small cell carcinoma	8045/3
8045/3	Combined small cell-adenocarcinoma	8045/3
8045/3	Combined small cell-squamous cell carcinoma	8045/3
-----	Common ALL	9836/3
-----	Common precursor B ALL	9836/3
-----	Composite Hodgkin and non-Hodgkin lymphoma	9596/3
8051/3	Condylomatous carcinoma	8051/3
-----	Conventional central osteosarcoma (C40._, C41._)	9186/3
-----	Cortical T ALL	9837/3
9473/3	CPNET (C71._)	9473/3
9709/3	Cutaneous T-cell lymphoma, NOS (C44._)	9709/3
8121/3	Cylindrical cell carcinoma (C30.0, C31._)	8121/3
-----	Cyst-associated renal cell carcinoma (C64.9)	8316/3
-----	Cystic hypersecretory carcinoma (C50._)	8508/3
8501/2	DCIS, comedo type (C50._)	8501/2
8500/2	DCIS, NOS (C50._)	8500/2
8503/2	DCIS, papillary (C50._)	8503/2
-----	Dedifferentiated chondrosarcoma (C40._, C41._)	9243/3
-----	Dedifferentiated chordoma	9372/3
-----	Dendritic cell sarcoma, NOS	9757/3
9084/3	Dermoid cyst with secondary tumor	9084/3
8745/3	Desmoplastic melanoma, amelanotic (C44._)	8745/3
9051/3	Desmoplastic mesothelioma	9051/3
9471/3	Desmoplastic nodular medulloblastoma (C71.6)	9471/3
-----	Desmoplastic small round cell tumor	8806/3
9841/3	Di Guglielmo disease [obs]	9840/3

9400/3	Diffuse astrocytoma (C71._)	9400/3
9400/3	Diffuse astrocytoma, low grade (C71._)	9400/3
8408/3	Digital papillary adenocarcinoma (C44._)	8408/3
9501/3	Diktyoma, malignant (C69._)	9501/3
8500/2	DIN 3 (C50._)	8500/2
-----	Duct carcinoma, desmoplastic type	8514/3
8501/2	Ductal carcinoma in situ, comedo type (C50._)	8501/2
8201/2	Ductal carcinoma in situ, cribriform type (C50._)	8201/2
-----	Ductal carcinoma in situ, micropapillary (C50._)	8507/2
8500/2	Ductal carcinoma in situ, NOS (C50._)	8500/2
8503/2	Ductal carcinoma in situ, papillary (C50._)	8503/2
8230/2	Ductal carcinoma in situ, solid type (C50._)	8230/2
8201/3	Ductal carcinoma, cribriform type (C50._)	8201/3
8500/2	Ductal intraepithelial neoplasia 3 (C50._)	8500/2
8241/3	EC cell carcinoid	8241/3
-----	Eccrine adenocarcinoma (C44._)	8413/3
8408/3	Eccrine papillary adenocarcinoma (C44._)	8408/3
-----	Eccrine poroma, malignant	8409/3
-----	ECL cell carcinoid, malignant	8242/3
-----	Ectomesenchymoma	8921/3
8910/3	Embryonal rhabdomyosarcoma, pleomorphic	8910/3
8931/1	Endolymphatic stromal myosis (C54.1)	8931/3
8930/3	Endometrial stromal sarcoma, high grade (C54.1)	8930/3
8931/1	Endometrial stromal sarcoma, low grade (C54.1)	8931/3
8931/1	Endometrial stromatosis (C54.1)	8931/3
-----	Endometrioid adenocarcinoma, ciliated cell variant	8383/3
-----	Endometrioid adenocarcinoma, secretory variant (C56.9)	8382/3
8241/3	Enterochromaffin cell carcinoid	8241/3
-----	Enterochromaffin-like cell tumor, malignant	8242/3
-----	Enteroglucagonoma, malignant	8157/3
-----	Enteropathy associated T-cell lymphoma	9717/3
-----	Enteropathy type intestinal T-cell lymphoma	9717/3
9880/3	Eosinophilic leukemia	9860/3
9540/3	Epithelioid MPNST	9540/3
9962/1	Essential hemorrhagic thrombocythemia	9962/3
9962/1	Essential thrombocythemia	9962/3
9821/3	FAB L1	9835/3
9828/3 **	FAB L2	9835/3
9826/3	FAB L3 [obs]	9826/3
9872/3 **	FAB M0	9872/3
9873/3 **	FAB M1	9873/3
-----	FAB M2, AML1(CBF-alpha)/ETO	9896/3
9874/3 **	FAB M2, NOS	9874/3
-----	FAB M2, t(8;21)(q22;q22)	9896/3
9866/3	FAB M3 (includes all variants)	9866/3
9867/3	FAB M4	9867/3
9871/3 **	FAB M4Eo	9871/3
9891/3	FAB M5 (includes all variants)	9891/3
9840/3	FAB M6	9840/3
9910/3	FAB M7	9910/3
8333/3	Fetal adenocarcinoma	8333/3
8857/3	Fibroblastic liposarcoma	8857/3

8093/3	Fibroepithelial basal cell carcinoma, Pinkus type	8093/3
8093/3	Fibroepithelioma of Pinkus type	8093/3
8093/3	Fibroepithelioma, NOS	8093/3
-----	Follicular carcinoma, encapsulated (C73.9)	8335/3
-----	Follicular carcinoma, minimally invasive (C73.9)	8335/3
8290/3	Follicular carcinoma, oxyphilic cell (C73.9)	8290/3
-----	Follicular dendritic cell sarcoma	9758/3
-----	Follicular dendritic cell tumor	9758/3
9695/3	Follicular lymphoma, grade 1	9695/3
9691/3	Follicular lymphoma, grade 2	9691/3
9698/3	Follicular lymphoma, grade 3	9698/3
9690/3	Follicular lymphoma, NOS (See also M-9675/3)	9690/3
9763/3	Franklin disease	9762/3
9763/3	Gamma heavy chain disease	9762/3
9505/3	Ganglioglioma, anaplastic	9505/3
8153/3	Gastrin cell tumor, malignant	8153/3
-----	Gastrointestinal stromal sarcoma	8936/3
-----	Gastrointestinal stromal tumor, malignant	8936/3
-----	Germ cell tumor, nonseminomatous (C62._)	9065/3
-----	Giant cell tumor of tendon sheath, malignant (C49._)	9252/3
-----	GIST, malignant	8936/3
-----	Glassy cell carcinoma	8015/3
8711/3	Glomus tumor, malignant	8711/3
8620/3	Granulosa cell tumor, sarcomatoid (C56.9)	8620/3
9940/3	Hairy cell leukemia variant	9940/3
9762/3	Heavy chain disease, NOS	9762/3
-----	Hepatocellular carcinoma, clear cell type (C22.0)	8174/3
-----	Hepatocellular carcinoma, pleomorphic type (C22.0)	8175/3
-----	Hepatocellular carcinoma, sarcomatoid (C22.0)	8173/3
-----	Hepatocellular carcinoma, scirrhous (C22.0)	8172/3
-----	Hepatocellular carcinoma, spindle cell variant (C22.0)	8173/3
-----	Hepatoid adenocarcinoma	8576/3
-----	Hepatoid carcinoma	8576/3
9071/3	Hepatoid yolk sac tumor	9071/3
-----	Hepatosplenic gamma-delta cell lymphoma	9716/3
8402/3	Hidradenocarcinoma (C44._)	8402/3
-----	High grade surface osteosarcoma (C40._, C41._)	9194/3
9680/3	Histiocyte-rich large B-cell lymphoma	9680/3
9720/3	Histiocytic medullary reticulosis [obs]	9750/3
-----	Histiocytic sarcoma	9755/3
9658/3	Hodgkin disease, lymphocyte predominance, diffuse [obs]	9651/3
9657/3	Hodgkin disease, lymphocyte predominance, NOS [obs]	9651/3
9657/3	Hodgkin disease, lymphocytic-histiocytic predominance [obs]	9651/3
9666/3	Hodgkin disease, nodular sclerosis, mixed cellularity	9665/3
-----	Hodgkin lymphoma, lymphocyte-rich	9651/3
9665/3	Hodgkin lymphoma, nodular sclerosis, grade 1	9665/3
9667/3	Hodgkin lymphoma, nodular sclerosis, grade 2	9667/3
9660/3	Hodgkin paragranuloma, nodular [obs]	9659/3
9660/3	Hodgkin paragranuloma, NOS [obs]	9659/3
-----	Hypereosinophilic syndrome	9964/3
9962/1	Idiopathic hemorrhagic thrombocytopenia	9962/3
9962/1	Idiopathic thrombocytopenia	9962/3

9080/3	Immature teratoma, malignant	9080/3
-----	Infiltrating basal cell carcinoma, non-sclerosing (C44._)	8092/3
-----	Infiltrating basal cell carcinoma, NOS (C44._)	8092/3
-----	Infiltrating basal cell carcinoma, sclerosing (C44._)	8092/3
-----	Infiltrating duct and colloid carcinoma (C50._)	8523/3
-----	Infiltrating duct and cribriform carcinoma (C50._)	8523/3
-----	Infiltrating duct and mucinous carcinoma (C50._)	8523/3
-----	Infiltrating duct and tubular carcinoma (C50._)	8523/3
-----	Infiltrating duct mixed with other types of carcinoma (C50._)	8523/3
8522/3	Infiltrating lobular carcinoma and ductal carcinoma in situ (C50._)	8522/3
-----	Infiltrating lobular mixed with other types of carcinoma (C50._)	8524/3
8503/3	Infiltrating papillary adenocarcinoma	8503/3
8851/3	Inflammatory liposarcoma	8851/3
-----	Insular carcinoma (C73.9)	8337/3
-----	Interdigitating cell sarcoma	9757/3
-----	Interdigitating dendritic cell sarcoma	9757/3
-----	Intestinal T-cell lymphoma	9717/3
-----	Intracortical osteosarcoma (C40._, C41._)	9195/3
-----	Intraductal carcinoma, clinging (C50._)	8507/2
8230/2	Intraductal carcinoma, solid type	8230/2
-----	Intraductal micropapillary carcinoma (C50._)	8507/2
-----	Intraductal papillary-mucinous carcinoma, invasive (C25._)	8453/3
-----	Intraductal papillary-mucinous carcinoma, non-invasive (C25._)	8453/2
-----	Intraosseous low grade osteosarcoma (C40._, C41._)	9187/3
-----	Intraosseous well differentiated osteosarcoma (C40._, C41._)	9187/3
9064/2	Intratubular germ cell neoplasia (C62._)	9064/2
9064/2	Intratubular malignant germ cells (C62._)	9064/2
9680/3	Intravascular B-cell lymphoma	9680/3
9134/1	Intravascular bronchial alveolar tumor (C34._) [obs]	9133/3
9680/3	Intravascular large B-cell lymphoma (C49.9)	9680/3
9421/3	Juvenile astrocytoma (C71._)	9421/1
-----	Juvenile chronic myelomonocytic leukemia	9946/3
-----	Juvenile myelomonocytic leukemia	9946/3
9190/3	Juxtacortical osteosarcoma (C40._, C41._)	9192/3
-----	Langerhans cell histiocytosis, disseminated	9754/3
-----	Langerhans cell histiocytosis, generalized	9754/3
-----	Langerhans cell sarcoma	9756/3
-----	Large cell carcinoma with rhabdoid phenotype	8014/3
-----	Large cell medulloblastoma (C71.6)	9474/3
-----	Large cell neuroendocrine carcinoma	8013/3
8520/2	LCIS, NOS (C50._)	8520/2
9704/3	Lennert lymphoma	9702/3
9722/3	Letterer-Siwe disease	9754/3
9941/3	Leukemic reticuloendotheliosis	9940/3
8851/3	Lipoma-like liposarcoma	8851/3
9821/3	Lymphoblastic leukemia, NOS	9835/3
9685/3	Lymphoblastoma [obs]	9727/3
9704/3	Lymphoepithelioid lymphoma	9702/3
8082/3	Lymphoepithelioma-like carcinoma	8082/3
-----	Lymphomatoid papulosis (C44._)	9718/3
9850/3	Lymphosarcoma cell leukemia [obs]	9820/3
9592/3	Lymphosarcoma, diffuse [obs]	9591/3

9592/3	Lymphosarcoma, NOS [obs]	9591/3
9840/3	M6A	9840/3
9840/3	M6B	9840/3
8940/3	Malignant chondroid syringoma (C44.~)	8940/3
-----	Malignant cystic nephroma (C64.9)	8959/3
8403/3	Malignant eccrine spiradenoma (C44.~)	8403/3
9720/3	Malignant histiocytosis	9750/3
9683/3	Malignant lymphoma, centroblastic, diffuse	9680/3
9697/3	Malignant lymphoma, centroblastic, follicular	9698/3
9683/3	Malignant lymphoma, centroblastic, NOS	9680/3
9676/3	Malignant lymphoma, centroblastic-centrocytic, diffuse [obs]	9675/3
9692/3	Malignant lymphoma, centroblastic-centrocytic, follicular	9690/3
9676/3	Malignant lymphoma, centroblastic-centrocytic, NOS [obs]	9675/3
9674/3	Malignant lymphoma, centrocytic [obs]	9673/3
9672/3	Malignant lymphoma, cleaved cell, NOS [obs]	9591/3
9685/3	Malignant lymphoma, convoluted cell [obs]	9727/3
9595/3	Malignant lymphoma, diffuse, NOS	9591/3
9690/3	Malignant lymphoma, follicle center, follicular	9690/3
9690/3	Malignant lymphoma, follicle center, NOS	9690/3
9680/3	Malignant lymphoma, large B-cell, diffuse, centroblastic, NOS	9680/3
9684/3	Malignant lymphoma, large B-cell, diffuse, immunoblastic, NOS	9684/3
9681/3	Malignant lymphoma, large cell, cleaved, diffuse	9680/3
9681/3	Malignant lymphoma, large cell, cleaved, NOS	9680/3
9682/3	Malignant lymphoma, large cell, noncleaved, diffuse	9680/3
9682/3	Malignant lymphoma, large cell, noncleaved, NOS	9680/3
9681/3	Malignant lymphoma, large cleaved cell, NOS	9680/3
9685/3	Malignant lymphoma, lymphoblastic (See also 9821/3)	9727/3
9694/3	Malignant lymphoma, lymphocytic, intermediate differentiation, nodular [obs]	9591/3
9672/3	Malignant lymphoma, lymphocytic, poorly differentiated, diffuse [obs]	9591/3
9696/3	Malignant lymphoma, lymphocytic, poorly differentiated, nodular [obs]	9695/3
9693/3	Malignant lymphoma, lymphocytic, well differentiated, nodular [obs]	9698/3
9682/3	Malignant lymphoma, noncleaved, diffuse, NOS	9680/3
9682/3	Malignant lymphoma, noncleaved, NOS	9680/3
9670/3	Malignant lymphoma, small B lymphocytic, NOS (See also M-9823/3)	9670/3
9670/3	Malignant lymphoma, small cell diffuse	9670/3
9686/3	Malignant lymphoma, small cell, noncleaved, diffuse [obs]	9591/3
9672/3	Malignant lymphoma, small cleaved cell, diffuse [obs]	9591/3
9672/3	Malignant lymphoma, small cleaved cell, NOS [obs]	9591/3
9670/3	Malignant lymphoma, small lymphocytic, NOS	9670/3
9686/3	Malignant lymphoma, undifferentiated cell type, NOS [obs]	9591/3
9686/3	Malignant lymphoma, undifferentiated cell, non-Burkitt [obs]	9591/3
9677/3	Malignant lymphomatous polyposis [obs]	9673/3
8761/3	Malignant melanoma in congenital melanocytic nevus (C44.~)	8761/3
9713/3	Malignant midline reticulosis [obs]	9719/3
9015/3	Malignant mucinous adenofibroma (C56.9)	9015/3
9015/3	Malignant mucinous cystadenofibroma (C56.9)	9015/3
-----	Malignant multilocular cystic nephroma (C64.9)	8959/3
9931/3	Malignant myelosclerosis [obs]	9931/3
8982/3	Malignant myoepithelioma	8982/3
9540/3	Malignant peripheral nerve sheath tumor	9540/3
9561/3	Malignant peripheral nerve sheath tumor with rhabdomyoblastic	9561/3

	differentiation	
9713/3	Malignant reticulosis, NOS [obs]	9719/3
8963/3	Malignant rhabdoid tumor	8963/3
9014/3	Malignant serous adenofibroma (C56.9)	9014/3
9014/3	Malignant serous cystadenofibroma (C56.9)	9014/3
-----	Malignant tenosynovial giant cell tumor (C49._)	9252/3
-----	Malignant tumor, clear cell type	8005/3
9715/3 *	MALT lymphoma	9699/3
9673/3	Mantle cell lymphoma	9673/3
-----	Marginal zone B-cell lymphoma, NOS	9699/3
9710/3 *	Marginal zone lymphoma, NOS	9699/3
9900/3	Mast cell leukemia (C42.1)	9742/3
8110/3	Matrical carcinoma (C44._)	8110/3
-----	Mature T ALL	9837/3
9702/3	Mature T-cell lymphoma, NOS	9702/3
-----	Mediastinal large B-cell lymphoma (C38.3)	9679/3
8511/3	Medullary carcinoma with amyloid stroma (C73.9)	8345/3
-----	Medullary osteosarcoma (C40._, C41._)	9186/3
9961/1	Megakaryocytic myelosclerosis	9961/3
9470/3	Melanotic medulloblastoma (C71.6)	9470/3
9540/3	Melanotic MPNST	9540/3
9540/3	Melanotic psammomatous MPNST	9540/3
-----	Meningeal melanomatosis (C70.9)	8728/3
9530/3	Meningioma, anaplastic	9530/3
-----	Metaplastic carcinoma, NOS	8575/3
8407/3	Microcystic adnexal carcinoma (C44._)	8407/3
9594/3	Microglioma (C71._) [obs]	9590/3
8460/3	Micropapillary serous carcinoma (C56.9)	8460/3
8154/3	Mixed acinar-endocrine carcinoma (C25._)	8154/3
8244/3	Mixed carcinoid-adenocarcinoma	8244/3
8154/3	Mixed ductal-endocrine carcinoma (C25._)	8154/3
8902/3	Mixed embryonal rhabdomyosarcoma and alveolar rhabdomyosarcoma	8902/3
-----	Mixed medullary-follicular carcinoma (C73.9)	8346/3
-----	Mixed medullary-papillary carcinoma (C73.9)	8347/3
9362/3	Mixed pineal tumor (C75.3)	9362/3
9362/3	Mixed pineocytoma-pineoblastoma (C75.3)	9362/3
8045/3	Mixed small cell carcinoma	8045/3
9085/3	Mixed teratoma and seminoma	9085/3
9890/3	Monocytic leukemia, NOS	9860/3
9711/3	Monocytoid B-cell lymphoma	9699/3
9481/3	Monstrocellular sarcoma (C71._) [obs]	9441/3
9540/3	MPNST with glandular differentiation	9540/3
9540/3	MPNST with mesenchymal differentiation	9540/3
9561/3	MPNST with rhabdomyoblastic differentiation	9561/3
9540/3	MPNST, NOS	9540/3
9762/3	Mu heavy chain disease	9762/3
9015/3	Mucinous adenocarcinofibroma (C56.9)	9015/3
-----	Mucinous adenocarcinoma, endocervical type	8482/3
9015/3	Mucinous cystadenocarcinofibroma (C56.9)	9015/3
8470/2	Mucinous cystadenocarcinoma, non-invasive (C25._)	8470/2
-----	Mucosal lentiginous melanoma	8746/3
9715/3 *	Mucosal-associated lymphoid tissue lymphoma	9699/3

-----	Multifocal superficial basal cell carcinoma (C44._)	8091/3
-----	Myelodysplastic syndrome with 5q- syndrome	9986/3
9961/3	Myelofibrosis as a result of myeloproliferative disease	9961/3
9961/1	Myelofibrosis with myeloid metaplasia	9961/3
9930/3	Myeloid sarcoma (See also M-9861/3)	9930/3
9961/1	Myelosclerosis with myeloid metaplasia	9961/3
8982/3	Myoepithelial carcinoma	8982/3
-----	NK/T-cell lymphoma, nasal and nasal-type	9719/3
-----	Nodal marginal zone lymphoma	9699/3
8402/3	Nodular hidradenoma, malignant (C44._)	8402/3
9722/3	Nonlipid reticuloendotheliosis [obs]	9754/3
9860/3	Non-lymphocytic leukemia, NOS	9860/3
-----	Non-small cell carcinoma (C34._)	8046/3
-----	Odontogenic carcinosarcoma	9342/3
9521/3	Olfactory neurocytoma (C30.0)	9521/3
9700/3	Pagetoid reticulosis	9700/3
8260/3	Papillary carcinoma of thyroid (C73.9)	8260/3
-----	Papillary carcinoma, columnar cell (C73.9)	8344/3
8350/3	Papillary carcinoma, diffuse sclerosing (C73.9)	8350/3
-----	Papillary carcinoma, encapsulated (C73.9)	8343/3
-----	Papillary carcinoma, oxyphilic cell (C73.9)	8342/3
-----	Papillary carcinoma, tall cell (C73.9)	8344/3
9393/1	Papillary ependymoma (C71._)	9393/3
9538/1	Papillary meningioma	9538/3
-----	Papillary microcarcinoma (C73.9)	8341/3
8260/3	Papillary renal cell carcinoma (C64.9)	8260/3
8052/2	Papillary squamous cell carcinoma in situ	8052/2
8052/2	Papillary squamous cell carcinoma, non-invasive	8052/2
8130/2	Papillary transitional cell carcinoma, non-invasive (C67._)	8130/2
8130/3	Papillary urothelial carcinoma (C67._)	8130/3
8130/2	Papillary urothelial carcinoma, non-invasive (C67._)	8130/2
8263/3	Papillotubular adenocarcinoma	8263/3
8510/3	Parafollicular cell carcinoma (C73.9)	8345/3
-----	Parietal cell adenocarcinoma (C16._)	8214/3
-----	Parietal cell carcinoma (C16._)	8214/3
9190/3	Parosteal osteosarcoma (C40._, C41._)	9192/3
-----	Perineural MPNST	9571/3
-----	Perineurioma, malignant	9571/3
9221/3	Periosteal chondrosarcoma (C40._, C41._)	9221/3
9190/3	Periosteal osteosarcoma (C40._, C41._)	9193/3
9364/3	Peripheral primitive neuroectodermal tumor, NOS	9364/3
9702/3	Peripheral T-cell lymphoma, large cell	9702/3
9707/3	Peripheral T-cell lymphoma, pleomorphic medium and large cell	9702/3
9706/3	Peripheral T-cell lymphoma, pleomorphic small cell	9702/3
9421/3	Pilocytic astrocytoma (C71._)	9421/1
9421/3	Piloid astrocytoma (C71._)	9421/1
8110/3	Pilomatricoma, malignant (C44._)	8110/3
9362/3	Pineal parenchymal tumor of intermediate differentiation (C75.3)	9362/3
8093/3	Pinkus tumor	8093/3
-----	Pituitary carcinoma, NOS (C75.1)	8272/3
9830/3	Plasma cell leukemia (C42.1)	9733/3
9684/3	Plasmablastic lymphoma	9684/3

9830/3	Plasmacytic leukemia (C42.1)	9733/3
9731/3	Plasmacytoma of bone (C40., C41.)	9731/3
9731/3	Plasmacytoma, extramedullary (not occurring in bone)	9734/3
8901/3	Pleomorphic rhabdomyosarcoma, adult type	8901/3
-----	Pleuropulmonary blastoma	8973/3
9473/3	PNET, NOS	9473/3
9423/3	Polar spongioblastoma (C71.)	9423/3
9950/1	Polycythemia rubra vera	9950/3
9950/1	Polycythemia vera	9950/3
9713/3	Polymorphic reticulosis [obs]	9719/3
-----	Polymorphous low grade adenocarcinoma	8525/3
-----	Porocarcinoma (C44.)	8409/3
9364/3	PPNET	9364/3
-----	Pre-B ALL	9836/3
-----	Precursor B-cell lymphoblastic leukemia	9836/3
-----	Precursor B-cell lymphoblastic lymphoma (See also M-9836/3)	9728/3
-----	Precursor cell lymphoblastic leukemia, NOS (See also M-9727/3)	9835/3
-----	Precursor cell lymphoblastic leukemia, not phenotyped	9835/3
-----	Precursor cell lymphoblastic lymphoma, NOS (See also M-9835/3)	9727/3
-----	Precursor T-cell lymphoblastic leukemia	9837/3
-----	Precursor T-cell lymphoblastic lymphoma (See also M-9837/3)	9729/3
-----	Pre-pre-B ALL	9836/3
-----	Pre-T ALL	9837/3
-----	Primary cutaneous anaplastic large cell lymphoma (C44.)	9718/3
-----	Primary cutaneous CD30+ large T-cell lymphoma (C44.)	9718/3
-----	Primary cutaneous CD30+ T-cell lymphoproliferative disorder (C44.)	9718/3
8247/3	Primary cutaneous neuroendocrine carcinoma (C44.)	8247/3
-----	Primary effusion lymphoma	9678/3
9270/3	Primary intraosseous carcinoma	9270/3
8461/3	Primary serous papillary carcinoma of peritoneum (C48.1)	8461/3
9443/3	Primitive polar spongioblastoma (C71.) [obs]	9423/3
-----	Pro-B ALL	9836/3
9950/3	Proliferative polycythemia	9950/3
-----	Prolymphocytic leukemia, B-cell type	9833/3
9825/3	Prolymphocytic leukemia, NOS	9832/3
-----	Prolymphocytic leukemia, T-cell type	9834/3
-----	Pro-T ALL	9837/3
8480/3	Pseudomyxoma peritonei with unknown primary site (C80.9)	8480/3
9983/3	RAEB	9983/3
9983/3	RAEB I	9983/3
9983/3	RAEB II	9983/3
9984/3	RAEB-T	9984/3
9982/3	RARS	9982/3
9980/1	Refractory anemia	9980/3
9983/1	Refractory anemia with excess blasts	9983/3
9984/1	Refractory anemia with excess blasts in transformation	9984/3
9982/1	Refractory anemia with ringed sideroblasts	9982/3
9982/1	Refractory anemia with sideroblasts	9982/3
9981/1	Refractory anemia without sideroblasts	9980/3
-----	Refractory cytopenia with multilineage dysplasia	9985/3
-----	Renal carcinoma, collecting duct type (C64.9)	8319/3
-----	Renal cell carcinoma, chromophobe cell (C64.9)	8317/3

-----	Renal cell carcinoma, sarcomatoid (C64.9)	8318/3
-----	Renal cell carcinoma, spindle cell (C64.9)	8318/3
9593/3	Reticulosarcoma, diffuse [obs]	9591/3
9593/3	Reticulosarcoma, NOS [obs]	9591/3
9593/3	Reticulum cell sarcoma, diffuse [obs]	9591/3
9593/3	Reticulum cell sarcoma, NOS [obs]	9591/3
-----	Retinoblastoma, diffuse (C69.2)	9513/3
-----	Rhabdoid meningioma	9538/3
8963/3	Rhabdoid tumor, NOS	8963/3
-----	Rhabdomyosarcoma with ganglionic differentiation	8921/3
9185/3	Round cell osteosarcoma (C40._, C41._)	9185/3
-----	SALT lymphoma	9699/3
8033/3	Sarcomatoid carcinoma	8033/3
9051/3	Sarcomatoid mesothelioma	9051/3
8851/3	Sclerosing liposarcoma	8851/3
-----	Sclerosing hepatic carcinoma (C22.0)	8172/3
8407/3	Sclerosing sweat duct carcinoma (C44._)	8407/3
9062/3	Seminoma with high mitotic index (C62._)	9062/3
8241/3	Serotonin producing carcinoid	8241/3
9014/3	Serous adenocarcinofibroma (C56.9)	9014/3
8441/3	Serous carcinoma, NOS	8441/3
9014/3	Serous cystadenocarcinofibroma (C56.9)	9014/3
8631/3	Sertoli-Leydig cell tumor, poorly differentiated	8631/3
-----	Sertoli-Leydig cell tumor, poorly differentiated, with heterologous elements	8634/3
8631/3	Sertoli-Leydig cell tumor, sarcomatoid	8631/3
-----	SETTLE	8588/3
-----	Skin-associated lymphoid tissue lymphoma	9699/3
8041/3	Small cell neuroendocrine carcinoma	8041/3
8230/3	Solid adenocarcinoma with mucin formation	8230/3
8230/3	Solid carcinoma with mucin formation	8230/3
8452/3	Solid pseudopapillary carcinoma (C25._)	8452/3
-----	Solitary fibrous tumor, malignant	8815/3
-----	Somatostatin cell tumor, malignant	8156/3
-----	Somatostatinoma, malignant	8156/3
-----	Spindle cell rhabdomyosarcoma	8912/3
-----	Spindle epithelial tumor with thymus-like differentiation	8588/3
-----	Spindle epithelial tumor with thymus-like element	8588/3
9051/3	Spindled mesothelioma	9051/3
-----	Splenic lymphoma with villous lymphocytes (C42.2)	9689/3
-----	Splenic marginal zone B-cell lymphoma (C42.2)	9689/3
-----	Splenic marginal zone lymphoma, NOS (C42.2)	9689/3
-----	Squamous cell carcinoma with horn formation	8078/3
8075/3	Squamous cell carcinoma, acantholytic	8075/3
-----	Squamous cell carcinoma, clear cell type	8084/3
8074/3	Squamous cell carcinoma, sarcomatoid	8074/3
8077/2	Squamous intraepithelial neoplasia, grade III	8077/2
9801/3	Stem cell leukemia	9801/3
8670/3	Steroid cell tumor, malignant	8670/3
8931/1	Stromal endometriosis (C54.1)	8931/3
8931/1	Stromal myosis, NOS (C54.1)	8931/3
8930/3	Stromal sarcoma, NOS	8935/3
9862/3	Subacute granulocytic leukemia [obs]	9860/3

9802/3	Subacute leukemia, NOS [obs]	9800/3
9822/3	Subacute lymphatic leukemia [obs]	9820/3
9822/3	Subacute lymphocytic leukemia [obs]	9820/3
9822/3	Subacute lymphoid leukemia [obs]	9820/3
9892/3	Subacute monocytic leukemia [obs]	9860/3
9862/3	Subacute myelogenous leukemia [obs]	9860/3
9862/3	Subacute myeloid leukemia [obs]	9860/3
-----	Subcutaneous panniculitis-like T-cell lymphoma	9708/3
9473/3	Supratentorial PNET (C71._)	9473/3
9041/3	Synovial sarcoma, monophasic fibrous	9041/3
8407/3	Syringomatous carcinoma (C44._)	8407/3
-----	T/NK-cell lymphoma	9719/3
9391/3	Tanycytic ependymoma (C71._)	9391/3
9702/3	T-cell lymphoma, NOS	9702/3
9688/3 *	T-cell rich large B-cell lymphoma	9680/3
9680/3	T-cell rich/histiocyte-rich large B-cell lymphoma	9680/3
-----	Terminal duct adenocarcinoma	8525/3
-----	Therapy-related acute myeloid leukemia and myelodysplastic syndrome, NOS	9920/3
-----	Therapy-related acute myeloid leukemia, alkylating agent related	9920/3
-----	Therapy-related acute myeloid leukemia, epipodophyllotoxin-related	9920/3
-----	Therapy-related myelodysplastic syndrome, alkylating agent related	9987/3
-----	Therapy-related myelodysplastic syndrome, epipodophyllotoxin-related	9987/3
-----	Therapy-related myelodysplastic syndrome, NOS	9987/3
8580/3	Thymic carcinoma (C37.9)	8586/3
-----	Thymic large B-cell lymphoma (C37.9)	9679/3
-----	Thymoma, atypical, malignant (C37.9)	8585/3
-----	Thymoma, cortical, malignant (C37.9)	8584/3
-----	Thymoma, epithelial, malignant (C37.9)	8585/3
-----	Thymoma, lymphocyte-rich, malignant (C37.9)	8583/3
-----	Thymoma, lymphocytic, malignant (C37.9)	8583/3
-----	Thymoma, medullary, malignant (C37.9)	8581/3
-----	Thymoma, mixed type, malignant (C37.9)	8582/3
-----	Thymoma, organoid, malignant (C37.9)	8583/3
-----	Thymoma, predominantly cortical, malignant (C37.9)	8583/3
-----	Thymoma, spindle cell, malignant (C37.9)	8581/3
-----	Thymoma, type A, malignant (C37.9)	8581/3
-----	Thymoma, type AB, malignant (C37.9)	8582/3
-----	Thymoma, type B1, malignant (C37.9)	8583/3
-----	Thymoma, type B2, malignant (C37.9)	8584/3
-----	Thymoma, type B3, malignant (C37.9)	8585/3
-----	Thymoma, type C (C37.9)	8586/3
-----	Transitional cell carcinoma, micropapillary (C67._)	8131/3
8122/3	Transitional cell carcinoma, sarcomatoid	8122/3
9362/3	Transitional pineal tumor (C75.3)	9362/3
8102/3	Trichilemmal carcinoma (C44._)	8102/3
8102/3	Trichilemmocarcinoma (C44._)	8102/3
-----	Trophoblastic tumor, epithelioid	9105/3
9723/3	True histiocytic lymphoma [obs]	9755/3
8263/3	Tubulopapillary adenocarcinoma	8263/3
8240/3	Typical carcinoma	8240/3
9703/3	T-zone lymphoma	9702/3

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-----	Undifferentiated sarcoma	8805/3
8120/2	Urothelial carcinoma in situ	8120/2
8077/2	Vaginal intraepithelial neoplasia, grade III (C52.~)	8077/2
8155/3	Vipoma, malignant	8155/3
8077/2	Vulvar intraepithelial neoplasia, grade III (C51.~)	8077/2
8051/3	Warty carcinoma	8051/3
-----	Well differentiated thymic carcinoma (C37.9)	8585/3

## NUMERIC SORT ON ICD-O-3

### Containing:

**NEW ICD-O-3 CODES  
NEW MORPHOLOGY TERMS AND SYNONYMS  
TERMS THAT CHANGED FROM BORDERLINE TO MALIGNANT  
TERMS THAT CHANGED MORPHOLOGY CODE  
TERMS THAT CHANGED FROM TUMOR-LIKE LESIONS TO  
NEOPLASMS**

### Key:

\* code used in United States (1995-2000) and in Canada (1997-2000)

\*\* code used in United States and Canada (1998-2000)

----- code did (does) not exist

Note: Code 9421/1: Juvenile astrocytoma, pilocytic astrocytoma, and piloid astrocytoma is reportable as 9421/3 for cases diagnosed 2001 and after. Code 8148/2, however, is not reportable: Glandular intraepithelial neoplasia, grade III.

Prostatic intraepithelial neoplasia, grade III; & PIN III. These terms are not included in this list.

ICD-O-2	Term as it appears in ICD-O-3	ICD-O-3
-----	Malignant tumor, clear cell type	8005/3
-----	Large cell neuroendocrine carcinoma	8013/3
-----	Large cell carcinoma with rhabdoid phenotype	8014/3
-----	Glassy cell carcinoma	8015/3
8033/3	Sarcomatoid carcinoma	8033/3
-----	Carcinoma with osteoclast-like giant cells	8035/3
8041/3	Small cell neuroendocrine carcinoma	8041/3
8045/3	Combined small cell carcinoma	8045/3
8045/3	Combined small cell-adenocarcinoma	8045/3
8045/3	Combined small cell-squamous cell carcinoma	8045/3
8045/3	Mixed small cell carcinoma	8045/3
-----	Non-small cell carcinoma (C34._)	8046/3
8051/3	Condylomatous carcinoma	8051/3
8051/3	Warty carcinoma	8051/3
8052/2	Papillary squamous cell carcinoma in situ	8052/2
8052/2	Papillary squamous cell carcinoma, non-invasive	8052/2
8074/3	Squamous cell carcinoma, sarcomatoid	8074/3
8075/3	Squamous cell carcinoma, acantholytic	8075/3
8077/2	AIN III (C21.1)	8077/2
8077/2	Anal intraepithelial neoplasia (C21.1)	8077/2
8077/2	Squamous intraepithelial neoplasia, grade III	8077/2
8077/2	Vaginal intraepithelial neoplasia, grade III (C52._)	8077/2
8077/2	Vulvar intraepithelial neoplasia, grade III (C51._)	8077/2
-----	Squamous cell carcinoma with horn formation	8078/3
8082/3	Lymphoepithelioma-like carcinoma	8082/3
-----	Basaloid squamous cell carcinoma	8083/3
-----	Squamous cell carcinoma, clear cell type	8084/3
8091/3	Multifocal superficial basal cell carcinoma (C44._)	8091/3

8092/3	Basal cell carcinoma, desmoplastic type (C44._)	8092/3
8092/3	Basal cell carcinoma, morpheic (C44._)	8092/3
8092/3	Infiltrating basal cell carcinoma, non-sclerosing (C44._)	8092/3
8092/3	Infiltrating basal cell carcinoma, NOS (C44._)	8092/3
8092/3	Infiltrating basal cell carcinoma, sclerosing (C44._)	8092/3
8093/3	Fibroepithelial basal cell carcinoma, Pinkus type	8093/3
8093/3	Fibroepithelioma of Pinkus type	8093/3
8093/3	Fibroepithelioma, NOS	8093/3
8093/3	Pinkus tumor	8093/3
-----	Basal cell carcinoma, micronodular (C44._)	8097/3
-----	Basal cell carcinoma, nodular (C44._)	8097/3
-----	Adenoid basal carcinoma (C53._)	8098/3
8102/3	Trichilemmal carcinoma (C44._)	8102/3
8102/3	Trichilemmocarcinoma (C44._)	8102/3
8110/3	Matrical carcinoma (C44._)	8110/3
8110/3	Pilomatricoma, malignant (C44._)	8110/3
8120/2	Urothelial carcinoma in situ	8120/2
8121/3	Cylindrical cell carcinoma (C30.0, C31._)	8121/3
8122/3	Transitional cell carcinoma, sarcomatoid	8122/3
8130/2	Papillary transitional cell carcinoma, non-invasive (C67._)	8130/2
8130/2	Papillary urothelial carcinoma, non-invasive (C67._)	8130/2
8130/3	Papillary urothelial carcinoma (C67._)	8130/3
-----	Transitional cell carcinoma, micropapillary (C67._)	8131/3
8153/3	Gastrin cell tumor, malignant	8153/3
8154/3	Mixed acinar-endocrine carcinoma (C25._)	8154/3
8154/3	Mixed ductal-endocrine carcinoma (C25._)	8154/3
8155/3	Vipoma, malignant	8155/3
-----	Somatostatin cell tumor, malignant	8156/3
-----	Somatostatinoma, malignant	8156/3
-----	Enteroglucagonoma, malignant	8157/3
-----	Hepatocellular carcinoma, scirrhus (C22.0)	8172/3
-----	Sclerosing hepatic carcinoma (C22.0)	8172/3
-----	Hepatocellular carcinoma, sarcomatoid (C22.0)	8173/3
-----	Hepatocellular carcinoma, spindle cell variant (C22.0)	8173/3
-----	Hepatocellular carcinoma, clear cell type (C22.0)	8174/3
-----	Hepatocellular carcinoma, pleomorphic type (C22.0)	8175/3
8201/2	Ductal carcinoma in situ, cribriform type (C50._)	8201/2
8201/3	Ductal carcinoma, cribriform type (C50._)	8201/3
-----	Parietal cell adenocarcinoma (C16._)	8214/3
-----	Parietal cell carcinoma (C16._)	8214/3
-----	Adenocarcinoma of anal ducts (C21.1)	8215/3
-----	Adenocarcinoma of anal glands (C21.1)	8215/3
8230/2	Ductal carcinoma in situ, solid type (C50._)	8230/2
8230/2	Intraductal carcinoma, solid type	8230/2
8230/3	Solid adenocarcinoma with mucin formation	8230/3
8230/3	Solid carcinoma with mucin formation	8230/3
8240/3	Typical carcinoid	8240/3
8241/3	EC cell carcinoid	8241/3
8241/3	Enterochromaffin cell carcinoid	8241/3
8241/3	Serotonin producing carcinoid	8241/3
-----	ECL cell carcinoid, malignant	8242/3
-----	Enterochromaffin-like cell tumor, malignant	8242/3

8244/3	Mixed carcinoid-adenocarcinoma	8244/3
8247/3	Primary cutaneous neuroendocrine carcinoma (C44._)	8247/3
-----	Atypical carcinoid tumor	8249/3
-----	Bronchiolo-alveolar carcinoma, Clara cell (C34._)	8252/3
-----	Bronchiolo-alveolar carcinoma, non-mucinous (C34._)	8252/3
-----	Bronchiolo-alveolar carcinoma, type II pneumocyte (C34._)	8252/3
-----	Bronchiolo-alveolar carcinoma, goblet cell type (C34._)	8253/3
-----	Bronchiolo-alveolar carcinoma, mucinous (C34._)	8253/3
-----	Bronchiolo-alveolar carcinoma, Clara cell and goblet cell type (C34._)	8254/3
-----	Bronchiolo-alveolar carcinoma, indeterminate type (C34._)	8254/3
-----	Bronchiolo-alveolar carcinoma, mixed mucinous and non-mucinous (C34._)	8254/3
-----	Bronchiolo-alveolar carcinoma, type II pneumocyte and goblet cell type (C34._)	8254/3
-----	Adenocarcinoma combined with other types of carcinoma	8255/3
-----	Adenocarcinoma with mixed subtypes	8255/3
8260/3	Papillary carcinoma of thyroid (C73.9)	8260/3
8260/3	Papillary renal cell carcinoma (C64.9)	8260/3
8263/3	Papillotubular adenocarcinoma	8263/3
8263/3	Tubulopapillary adenocarcinoma	8263/3
-----	Pituitary carcinoma, NOS (C75.1)	8272/3
8290/3	Follicular carcinoma, oxyphilic cell (C73.9)	8290/3
8313/3	Clear cell adenocarcinofibroma (C56.9)	8313/3
8313/3	Clear cell cystadenocarcinofibroma (C56.9)	8313/3
-----	Cyst-associated renal cell carcinoma (C64.9)	8316/3
-----	Chromophobe cell renal carcinoma (C64.9)	8317/3
-----	Renal cell carcinoma, chromophobe cell (C64.9)	8317/3
-----	Renal cell carcinoma, sarcomatoid (C64.9)	8318/3
-----	Renal cell carcinoma, spindle cell (C64.9)	8318/3
-----	Bellini duct carcinoma (C64.9)	8319/3
-----	Collecting duct carcinoma (C64.9)	8319/3
-----	Renal carcinoma, collecting duct type (C64.9)	8319/3
8333/3	Fetal adenocarcinoma	8333/3
-----	Follicular carcinoma, encapsulated (C73.9)	8335/3
-----	Follicular carcinoma, minimally invasive (C73.9)	8335/3
-----	Insular carcinoma (C73.9)	8337/3
-----	Papillary microcarcinoma (C73.9)	8341/3
-----	Papillary carcinoma, oxyphilic cell (C73.9)	8342/3
-----	Papillary carcinoma, encapsulated (C73.9)	8343/3
-----	Papillary carcinoma, columnar cell (C73.9)	8344/3
-----	Papillary carcinoma, tall cell (C73.9)	8344/3
8510/3	C cell carcinoma (C73.9)	8345/3
8511/3	Medullary carcinoma with amyloid stroma (C73.9)	8345/3
8510/3	Parafollicular cell carcinoma (C73.9)	8345/3
-----	Mixed medullary-follicular carcinoma (C73.9)	8346/3
-----	Mixed medullary-papillary carcinoma (C73.9)	8347/3
8350/3	Papillary carcinoma, diffuse sclerosing (C73.9)	8350/3
-----	Endometrioid adenocarcinoma, secretory variant (C56.9)	8382/3
-----	Endometrioid adenocarcinoma, ciliated cell variant	8383/3
-----	Adenocarcinoma, endocervical type	8384/3
8402/3	Hidradenocarcinoma (C44._)	8402/3
8402/3	Nodular hidradenoma, malignant (C44._)	8402/3

8403/3	Malignant eccrine spiradenoma (C44._)	8403/3
8407/3	Microcystic adnexal carcinoma (C44._)	8407/3
8407/3	Sclerosing sweat duct carcinoma (C44._)	8407/3
8407/3	Syringomatous carcinoma (C44._)	8407/3
8408/3	Digital papillary adenocarcinoma (C44._)	8408/3
8408/3	Eccrine papillary adenocarcinoma (C44._)	8408/3
-----	Eccrine poroma, malignant	8409/3
-----	Porocarcinoma (C44._)	8409/3
-----	Eccrine adenocarcinoma (C44._)	8413/3
8441/3	Serous carcinoma, NOS	8441/3
8452/3	Solid pseudopapillary carcinoma (C25._)	8452/3
-----	Intraductal papillary-mucinous carcinoma, non-invasive (C25._)	8453/2
-----	Intraductal papillary-mucinous carcinoma, invasive (C25._)	8453/3
8460/3	Micropapillary serous carcinoma (C56.9)	8460/3
8461/3	Primary serous papillary carcinoma of peritoneum (C48.1)	8461/3
8470/2	Mucinous cystadenocarcinoma, non-invasive (C25._)	8470/2
8480/3	Pseudomyxoma peritonei with unknown primary site (C80.9)	8480/3
-----	Mucinous adenocarcinoma, endocervical type	8482/3
8500/2	DCIS, NOS (C50._)	8500/2
8500/2	DIN 3 (C50._)	8500/2
8500/2	Ductal carcinoma in situ, NOS (C50._)	8500/2
8500/2	Ductal intraepithelial neoplasia 3 (C50._)	8500/2
8501/2	DCIS, comedo type (C50._)	8501/2
8501/2	Ductal carcinoma in situ, comedo type (C50._)	8501/2
8503/2	DCIS, papillary (C50._)	8503/2
8503/2	Ductal carcinoma in situ, papillary (C50._)	8503/2
8503/3	Infiltrating papillary adenocarcinoma	8503/3
-----	Ductal carcinoma in situ, micropapillary (C50._)	8507/2
-----	Intraductal carcinoma, clinging (C50._)	8507/2
-----	Intraductal micropapillary carcinoma (C50._)	8507/2
-----	Cystic hypersecretory carcinoma (C50._)	8508/3
-----	Atypical medullary carcinoma (C50._)	8513/3
-----	Duct carcinoma, desmoplastic type	8514/3
8520/2	LCIS, NOS (C50._)	8520/2
8522/3	Infiltrating lobular carcinoma and ductal carcinoma in situ (C50._)	8522/3
-----	Infiltrating duct and colloid carcinoma (C50._)	8523/3
-----	Infiltrating duct and cribriform carcinoma (C50._)	8523/3
-----	Infiltrating duct and mucinous carcinoma (C50._)	8523/3
-----	Infiltrating duct and tubular carcinoma (C50._)	8523/3
-----	Infiltrating duct mixed with other types of carcinoma (C50._)	8523/3
-----	Infiltrating lobular mixed with other types of carcinoma (C50._)	8524/3
-----	Polymorphous low grade adenocarcinoma	8525/3
-----	Terminal duct adenocarcinoma	8525/3
-----	Acinar cell cystadenocarcinoma	8551/3
-----	Adenocarcinoma with neuroendocrine differentiation	8574/3
-----	Carcinoma with neuroendocrine differentiation	8574/3
-----	Metaplastic carcinoma, NOS	8575/3
-----	Hepatoid adenocarcinoma	8576/3
-----	Hepatoid carcinoma	8576/3
-----	Thymoma, medullary, malignant (C37.9)	8581/3
-----	Thymoma, spindle cell, malignant (C37.9)	8581/3
-----	Thymoma, type A, malignant (C37.9)	8581/3

-----	Thymoma, mixed type, malignant (C37.9)	8582/3
-----	Thymoma, type AB, malignant (C37.9)	8582/3
-----	Thymoma, lymphocyte-rich, malignant (C37.9)	8583/3
-----	Thymoma, lymphocytic, malignant (C37.9)	8583/3
-----	Thymoma, organoid, malignant (C37.9)	8583/3
-----	Thymoma, predominantly cortical, malignant (C37.9)	8583/3
-----	Thymoma, type B1, malignant (C37.9)	8583/3
-----	Thymoma, cortical, malignant (C37.9)	8584/3
-----	Thymoma, type B2, malignant (C37.9)	8584/3
-----	Thymoma, atypical, malignant (C37.9)	8585/3
-----	Thymoma, epithelial, malignant (C37.9)	8585/3
-----	Thymoma, type B3, malignant (C37.9)	8585/3
-----	Well differentiated thymic carcinoma (C37.9)	8585/3
8580/3	Thymic carcinoma (C37.9)	8586/3
-----	Thymoma, type C (C37.9)	8586/3
-----	SETTLE	8588/3
-----	Spindle epithelial tumor with thymus-like differentiation	8588/3
-----	Spindle epithelial tumor with thymus-like element	8588/3
-----	Carcinoma showing thymus-like differentiation	8589/3
-----	Carcinoma showing thymus-like element	8589/3
-----	CASTLE	8589/3
8620/3	Granulosa cell tumor, sarcomatoid (C56.9)	8620/3
8631/3	Sertoli-Leydig cell tumor, poorly differentiated	8631/3
8631/3	Sertoli-Leydig cell tumor, sarcomatoid	8631/3
-----	Sertoli-Leydig cell tumor, poorly differentiated, with heterologous elements	8634/3
8670/3	Steroid cell tumor, malignant	8670/3
8700/3	Adrenal medullary paraganglioma, malignant (C74.1)	8700/3
8711/3	Glomus tumor, malignant	8711/3
-----	Meningeal melanomatosis (C70.9)	8728/3
8745/3	Desmoplastic melanoma, amelanotic (C44._)	8745/3
-----	Mucosal lentiginous melanoma	8746/3
8761/3	Malignant melanoma in congenital melanocytic nevus (C44._)	8761/3
-----	Undifferentiated sarcoma	8805/3
-----	Desmoplastic small round cell tumor	8806/3
-----	Solitary fibrous tumor, malignant	8815/3
8851/3	Inflammatory liposarcoma	8851/3
8851/3	Lipoma-like liposarcoma	8851/3
8851/3	Sclerosing liposarcoma	8851/3
8857/3	Fibroblastic liposarcoma	8857/3
8901/3	Pleomorphic rhabdomyosarcoma, adult type	8901/3
8902/3	Mixed embryonal rhabdomyosarcoma and alveolar rhabdomyosarcoma	8902/3
8910/3	Embryonal rhabdomyosarcoma, pleomorphic	8910/3
-----	Spindle cell rhabdomyosarcoma	8912/3
-----	Ectomesenchymoma	8921/3
-----	Rhabdomyosarcoma with ganglionic differentiation	8921/3
8930/3	Endometrial stromal sarcoma, high grade (C54.1)	8930/3
8931/1	Endolymphatic stromal myosis (C54.1)	8931/3
8931/1	Endometrial stromal sarcoma, low grade (C54.1)	8931/3
8931/1	Endometrial stromatosis (C54.1)	8931/3
8931/1	Stromal endometriosis (C54.1)	8931/3
8931/1	Stromal myosis, NOS (C54.1)	8931/3
-----	Carcinofibroma	8934/3

8930/3	Stromal sarcoma, NOS	8935/3
-----	Gastrointestinal stromal sarcoma	8936/3
-----	Gastrointestinal stromal tumor, malignant	8936/3
-----	GIST, malignant	8936/3
8940/3	Malignant chondroid syringoma (C44._)	8940/3
-----	Malignant cystic nephroma (C64.9)	8959/3
-----	Malignant multilocular cystic nephroma (C64.9)	8959/3
8963/3	Malignant rhabdoid tumor	8963/3
8963/3	Rhabdoid tumor, NOS	8963/3
-----	Pleuropulmonary blastoma	8973/3
8982/3	Malignant myoepithelioma	8982/3
8982/3	Myoepithelial carcinoma	8982/3
9014/3	Malignant serous adenofibroma (C56.9)	9014/3
9014/3	Malignant serous cystadenofibroma (C56.9)	9014/3
9014/3	Serous adenocarcinofibroma (C56.9)	9014/3
9014/3	Serous cystadenocarcinofibroma (C56.9)	9014/3
9015/3	Malignant mucinous adenofibroma (C56.9)	9015/3
9015/3	Malignant mucinous cystadenofibroma (C56.9)	9015/3
9015/3	Mucinous adenocarcinofibroma (C56.9)	9015/3
9015/3	Mucinous cystadenocarcinofibroma (C56.9)	9015/3
9041/3	Synovial sarcoma, monophasic fibrous	9041/3
9051/3	Desmoplastic mesothelioma	9051/3
9051/3	Sarcomatoid mesothelioma	9051/3
9051/3	Spindled mesothelioma	9051/3
9062/3	Seminoma with high mitotic index (C62._)	9062/3
9064/2	Intratubular germ cell neoplasia (C62._)	9064/2
9064/2	Intratubular malignant germ cells (C62._)	9064/2
-----	Germ cell tumor, nonseminomatous (C62._)	9065/3
9071/3	Hepatoid yolk sac tumor	9071/3
9080/3	Immature teratoma, malignant	9080/3
9084/3	Dermoid cyst with secondary tumor	9084/3
9085/3	Mixed teratoma and seminoma	9085/3
-----	Trophoblastic tumor, epithelioid	9105/3
9134/1	Intravascular bronchial alveolar tumor (C34._) [obs]	9133/3
9185/3	Round cell osteosarcoma (C40._, C41._)	9185/3
-----	Central osteosarcoma (C40._, C41._)	9186/3
-----	Conventional central osteosarcoma (C40._, C41._)	9186/3
-----	Medullary osteosarcoma (C40._, C41._)	9186/3
-----	Intraosseous low grade osteosarcoma (C40._, C41._)	9187/3
-----	Intraosseous well differentiated osteosarcoma (C40._, C41._)	9187/3
9190/3	Juxtacortical osteosarcoma (C40._, C41._)	9192/3
9190/3	Parosteal osteosarcoma (C40._, C41._)	9192/3
9190/3	Periosteal osteosarcoma (C40._, C41._)	9193/3
-----	High grade surface osteosarcoma (C40._, C41._)	9194/3
-----	Intracortical osteosarcoma (C40._, C41._)	9195/3
9221/3	Periosteal chondrosarcoma (C40._, C41._)	9221/3
-----	Clear cell chondrosarcoma (C40._, C41._)	9242/3
-----	Dedifferentiated chondrosarcoma (C40._, C41._)	9243/3
-----	Giant cell tumor of tendon sheath, malignant (C49._)	9252/3
-----	Malignant tenosynovial giant cell tumor (C49._)	9252/3
9270/3	Primary intraosseous carcinoma	9270/3
9290/3	Ameloblastic fibrodentinosa sarcoma	9290/3

9290/3	Ameloblastic fibro-odontosarcoma	9290/3
-----	Odontogenic carcinosarcoma	9342/3
9362/3	Mixed pineal tumor (C75.3)	9362/3
9362/3	Mixed pineocytoma-pineoblastoma (C75.3)	9362/3
9362/3	Pineal parenchymal tumor of intermediate differentiation (C75.3)	9362/3
9362/3	Transitional pineal tumor (C75.3)	9362/3
9364/3	Peripheral primitive neuroectodermal tumor, NOS	9364/3
9364/3	PPNET	9364/3
8803/3	Askin tumor	9365/3
-----	Chondroid chordoma	9371/3
-----	Dedifferentiated chordoma	9372/3
9382/3	Anaplastic oligoastrocytoma (C71._)	9382/3
9390/3	Choroid plexus carcinoma (C71.5)	9390/3
9391/3	Cellular ependymoma (C71._)	9391/3
9391/3	Clear cell ependymoma (C71._)	9391/3
9391/3	Tanycytic ependymoma (C71._)	9391/3
9393/1	Papillary ependymoma (C71._)	9393/3
9400/3	Astrocytoma, low grade (C71._)	9400/3
9400/3	Diffuse astrocytoma (C71._)	9400/3
9400/3	Diffuse astrocytoma, low grade (C71._)	9400/3
9421/3	Juvenile astrocytoma (C71._)	9421/1
9421/3	Pilocytic astrocytoma (C71._)	9421/1
9421/3	Piloid astrocytoma (C71._)	9421/1
9423/3	Polar spongioblastoma (C71._)	9423/3
9443/3	Primitive polar spongioblastoma (C71._) [obs]	9423/3
9481/3	Monstrocellular sarcoma (C71._) [obs]	9441/3
9470/3	Melanotic medulloblastoma (C71.6)	9470/3
9471/3	Desmoplastic nodular medulloblastoma (C71.6)	9471/3
9473/3	Central primitive neuroectodermal tumor, NOS (C71._)	9473/3
9473/3	CPNET (C71._)	9473/3
9473/3	PNET, NOS	9473/3
9473/3	Supratentorial PNET (C71._)	9473/3
-----	Large cell medulloblastoma (C71.6)	9474/3
9500/3	Central neuroblastoma (C71._)	9500/3
9501/3	Diktyoma, malignant (C69._)	9501/3
9505/3	Ganglioglioma, anaplastic	9505/3
-----	Atypical teratoid/rhabdoid tumor (C71._)	9508/3
-----	Retinoblastoma, diffuse (C69.2)	9513/3
9521/3	Olfactory neurocytoma (C30.0)	9521/3
9530/3	Meningioma, anaplastic	9530/3
9538/1	Papillary meningioma	9538/3
9538/3	Rhabdoid meningioma	9538/3
9540/3	Epithelioid MPNST	9540/3
9540/3	Malignant peripheral nerve sheath tumor	9540/3
9540/3	Melanotic MPNST	9540/3
9540/3	Melanotic psammomatous MPNST	9540/3
9540/3	MPNST with glandular differentiation	9540/3
9540/3	MPNST with mesenchymal differentiation	9540/3
9540/3	MPNST, NOS	9540/3
9561/3	Malignant peripheral nerve sheath tumor with rhabdomyoblastic differentiation	9561/3
9561/3	MPNST with rhabdomyoblastic differentiation	9561/3

-----	Perineural MPNST	9571/3
-----	Perineurioma, malignant	9571/3
9594/3	Microglioma (C71.0) [obs]	9590/3
9591/3	B cell lymphoma, NOS	9591/3
9592/3	Lymphosarcoma, diffuse [obs]	9591/3
9592/3	Lymphosarcoma, NOS [obs]	9591/3
9672/3	Malignant lymphoma, cleaved cell, NOS [obs]	9591/3
9595/3	Malignant lymphoma, diffuse, NOS	9591/3
9694/3	Malignant lymphoma, lymphocytic, intermediate differentiation, nodular [obs]	9591/3
9672/3	Malignant lymphoma, lymphocytic, poorly differentiated, diffuse [obs]	9591/3
9686/3	Malignant lymphoma, small cell, noncleaved, diffuse [obs]	9591/3
9672/3	Malignant lymphoma, small cleaved cell, diffuse [obs]	9591/3
9672/3	Malignant lymphoma, small cleaved cell, NOS [obs]	9591/3
9686/3	Malignant lymphoma, undifferentiated cell type, NOS [obs]	9591/3
9686/3	Malignant lymphoma, undifferentiated cell, non-Burkitt [obs]	9591/3
9593/3	Reticulosarcoma, diffuse [obs]	9591/3
9593/3	Reticulosarcoma, NOS [obs]	9591/3
9593/3	Reticulum cell sarcoma, diffuse [obs]	9591/3
9593/3	Reticulum cell sarcoma, NOS [obs]	9591/3
-----	Composite Hodgkin and non-Hodgkin lymphoma	9596/3
-----	Classical Hodgkin lymphoma, lymphocyte-rich	9651/3
9658/3	Hodgkin disease, lymphocyte predominance, diffuse [obs]	9651/3
9657/3	Hodgkin disease, lymphocyte predominance, NOS [obs]	9651/3
9657/3	Hodgkin disease, lymphocytic-histiocytic predominance [obs]	9651/3
-----	Hodgkin lymphoma, lymphocyte-rich	9651/3
9652/3	Classical Hodgkin lymphoma, mixed cellularity, NOS	9652/3
9653/3	Classical Hodgkin lymphoma, lymphocyte depletion, NOS	9653/3
9654/3	Classical Hodgkin lymphoma, lymphocyte depletion, diffuse fibrosis	9654/3
9655/3	Classical Hodgkin lymphoma, lymphocyte depletion, reticular	9655/3
9660/3	Hodgkin paragranuloma, nodular [obs]	9659/3
9660/3	Hodgkin paragranuloma, NOS [obs]	9659/3
9663/3	Classical Hodgkin lymphoma, nodular sclerosis, NOS	9663/3
9664/3	Classical Hodgkin lymphoma, nodular sclerosis, cellular phase	9664/3
9665/3	Classical Hodgkin lymphoma, nodular sclerosis, grade 1	9665/3
9666/3	Hodgkin disease, nodular sclerosis, mixed cellularity	9665/3
9665/3	Hodgkin lymphoma, nodular sclerosis, grade 1	9665/3
9667/3	Classical Hodgkin lymphoma, nodular sclerosis, grade 2	9667/3
9667/3	Hodgkin lymphoma, nodular sclerosis, grade 2	9667/3
9670/3	Malignant lymphoma, small B lymphocytic, NOS (See also M-9823/3)	9670/3
9670/3	Malignant lymphoma, small cell diffuse	9670/3
9670/3	Malignant lymphoma, small lymphocytic, NOS	9670/3
9674/3	Malignant lymphoma, centrocytic [obs]	9673/3
9677/3	Malignant lymphomatous polyposis [obs]	9673/3
9673/3	Mantle cell lymphoma	9673/3
9676/3	Malignant lymphoma, centroblastic-centrocytic, diffuse [obs]	9675/3
9676/3	Malignant lymphoma, centroblastic-centrocytic, NOS [obs]	9675/3
-----	Primary effusion lymphoma	9678/3
-----	Mediastinal large B-cell lymphoma (C38.3)	9679/3
-----	Thymic large B-cell lymphoma (C37.9)	9679/3
9680/3	Anaplastic large B-cell lymphoma	9680/3
9712/3	Angioendotheliomatosis	9680/3

9680/3	Angiotropic lymphoma	9680/3
9680/3	Histiocyte-rich large B-cell lymphoma	9680/3
9680/3	Intravascular B-cell lymphoma	9680/3
9680/3	Intravascular large B-cell lymphoma (C49.9)	9680/3
9683/3	Malignant lymphoma, centroblastic, diffuse	9680/3
9683/3	Malignant lymphoma, centroblastic, NOS	9680/3
9680/3	Malignant lymphoma, large B-cell, diffuse, centroblastic, NOS	9680/3
9681/3	Malignant lymphoma, large cell, cleaved, diffuse	9680/3
9681/3	Malignant lymphoma, large cell, cleaved, NOS	9680/3
9682/3	Malignant lymphoma, large cell, noncleaved, diffuse	9680/3
9682/3	Malignant lymphoma, large cell, noncleaved, NOS	9680/3
9681/3	Malignant lymphoma, large cleaved cell, NOS	9680/3
9682/3	Malignant lymphoma, noncleaved, diffuse, NOS	9680/3
9682/3	Malignant lymphoma, noncleaved, NOS	9680/3
9688/3 *	T-cell rich large B-cell lymphoma	9680/3
9680/3	T-cell rich/histiocyte-rich large B-cell lymphoma	9680/3
9684/3	Malignant lymphoma, large B-cell, diffuse, immunoblastic, NOS	9684/3
9684/3	Plasmablastic lymphoma	9684/3
9687/3	Burkitt-like lymphoma	9687/3
-----	Splenic lymphoma with villous lymphocytes (C42.2)	9689/3
-----	Splenic marginal zone B-cell lymphoma (C42.2)	9689/3
-----	Splenic marginal zone lymphoma, NOS (C42.2)	9689/3
9690/3	Follicular lymphoma, NOS (See also M-9675/3)	9690/3
9692/3	Malignant lymphoma, centroblastic-centrocytic, follicular	9690/3
9690/3	Malignant lymphoma, follicle center, follicular	9690/3
9690/3	Malignant lymphoma, follicle center, NOS	9690/3
9691/3	Follicular lymphoma, grade 2	9691/3
9695/3	Follicular lymphoma, grade 1	9695/3
9696/3	Malignant lymphoma, lymphocytic, poorly differentiated, nodular [obs]	9695/3
9698/3	Follicular lymphoma, grade 3	9698/3
9697/3	Malignant lymphoma, centroblastic, follicular	9698/3
9693/3	Malignant lymphoma, lymphocytic, well differentiated, nodular [obs]	9698/3
-----	BALT lymphoma	9699/3
-----	Bronchial-associated lymphoid tissue lymphoma	9699/3
9715/3 *	MALT lymphoma	9699/3
-----	Marginal zone B-cell lymphoma, NOS	9699/3
9710/3 *	Marginal zone lymphoma, NOS	9699/3
9711/3	Monocytoid B-cell lymphoma	9699/3
9715/3 *	Mucosal-associated lymphoid tissue lymphoma	9699/3
-----	Nodal marginal zone lymphoma	9699/3
-----	SALT lymphoma	9699/3
-----	Skin-associated lymphoid tissue lymphoma	9699/3
9700/3	Pagetoid reticulosis	9700/3
9704/3	Lennert lymphoma	9702/3
9704/3	Lymphoepithelioid lymphoma	9702/3
9702/3	Mature T-cell lymphoma, NOS	9702/3
9702/3	Peripheral T-cell lymphoma, large cell	9702/3
9707/3	Peripheral T-cell lymphoma, pleomorphic medium and large cell	9702/3
9706/3	Peripheral T-cell lymphoma, pleomorphic small cell	9702/3
9702/3	T-cell lymphoma, NOS	9702/3
9703/3	T-zone lymphoma	9702/3
-----	Subcutaneous panniculitis-like T-cell lymphoma	9708/3

9709/3	Cutaneous T-cell lymphoma, NOS (C44._)	9709/3
9714/3	Anaplastic large cell lymphoma, CD30+	9714/3
9714/3	Anaplastic large cell lymphoma, NOS	9714/3
9714/3	Anaplastic large cell lymphoma, T cell and Null cell type	9714/3
-----	Hepatosplenic gamma-delta cell lymphoma	9716/3
-----	Enteropathy associated T-cell lymphoma	9717/3
-----	Enteropathy type intestinal T-cell lymphoma	9717/3
-----	Intestinal T-cell lymphoma	9717/3
-----	Lymphomatoid papulosis (C44._)	9718/3
-----	Primary cutaneous anaplastic large cell lymphoma (C44._)	9718/3
-----	Primary cutaneous CD30+ large T-cell lymphoma (C44._)	9718/3
-----	Primary cutaneous CD30+ T-cell lymphoproliferative disorder (C44._)	9718/3
9713/3	Angiocentric T-cell lymphoma [obs]	9719/3
9713/3	Malignant midline reticulosis [obs]	9719/3
9713/3	Malignant reticulosis, NOS [obs]	9719/3
-----	NK/T-cell lymphoma, nasal and nasal-type	9719/3
9713/3	Polymorphic reticulosis [obs]	9719/3
-----	T/NK-cell lymphoma	9719/3
9685/3	Lymphoblastoma [obs]	9727/3
9685/3	Malignant lymphoma, convoluted cell [obs]	9727/3
9685/3	Malignant lymphoma, lymphoblastic (See also 9821/3)	9727/3
-----	Precursor cell lymphoblastic lymphoma, NOS (See also M-9835/3)	9727/3
-----	Precursor B-cell lymphoblastic lymphoma (See also M-9836/3)	9728/3
-----	Precursor T-cell lymphoblastic lymphoma (See also M-9837/3)	9729/3
9731/3	Plasmacytoma of bone (C40._, C41._)	9731/3
9830/3	Plasma cell leukemia (C42.1)	9733/3
9830/3	Plasmacytic leukemia (C42.1)	9733/3
9731/3	Plasmacytoma, extramedullary (not occurring in bone)	9734/3
9900/3	Mast cell leukemia (C42.1)	9742/3
9720/3	Histiocytic medullary reticulosis [obs]	9750/3
9720/3	Malignant histiocytosis	9750/3
9722/3	Acute progressive histiocytosis X	9754/3
-----	Langerhans cell histiocytosis, disseminated	9754/3
-----	Langerhans cell histiocytosis, generalized	9754/3
9722/3	Letterer-Siwe disease	9754/3
9722/3	Nonlipid reticuloendotheliosis [obs]	9754/3
-----	Histiocytic sarcoma	9755/3
9723/3	True histiocytic lymphoma [obs]	9755/3
-----	Langerhans cell sarcoma	9756/3
-----	Dendritic cell sarcoma, NOS	9757/3
-----	Interdigitating cell sarcoma	9757/3
-----	Interdigitating dendritic cell sarcoma	9757/3
-----	Follicular dendritic cell sarcoma	9758/3
-----	Follicular dendritic cell tumor	9758/3
9763/3	Franklin disease	9762/3
9763/3	Gamma heavy chain disease	9762/3
9762/3	Heavy chain disease, NOS	9762/3
9762/3	Mu heavy chain disease	9762/3
9804/3	Aleukemic leukemia, NOS [obs]	9800/3
9803/3	Chronic leukemia, NOS [obs]	9800/3
9802/3	Subacute leukemia, NOS [obs]	9800/3
9801/3	Stem cell leukemia	9801/3

-----	Acute bilineal leukemia	9805/3
-----	Acute biphenotypic leukemia	9805/3
-----	Acute mixed lineage leukemia	9805/3
9824/3	Aleukemic lymphatic leukemia [obs]	9820/3
9824/3	Aleukemic lymphocytic leukemia [obs]	9820/3
9824/3	Aleukemic lymphoid leukemia [obs]	9820/3
9850/3	Lymphosarcoma cell leukemia [obs]	9820/3
9822/3	Subacute lymphatic leukemia [obs]	9820/3
9822/3	Subacute lymphocytic leukemia [obs]	9820/3
9822/3	Subacute lymphoid leukemia [obs]	9820/3
9823/3	B-cell chronic lymphocytic leukemia/small lymphocytic lymphoma (See also M-9670/3)	9823/3
9823/3	Chronic lymphocytic leukemia, B-cell type (includes all variants of BCLL)	9823/3
9826/3	Acute lymphoblastic leukemia, mature B-cell type	9826/3
9826/3	B-ALL [obs]	9826/3
9826/3	Burkitt cell leukemia (See also M-9687/3)	9826/3
9826/3	FAB L3 [obs]	9826/3
9827/3	Adult T-cell leukemia/lymphoma (HTLV-1 positive) Includes all variants	9827/3
9825/3	Prolymphocytic leukemia, NOS	9832/3
-----	Prolymphocytic leukemia, B-cell type	9833/3
-----	Prolymphocytic leukemia, T-cell type	9834/3
9821/3	Acute lymphatic leukemia	9835/3
9828/3 **	Acute lymphoblastic leukemia, L2 type, NOS	9835/3
9821/3	Acute lymphoblastic leukemia, NOS (See also M-9727/3)	9835/3
-----	Acute lymphoblastic leukemia, precursor-cell type	9835/3
-----	Acute lymphoblastic leukemia-lymphoma, NOS	9835/3
9821/3	Acute lymphocytic leukemia	9835/3
9821/3	Acute lymphoid leukemia	9835/3
9821/3	FAB L1	9835/3
9828/3 **	FAB L2	9835/3
9821/3	Lymphoblastic leukemia, NOS	9835/3
-----	Precursor cell lymphoblastic leukemia, NOS (See also M-9727/3)	9835/3
-----	Precursor cell lymphoblastic leukemia, not phenotyped	9835/3
-----	c-ALL	9836/3
-----	Common ALL	9836/3
-----	Common precursor B ALL	9836/3
-----	Pre-B ALL	9836/3
-----	Precursor B-cell lymphoblastic leukemia	9836/3
-----	Pre-pre-B ALL	9836/3
-----	Pro-B ALL	9836/3
-----	Cortical T ALL	9837/3
-----	Mature T ALL	9837/3
-----	Precursor T-cell lymphoblastic leukemia	9837/3
-----	Pre-T ALL	9837/3
-----	Pro-T ALL	9837/3
9841/3	Acute erythremia [obs]	9840/3
9841/3	Acute erythremic myelosis [obs]	9840/3
9840/3	Acute erythroid leukemia	9840/3
9840/3	Acute myeloid leukemia, M6 type	9840/3
9840/3	AML M6	9840/3
9841/3	Di Guglielmo disease [obs]	9840/3
9840/3	FAB M6	9840/3

9840/3	M6A	9840/3
9840/3	M6B	9840/3
9864/3	Aleukemic granulocytic leukemia [obs]	9860/3
9894/3	Aleukemic monocytic leukemia [obs]	9860/3
9864/3	Aleukemic myelogenous leukemia [obs]	9860/3
9864/3	Aleukemic myeloid leukemia [obs]	9860/3
9893/3	Chronic monocytic leukemia [obs]	9860/3
9880/3	Eosinophilic leukemia	9860/3
9890/3	Monocytic leukemia, NOS	9860/3
9860/3	Non-lymphocytic leukemia, NOS	9860/3
9862/3	Subacute granulocytic leukemia [obs]	9860/3
9892/3	Subacute monocytic leukemia [obs]	9860/3
9862/3	Subacute myelogenous leukemia [obs]	9860/3
9862/3	Subacute myeloid leukemia [obs]	9860/3
9861/3	Acute myeloid leukemia, NOS (FAB or WHO type not specified) (See also M-9930/3)	9861/3
9861/3	Acute non-lymphocytic leukemia	9861/3
9866/3	Acute myeloid leukemia, PML/RAR-alpha	9866/3
9866/3	Acute myeloid leukemia, t(15;17)(q22;q11-12)	9866/3
9866/3	Acute promyelocytic leukemia, PML/RAR-alpha	9866/3
9866/3	Acute promyelocytic leukemia, t(15;17)(q22;q11-12)	9866/3
9866/3	FAB M3 (includes all variants)	9866/3
9867/3	FAB M4	9867/3
9870/3	Acute basophilic leukemia	9870/3
-----	Acute myeloid leukemia with abnormal marrow eosinophils (includes all variants)	9871/3
-----	Acute myeloid leukemia, CBF-beta/MYH11	9871/3
-----	Acute myeloid leukemia, inv(16)(p13;q22)	9871/3
-----	Acute myeloid leukemia, t(16;16)(p13;q11)	9871/3
-----	Acute myelomonocytic leukemia with abnormal eosinophils	9871/3
9871/3 **	FAB M4Eo	9871/3
9869/3 **	Acute myeloblastic leukemia	9872/3
-----	Acute myeloid leukemia, minimal differentiation	9872/3
9872/3 **	FAB M0	9872/3
-----	Acute myeloid leukemia without maturation	9873/3
9873/3 **	FAB M1	9873/3
9865/3 **	Acute myelocytic leukemia with maturation	9874/3
-----	Acute myeloid leukemia with maturation	9874/3
9874/3 **	FAB M2, NOS	9874/3
-----	Chronic granulocytic leukemia, BCR/ABL	9875/3
-----	Chronic granulocytic leukemia, Philadelphia chromosome (Ph1) positive	9875/3
-----	Chronic granulocytic leukemia, t(9;22)(q34;q11)	9875/3
-----	Chronic myelogenous leukemia, BCR/ABL positive	9875/3
-----	Chronic myelogenous leukemia, Philadelphia chromosome (Ph1) positive	9875/3
-----	Chronic myelogenous leukemia, t(9;22)(q34;q11)	9875/3
-----	Atypical chronic myeloid leukemia, BCR/ABL negative	9876/3
-----	Atypical chronic myeloid leukemia, Philadelphia chromosome (Ph1) negative	9876/3
9891/3	FAB M5 (includes all variants)	9891/3
-----	Acute myeloid leukemia with multilineage dysplasia (See also M-9984/3)	9895/3
-----	Acute myeloid leukemia with prior myelodysplastic syndrome	9895/3
-----	Acute myeloid leukemia without prior myelodysplastic syndrome	9895/3

-----	Acute myeloid leukemia, AML1(CBF-alpha)/ETO	9896/3
-----	Acute myeloid leukemia, t(8;21) (q22;q22)	9896/3
-----	FAB M2, AML1(CBF-alpha)/ETO	9896/3
-----	FAB M2, t(8;21)(q22;q22)	9896/3
-----	Acute myeloid leukemia, 11q23 abnormalities	9897/3
-----	Acute myeloid leukemia, MLL	9897/3
9910/3	FAB M7	9910/3
-----	Therapy-related acute myeloid leukemia and myelodysplastic syndrome, NOS	9920/3
-----	Therapy-related acute myeloid leukemia, alkylating agent related	9920/3
-----	Therapy-related acute myeloid leukemia, epipodophyllotoxin-related	9920/3
9930/3	Myeloid sarcoma (See also M-9861/3)	9930/3
9932/3	Acute myelofibrosis	9931/3
9931/3	Acute myelosclerosis	9931/3
9931/3	Acute panmyelosis with myelofibrosis (C42.1)	9931/3
9931/3	Malignant myelosclerosis [obs]	9931/3
9940/3	Hairy cell leukemia variant	9940/3
9941/3	Leukemic reticuloendotheliosis	9940/3
-----	Chronic myelomonocytic leukemia in transformation [obs]	9945/3
9868/3	Chronic myelomonocytic leukemia, NOS	9945/3
-----	Chronic myelomonocytic leukemia, Type I	9945/3
-----	Chronic myelomonocytic leukemia, Type II	9945/3
-----	Juvenile chronic myelomonocytic leukemia	9946/3
-----	Juvenile myelomonocytic leukemia	9946/3
-----	Aggressive NK-cell leukemia	9948/3
9842/3	Chronic erythremia [obs]	9950/3
9950/1	Polycythemia rubra vera	9950/3
9950/1	Polycythemia vera	9950/3
9950/3	Proliferative polycythemia	9950/3
9960/1	Chronic myeloproliferative disease, NOS	9960/3
9960/1	Chronic myeloproliferative disorder	9960/3
9961/3	Agnogenic myeloid metaplasia	9961/3
9961/3	Chronic idiopathic myelofibrosis	9961/3
9961/1	Megakaryocytic myelosclerosis	9961/3
9961/3	Myelofibrosis as a result of myeloproliferative disease	9961/3
9961/1	Myelofibrosis with myeloid metaplasia	9961/3
9961/1	Myelosclerosis with myeloid metaplasia	9961/3
9962/1	Essential hemorrhagic thrombocythemia	9962/3
9962/1	Essential thrombocythemia	9962/3
9962/1	Idiopathic hemorrhagic thrombocythemia	9962/3
9962/1	Idiopathic thrombocythemia	9962/3
-----	Chronic neutrophilic leukemia	9963/3
-----	Chronic eosinophilic leukemia	9964/3
-----	Hypereosinophilic syndrome	9964/3
9980/1	Refractory anemia	9980/3
9981/1	Refractory anemia without sideroblasts	9980/3
9982/3	RARS	9982/3
9982/1	Refractory anemia with ringed sideroblasts	9982/3
9982/1	Refractory anemia with sideroblasts	9982/3
9983/3	RAEB	9983/3
9983/3	RAEB I	9983/3
9983/3	RAEB II	9983/3

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9983/1	Refractory anemia with excess blasts	9983/3
9984/3	RAEB-T	9984/3
9984/1	Refractory anemia with excess blasts in transformation	9984/3
-----	Refractory cytopenia with multilineage dysplasia	9985/3
-----	Myelodysplastic syndrome with 5q- syndrome	9986/3
-----	Therapy-related myelodysplastic syndrome, alkylating agent related	9987/3
-----	Therapy-related myelodysplastic syndrome, epidopophyllotoxin-related	9987/3
-----	Therapy-related myelodysplastic syndrome, NOS	9987/3

## 7 APPENDIX B: Y2001 CASE FINDING LIST

Source: URL: [http://www.training.seer.cancer.gov/y2001\\_casefinding\\_list.html](http://www.training.seer.cancer.gov/y2001_casefinding_list.html)

Cancer registries and cancer surveillance programs typically describe the reportable neoplasms as any neoplasm with a behavior code (fifth digit in a complete six-digit morphology code) of '/2' (in situ) or '/3' (invasive). Some registries also collect and report the benign ('/0') and borderline ('/1') neoplasms.

The following list is intended to assist in reportable neoplasm case finding activities that are performed in case finding sources that use ICD-9-CM\* codes to codify the diagnoses. Codes and/or terms that have new malignant behavior codes in ICD-O-3 are underlined and the ICD-O-3 code is placed in parentheses following the terms.

ICD-9-CM Codes	Diagnosis (in preferred ICD-O-3 terminology)
042	AIDS (review cases for AIDS-related malignancies)
140.0 - 208.9	Malignant neoplasms
203.1	Plasma cell leukemia ( <u>9733/3</u> )
205.1	<u>Chronic neutrophilic leukemia (9963/3)</u>
210.0 - 229.9	Benign neoplasms
230.0 - 234.9	Carcinoma in situ
235.0 - 238.9	Neoplasms of uncertain behavior
238.4	Polycythemia vera ( <u>9950/3</u> )
238.6	Solitary plasmacytoma ( <u>9731/3</u> )
238.6	Extramedullary plasmacytoma ( <u>9734/3</u> )
238.7	Chronic myeloproliferative disease ( <u>9960/3</u> )
238.7	Myelosclerosis with myeloid metaplasia ( <u>9961/3</u> )
238.7	Essential thrombocythemia ( <u>9962/3</u> )
238.7	<u>Refractory cytopenia with multilineage dysplasia (9985/3)</u>
238.7	<u>Myelodysplastic syndrome with 5q- syndrome (9986/3)</u>
238.7	<u>Therapy-related myelodysplastic syndrome (9987/3)</u>
239.0 - 239.9	Neoplasms of unspecified behavior
273.2	Gamma heavy chain disease; Franklin's disease
273.3	Waldenstrom's macroglobulinemia
273.9	Unspecified disorder of immune mechanism (screen for potential 273.3 miscodes)
284.9	Refractory anemia ( <u>9980/3</u> )
285.0	Refractory anemia with ringed sideroblasts ( <u>9982/3</u> )
285.0	Refractory anemia with excess blasts ( <u>9983/3</u> )
285.0	Refractory anemia with excess blasts in transformation ( <u>9984/3</u> )
288.3	<u>Hypereosinophilic syndrome (9964/3)</u>
289.8	Acute myelofibrosis ( <u>9932/3</u> )
V07.3	Other prophylactic chemotherapy (screen carefully for miscoded malignancies)
V07.8	Other specified prophylactic measure
V10.0 - V10.9	Personal history of malignancy (review these for recurrences, subsequent primaries, and/or subsequent treatment)
V58.0	Admission for radiotherapy
V58.1	Admission for chemotherapy
V66.1	Convalescence following radiotherapy
V66.2	Convalescence following chemotherapy
V67.1	Radiation therapy follow-up
V67.2	Chemotherapy follow-up
V71.1	Observation for suspected malignant neoplasm
V76.0 - V76.9	Special screening for malignant neoplasm

Please note:

- Prostatic Intraepithelial Neoplasia (PIN III) M-8148/2 will NOT be collected by SEER registries.
- Pilocytic/juvenile astrocytoma M-9421 which moves from /3 to /1 will CONTINUE to be collected as a /3 in SEER registries.
- Borderline cystadenomas M-8442, 8451, 8462, 8472, 8473, of the ovaries which move from /3 to /1 will NOT be collected as of 1/1/2001 and previous cases will continue to have to be submitted in SEER registries.
- The World Health Organization (WHO) diagnosis "B-cell chronic lymphocytic leukemia/small lymphocytic lymphoma" is coded as 9823/3, and cross-referenced to 9670/3, malignant lymphoma, small B lymphocytic. If this WHO term is diagnosed in blood or bone marrow, code 9823/3; if diagnosed in tissue, lymph nodes or any organ in combination with blood or bone marrow, code 9670/3.

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\* *International Classification of Diseases, Ninth Revision, Clinical Modification*. U.S. Dept. of Health and Human Services, Public Health Service – Health Care Finance Administration; DHHS Publication No. (PHS) 80-1260.

## 8 APPENDIX C: LAYOUT AND CODING ICD-O-3 CONVERSION FLAGS

Source: NAACCR. *Standards for Cancer Registries, Volume II, Data Standards and Data Dictionary, Record Layout Version 9*. Available on the NAACCR web site as of November 22, 2000, URL: <http://www.naacr.org>

### ICD-O-3 CONVERSION FLAG

Alternate Name	Item #	Length	Source of Standard	Column #
	2116	1	SEER/COC	1020-1020

#### Description

Code specifying how the conversion of site and morphology codes from ICD-O-2 to ICD-O-3 was accomplished.

#### Codes - Original

- 0 Primary site and morphology originally coded in ICD-O-3
- 1 Primary site and morphology converted without review
- 2 Primary site converted with review; morphology machine-converted without review
- 3 Primary site machine converted without review, morphology converted with review
- 4 Primary site and morphology converted with review

#### Proposed Coding Instructions

The above codes are nearly identical to the codes of the ICD-O-2 Conversion Flag data item [1980], which had to address both primary site and morphology code changes from ICD-O-1 to ICD-O-2. The primary site codes, however, from ICD-O-2 to ICD-O-3 have not changed and therefore will not be converted. The reference to primary site, in the above codes appear superfluous and could create some ambiguity when coding this data item. The following adjusted code list omits the primary site references. Codes 2 and 4 have been dropped because in the absence of the primary site reference, 2 is identical to 1 and 4 is identical to 3.

#### Proposed Adjusted Code List – Pending UDSC Approval

- 0 Morphology originally coded in ICD-O-3
- 1 Morphology converted without review
- 3 Morphology converted with review

**ICD-O-2 CONVERSION FLAG**

<b>Alternate Name</b>	<b>Item #</b>	<b>Length</b>	<b>Source of Standard</b>	<b>Column #</b>
Review Flag for 1973-91 Cases (SEER)	1980	1	SEER	912-912

**Description**

Code specifying how the conversion of site and morphology codes from ICD-O-1 and the field trial editions to ICD-O-2, or the conversion of morphology codes from ICD-0-3 to ICD-0-2, was accomplished.

The alternate SEER item names include years 73-91. However, some states may have used the codes for cases before 1973 or, with new codes 5 and 6 added in late 2000, for cases diagnosed on or after January 1, 2001.

**Codes (modified by UDSC 10/31/00)**

- 0 Primary site and morphology originally coded in ICD-O-2
- 1 Primary site and morphology converted from ICD-O-1 without review
- 2 Primary site converted from ICD-O-1 with review; morphology machine-converted without review
- 3 Primary site machine-converted from ICD-O-1 without review, morphology converted with review
- 4 Primary site and morphology converted from ICD-O-1 with review
- 5 Morphology converted from ICD-O-3 without review
- 6 Morphology converted from ICD-O-3 with review

## 9 APPENDIX D: NPCR-STATE (TERRITORY) SPECIFIC PLANNING POINTS

*Source:* National Program of Cancer Registries Staff, Prepared for ICD-O-3 Work Group, October 2000.

Each registry will need to gather appropriate staff, clients, and partners to develop state specific plans. Since each population-based cancer registry is unique, ICD-O-3 Implementation plans will differ. The following questions are offered as a starting point for planning purposes.

1. Case finding of diagnosis year 2001 will begin early in January 2001. Will your registry continue to collect some of the tumors whose behavior codes went from malignant to borderline (reportable to non-reportable)? How should case-finding lists of new ICD-O-3 terms and codes be distributed? How should revised ICD-9-CM case-finding lists be distributed (for disease index screening)?
2. When will hospital cancer registry software, for both CoC approved facilities and non-CoC reporters, in your state or area be able to receive the new data items and export that information in the NAACCR Version 9 Layout? If your registry maintains hospital cancer reporting software, refer to Section III. B "Vendors".
3. When will paper abstract forms need to be modified and distributed, if applicable? When will the corresponding data entry programs need to be modified? For smaller hospitals who submit photocopies of pertinent reports from the medical record, when will entry (or abstracting) programs need to be modified?
4. When will your central cancer registry software be able to accept the new data items and the corresponding NAACCR Version 9 Layout? If your registry maintains your own central cancer reporting software, refer to the  Cancer Registry Software Provider Level  section.
5. When will you accept 2001 cancers from CoC approved facilities (Version 9)? When will you accept 2001 cancers from non-CoC reporters (Version 9)? Since the majority of primary site - morphology cancers will not change from ICD-O-2 to ICD-O-3, should you ask reporters to suspend only the newer ICD-O-3 cancers while submitting the remaining cancers?
6. If central registry software is not upgraded to Version 9, should the population-based cancer registry accept all cancers from reporters in Version 9 and put all or part of them into suspense until the central registry is ready to process the new information?
7. If data is accepted and processed in the NAACCR Version 8 Layout, what information will be lost? Could any  lost  information be recovered? Should reporters be instructed to use the ICD-O-3 codes in the Version 8 layout?
8. What are the best mechanisms to educate CoC approved facilities and non-CoC reporters about the implementation of ICD-O-3 (as well as SEER Summary Stage 2000)? What tools are available for this education? [See earlier sections related to the SEER Web Site ICD-O-3 tutorial, and the January 2001 workshop broadcast via satellite which will be taped onto a videotape.]
9. When will plans be shared with pertinent organizations? What are the best mechanisms to communicate your plans to the facilities (and other reporters) as well as software providers in your area?

## 10 APPENDIX E: REPORTING OF JUVENILE ASTROCYTOMA IN ICD-O-3

Source: NAACCR Uniform Data Standards Committee, reviewed and approved September, 2000

In ICD-O-2 (International Classification of Diseases for Oncology, second edition), juvenile astrocytoma has the morphology code of 9421/3. The behavior code of '3' (malignant) has made it a reportable lesion in the first and second editions of ICD-O. Prior to ICD-O, in MOTNAC (Manual of Tumor Nomenclature and Coding - 1968), juvenile astrocytoma would have been reported as astrocytoma since there wasn't a specific code for juvenile astrocytoma. Neuropathology experts have long considered juvenile astrocytoma as a very indolent tumor. To reflect this, they 'downgraded' juvenile astrocytoma to borderline behavior in the third edition of ICD-O (ICD-O-3). When ICD-O-3 goes into effect, juvenile astrocytoma will retain the same morphology code, 9421, but the behavior code will change to '1' (uncertain whether benign or malignant). Therefore, when ICD-O-3 goes into effect, juvenile astrocytoma will no longer be reportable to most cancer registries since most cancer registries only collect in situ ('2') and malignant ('3') behavior codes.

The analyses of older adult brain cancer patients would remain relatively unaffected by including or excluding these cases since they comprise less than 1% of the brain/CNS malignant tumors in persons over the age of 50. They comprise less than 4% of the malignant brain tumors in 20-49 year olds. Most of these adult tumors were probably specified as pilocytic astrocytoma or piloid astrocytoma which are also terms under code 9421.

The analyses of brain cancer among children and adolescents, however, would change dramatically. Of those tumors listed as astrocytomas, about 45% were further specified as juvenile astrocytomas among those under 20 years of age. When considering all of the malignant brain/CNS tumors, nearly a quarter were designated as 'juvenile astrocytoma' among those under 20 years of age. Obviously, the removal of the juvenile astrocytomas will cause problems with time trends of total malignant brain/CNS tumors and especially astrocytomas. In addition, the exclusion or inclusion is based only on whether the pathologist specified 'juvenile' or not. The time trends of 'juvenile astrocytoma' indicate that there has been an increase in this particular group probably because the pathologists have become more specific in their diagnosis. The term was rarely used prior to 1985. In the 1970s, less than 4% of the astrocytomas on file are juvenile (mainly because the term was not in MOTNAC). In the late 1970's, around 10% were designated 'juvenile' and in 1997 over half of the cases were so designated.

Therefore, it is very important to continue to collect juvenile astrocytoma. Normally, a diagnosis could be added to the 'reportable' list for a hospital or central registry. In this case, however, reporting a '1' in the behavior code will cause problems with most software packages that were designed to only handle in situ and malignant cases. Therefore, the proposal is to continue to collect juvenile astrocytoma as 9421 in ICD-O-3 but to report it as malignant ('3') in the behavior code.

Note: the numbers are from the SEER Program, NCI. Any questions, please contact Lynn Ries (301-402-5259) or email.