**Collecting Cancer Data:
Leukemia, Lymphoma, & other
Hematopoietic Malignancies**

NAACCR 2008-2009 Webinar Series
December 4, 2008

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Clarifications and Corrections

Coding Pitfalls
11/6/08

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Prizes!

Question of the Month!

- The participant that submits the best question of the session will receive a fabulous Prize!
- Shannon and Jim will announce the winner at end of the session.

Tip of the Month!

- The participant that sends in the best tip related to the topic will win a spectacular prize!
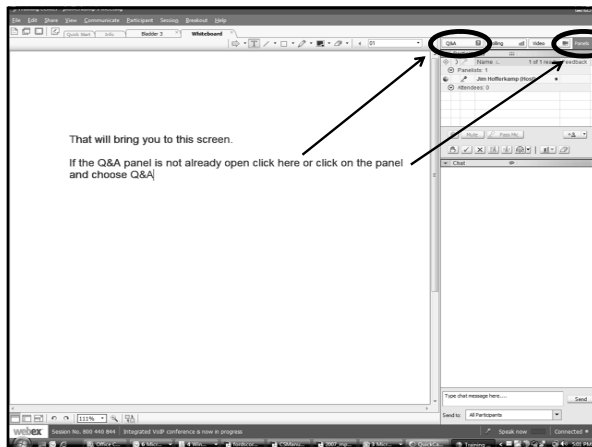- Shannon and Jim will announce the winner at the end of the session.

Q&A

Please submit all questions
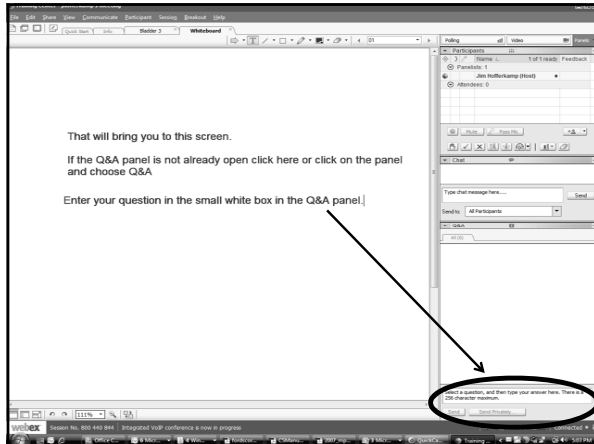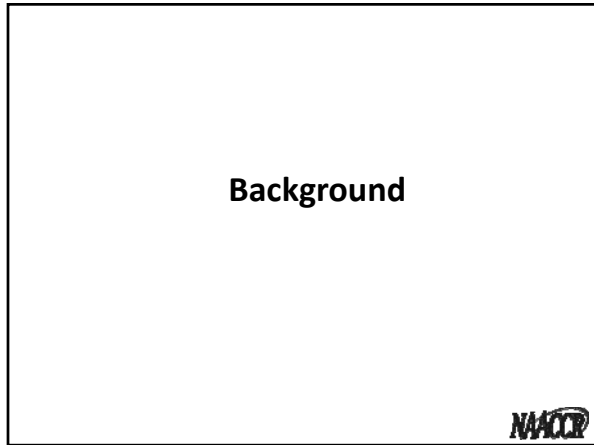concerning webinar content through
the Q&A panel

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If the presentation is at full screen and you have a question,
hit the escape key on your key board

That will bring you to this screen.

If the Q&A panel is not already open click here or click on the panel
and choose Q&A

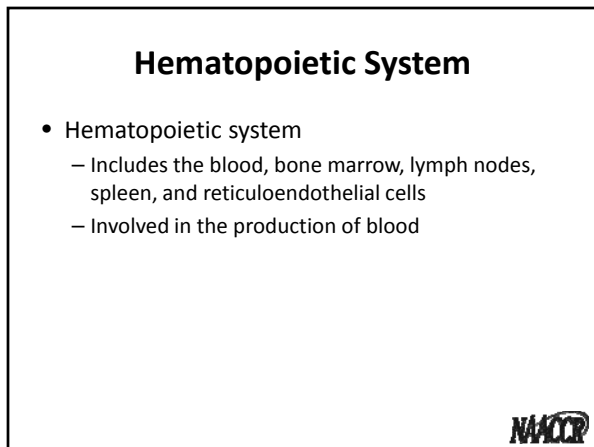That will bring you to this screen.

If the Q&A panel is not already open click here or click on the panel and choose Q&A

Enter your question in the small white box in the Q&A panel.

Background

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Hematopoietic System

- Hematopoietic system
  - Includes the blood, bone marrow, lymph nodes, spleen, and reticuloendothelial cells
  - Involved in the production of blood

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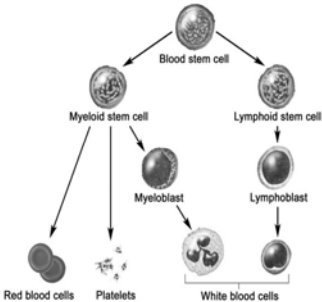
Hematopoietic System

- Hematopoietic tissues
  - Myeloid
  - Lymphoid
- Blood-making organs
  - Bone marrow
  - Lymph nodes

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Hematopoietic System

- Blood
  - Plasma
  - Formed elements
    - Erythrocytes – red blood cells
    - Leukocytes – white blood cells
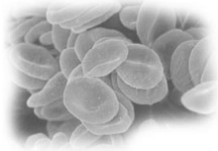   - Thrombocytes – blood platelets

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Hematopoietic System

- Leukocytes
  - Neutrophils
  - Eosinophils
  - Basophils
  - Lymphocytes
  - Monocytes

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Hematopoietic System

- Lymphocytes
  - Small granular
    - T-Cells
    - B-Cells
  - Large granular
    - NK cells

Image source: SEER Training Website

Flow Cytometry
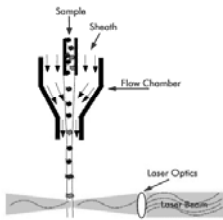
- Flow Cytometry can be used to detect antigens on the surface of lymphocytes that can be used to differentiate sub-types.

http://biology.berkeley.edu/crl/flow_cytometry_basic.html

Clusters of Differentiation

- **Cluster of differentiation (CD)** molecules are a set of immunologically significant cell surface molecules.
  - CD4 and CD8 are characteristic of subtypes of T-Cells
  - CD20 are characteristic of B-Cells.
  - The presence of CD56 and/or CD16 and the absence of CD3 indicate an NK (Natural Killer) Cell.

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Lymphatic System

- Functions of lymphatic system
  - Return interstitial fluid to blood
  - Absorb fats and vitamins
  - Defend against disease and infection

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Lymphatic System

- Lymph
- Lymphatic capillaries and vessels
- Lymphatic trunks
  - Right lymphatic duct
  - Thoracic duct

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Lymphatic System

- Lymphatic organs
  - Lymph nodes
    - Armpit: axillary nodes
    - Neck: cervical nodes
    - Groin: inguinal nodes
    - Intestine
      - Para-aortic nodes
      - Retroperitoneal nodes

Image source: SEER Training Website

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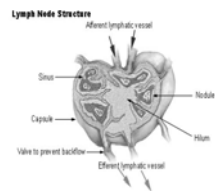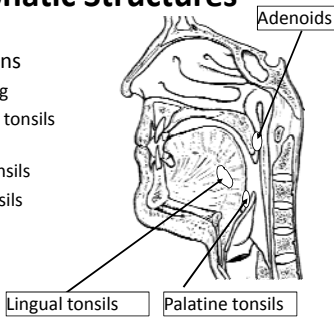
Lymphatic Structures

- Lymphatic organs
  - Waldeyer's ring
    - Pharyngeal tonsils (adenoids)
    - Palatine tonsils
    - Lingual tonsils

Adenoids

Lingual tonsils   Palatine tonsils

Lymphatic System

- Lymphatic organs
  - Spleen
  - Thymus
  - Peyer patches
  - Lymphoid nodules of the appendix

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Lymphatic System

- Extranodal
  - Occurring outside of a lymph node
- Extralymphatic
  - Occurring outside of the lymphatic system

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Extralymphatic vs. Extranodal

Lymph Nodes

Extranodal Lymphatic Sites

Extra Lymphatic (E)

Lymphatic System
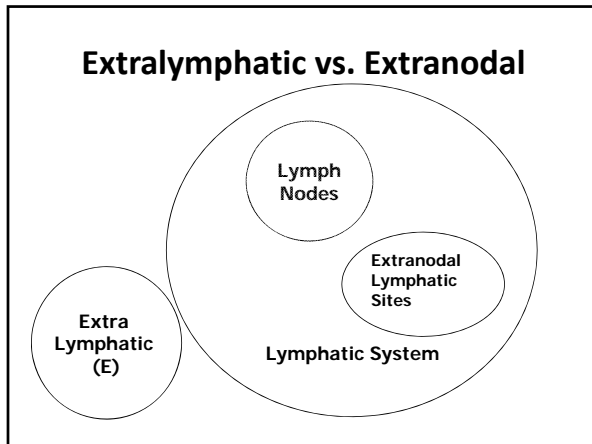
Lymphoma

- Hodgkin Lymphoma
  – Classical Hodgkin Lymphoma (CHL)

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Primary Site, Histology, and Multiple Primary Rules

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Coding Guidelines: Lymphoma*

Primary Site – Nodal vs. Extra-nodal

1. When multiple lymph node chains are involved at the time of diagnosis, do not simply code the lymph node chain that was biopsied.

2. If it is possible to determine where the disease originated, code the primary to that lymph node chain.

*2007 SEER Program Coding and Staging Manual, Appendix C pages C-1055

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Coding Guidelines: Lymphoma*

Primary Site – Nodal vs. Extra-nodal

3. If multiple lymph node chains are involved and it is not possible to determine the lymph node chain where the disease originated, code primary site to C77.8.

*2007 SEER Program Coding and Staging Manual, Appendix C pages C-1055

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Coding Guidelines: Lymphoma*
Primary Site – Nodal vs. Extra-nodal

4. If a lymphoma is extranodal, code the organ of origin.

Example:

- Small intestine resection pathology shows malignant lymphoma; no other pathologic or clinical disease.
- *Code to C17.9, small intestine*

*2007 SEER Program Coding and Staging Manual, Appendix C pages C-1055

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Coding Guidelines: Lymphoma*

Primary Site – Nodal vs Extra-nodal

5. If a lymphoma is present both in an extranodal site and in that organ's regional lymph nodes, code the extralymphatic organ as the primary site.

*2007 SEER Program Coding and Staging Manual, Appendix C pages C-1055   NAACCR

Coding Guidelines: Lymphoma*

Primary Site – Nodal vs. Extra-nodal

5. Example 1:
   - Stomach resection pathology: malignant lymphoma of gastric antrum; 1 of 2 gastric lymph nodes shows malignant lymphoma.
   - *Code to C16.3, gastric antrum*

*2007 SEER Program Coding and Staging Manual, Appendix C pages C-1055   NAACCR

Coding Guidelines: Lymphoma*

Primary Site – Nodal vs. Extra-nodal

5. *Exception:*
   - If the lymphoma in the extranodal site is a direct extension from the regional lymph nodes, assign primary site to the lymph node chain.

*2007 SEER Program Coding and Staging Manual, Appendix C pages C-1055   NAACCR

Coding Guidelines: Lymphoma*

Primary Site – Nodal vs Extra-nodal

5. Example 2:
   - Stomach resection pathology: malignant lymphoma of gastric antrum involves and extends directly from gastric lymph nodes
   - Code to C77.2, gastric lymph node

*2007 SEER Program Coding and Staging Manual, Appendix C pages C-1055   NAACCR

Coding Guidelines: Lymphoma*

Primary Site – Nodal vs Extra-nodal

6. If the lymphoma is present in extralymphatic organs and non-regional lymph nodes, consult the physician to determine primary site. If primary site cannot be determined, code lymph node, NOS (C77.9).

*2007 SEER Program Coding and Staging Manual, Appendix C pages C-1055   NAACCR

Coding Guidelines: Lymphoma*

Primary Site – Nodal vs Extra-nodal

7. If the primary site is unknown or not given:
   a. Code retroperitoneal lymph nodes if described as retroperitoneal mass
   b. Code inguinal lymph nodes if described as inguinal mass
   c. Code mediastinal nodes if described as mediastinal mass

*2007 SEER Program Coding and Staging Manual, Appendix C pages C-1055   NAACCR

Coding Guidelines: Lymphoma*

Primary Site – Nodal vs Extra-nodal
7. If the primary site is unknown or not given.
   d. Code mesenteric lymph nodes if described as mesenteric mass.
   e. If the primary site is unknown, code lymph nodes, NOS (C77.9)

*2007 SEER Program Coding and Staging Manual, Appendix C pages C-1055

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Coding Guidelines: Lymphoma*

Primary Site – Nodal vs Extra-nodal
7. Exception:
   • Code unknown primary site (C80.9) when there is no evidence of lymphoma in lymph nodes or physician suspects extranodal lymphoma

*2007 SEER Program Coding and Staging Manual, Appendix C pages C-1055

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Coding Guidelines: Lymphoma*

Primary Site – Nodal vs Extra-nodal
8. Code mycosis fungoides and cutaneous lymphoma to skin (C44._)

*2007 SEER Program Coding and Staging Manual, Appendix C pages C-1055

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Coding Guidelines: Lymphoma*

- For lymphoma ONLY
  - Do not code high, low, or intermediate grade as grade or differentiation
  - Do not code grade 1, 2 or 3 as grade or differentiation
- Designation of T-cell, B-cell, null cell, or NK cell has precedence over a statement of grade or differentiation

*2007 SEER Program Coding and Staging Manual, Appendix C pages C-1055 – C-1056

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Other Coding Issues

- Diagnostic confirmation
  - Assign code 1, positive histology, if hematopoietic disease is diagnosed by peripheral blood smear or bone marrow biopsy

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Hematopoietic Primaries*

- Multiple primary rules
  - Use the information if a physician clearly states that a hematopoietic diagnosis is a new primary
  - If not, use SEER "Definitions of Single and Subsequent Primaries for Hematologic Malignancies"
    - Assign both histologies ICD-O-3 Codes
    - S indicates a single primary
    - D indicates a subsequent primary

*2007 SEER Program Coding and Staging Manual, Appendix C pages C-1057 or C-1069

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Hematopoietic Primaries*

Histology Coding Instructions

1. If there is no tumor specimen, code the histology described by the medical practitioner.

*2007 SEER Program Coding and Staging Manual, Appendix C pages C-1058 or C-1070 **NAACCR**

Hematopoietic Primaries*

Histology Coding Instructions

2. Use the histology stated in the final diagnosis from the path report from the procedure that resected the majority of the primary tumor.

- If a more specific histologic type is definitively described in the microscopic portion or comment, code the more specific diagnosis.

*2007 SEER Program Coding and Staging Manual, Appendix C pages C-1058 or C-1070 **NAACCR**

Hematopoietic Primaries*

Histology Coding Instructions

3. Lymphomas may be classified by the WHO Classification, REAL system, Rappaport, or Working Formulation. The WHO Classification is preferred.

*2007 SEER Program Coding and Staging Manual, Appendix C pages C-1058 or C-1070 **NAACCR**

Hematopoietic Primaries*

Histology Coding Instructions

4. Chronic lymphocytic leukemia and/or small
    lymphocytic lymphoma
    - Code small lymphocytic **lymphoma** (9670/3) if there are
      positive lymph nodes or deposits of lymphoma/leukemia in
      organs or in other tissue.
    - Code the histology to chronic lymphocytic **leukemia**
      (9823/3) if there are **no physical manifestations** of the
      disease other than a positive blood study or positive bone
      marrow.

*2007 SEER Program Coding and Staging Manual, Appendix C pages C-1058 or C-1070   NAACCR

Hematopoietic Primaries*

Histology Coding Rules

1. Code the histology if only one type is
    mentioned in the path report.
2. Code the more specific term when one of the
    terms is 'NOS' and the other is a more specific
    description of the same histology.
3. Code the numerically higher ICD-O-3 code.

*2007 SEER Program Coding and Staging Manual, Appendix C pages C-1058 or C-1070   NAACCR

Hodgkin Lymphoma or Disease

- Classical Hodgkin Lymphoma (CHL)
    – Characterized by the presence of Reed Sternberg
      cells
    – Derived from B lymphocytes
- Lymphocyte-Predominant Hodgkin
  Lymphoma(LPHL)
    - Characterized by the presence of lymphocytic and
      histolytic cells.

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Non-Hodgkin lymphoma or disease

- B-cell lymphomas
  - Indolent lymphomas
    - Chronic lymphocytic leukemia/small lymphocytic lymphoma
    - Follicular lymphoma
    - Marginal zone lymphoma (MZL)
      - MALT
      - Splenic MZL
      - Nodal MZL

Non-Hodgkin lymphoma or disease

- B-cell lymphomas
  - Aggressive
    - Diffuse large B-cell lymphoma
    - Mantle cell lymphoma
  - Highly Aggressive
    - Burkitt Lymphoma
    - Lymphoblastic lymphoma
    - AIDS related B-Cell lymphoma

Lymphatic System Malignancies

- Cutaneous T-cell lymphoma (CTCL)
  - Form of Non Hodgkin's Lymphoma
  - Code primary site to skin (C44.*)
  - Most common types are mycosis fungoides and Sezary syndrome
- Composite lymphoma (9596/3)
  - Combination of non-Hodgkin and Hodgkin lymphoma
  - Do not code a composite of non-Hodgkin to 9596/3

Lymphatic System Malignancies

- Polymorphic lymphoma
  - Polymorphic may be a synonym for post-transplant lymphoproliferative disorder
  - Code to the appropriate lymphoma
  - Refer back to physician for more information

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Hematopoietic System Malignancies

- Plasma cell tumors
  - Multiple myeloma is a malignancy of the plasma cells that accumulate in the blood marrow. This leads to bone destruction and marrow failure.
  - Reportability
    - Smoldering multiple myeloma is reportable
    - Evolving multiple myeloma is not reportable

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Hematopoietic System Malignancies

- Mast cell tumors
  - Primary site for mast cell sarcoma and malignant mastocytosis is coded to site of origin
    - Mast cell sarcoma may have a leukemic phase
  - Primary site for mast cell leukemia is bone marrow

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Hematopoietic System Malignancies

- Neoplasms of histiocytes and accessory lymphoid cells
  - Primary site for malignant histiocytosis and the Langerhans cell histiocytoses is coded to bone marrow
  - Primary site for histiocytic sarcoma, Langerhans cell sarcoma, interdigitating dendritic cell sarcoma, and follicular dendritic cell sarcoma is coded to site of origin

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Hematopoietic System Malignancies

- Immunoproliferative diseases
  - Waldenstrom macroglobulinemia
    - Assign histology code to 9761/3 and primary site to blood (C42.0) when diagnosed in the blood or bone marrow
    - Assign histology code to 9671/3, lymphoblastic lymphoma, when diagnosed in sites other than blood and bone marrow

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Hematopoietic System Malignancies

- Chronic myeloproliferative disorders
  - Polycythemia vera is a reportable disease
  - Polycythemia NOS or secondary are not reportable
  - Chronic myeloproliferative disease or disorder is reportable
  - Myeloproliferative disorder or disease NOS is not reportable

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Hematopoietic System Malignancies

- Myelodysplastic syndromes
  - Aplastic anemia and refractory anemia are <u>not</u> synonyms
  - Sideroblastic anemia
    - Reportable
      - Acquired primary (idiopathic)
    - Not reportable
      - Acquired secondary, drug induced, chronic inflammatory
      - Inherited
        » Sex-linked, pyridoxine-responsive, hypochromic anemia with iron-loading

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Hematopoietic System Malignancies

- Myelodysplastic syndromes
  - Myelodysplasia NOS is only reportable if the diagnosis refers to a hematopoietic disease that is reportable
  - Myelodysplasia NOS is not reportable if the diagnosis refers to a bone marrow malfunction

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Hematopoietic System Malignancies

- Leukemias
  - Lymphoid
  - Myeloid
    - Myeloid sarcoma
      - Code primary site to site of mass
  - Other

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Hematopoietic Malignancies

- B-cell chronic lymphocytic leukemia/small lymphocytic lymphoma (bcll/sll)
  - If solid tumor is present code to lymphoma (9670/3)
  - If solid tumor is not present code to leukemia (9823)

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Quiz

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Collaborative Staging

Hodgkin and Non-Hodgkin
Lymphoma

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Collaborative Staging
Hodgkin and Non-Hodgkin Lymphoma

- Use the Hodgkin and Non-Hodgkin Lymphoma CS schema for all lymphomas regardless of primary site
  – Do not code CS data items for extranodal lymphomas using a site-specific CS schema

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CS Extension
Hodgkin and Non-Hodgkin Lymphoma

- Notes
1. For lymphoma an E lesion is disease that involves extralymphatic site(s).
  – Extralymphatic is other than lymph nodes and lymphatic structures

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CS Extension
Hodgkin and Non-Hodgkin Lymphoma

- Notes
1. (Continued)
  – Lymphatic structures
    • Spleen
    • Thymus
    • Waldeyer's ring
    • Peyer's patches
    • Lymphoid nodules in appendix

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CS Extension

Hodgkin and Non-Hodgkin Lymphoma

- Notes
1. (Continued) Any lymphatic structure is to be coded the same as a lymph node region.
2. S equals spleen involvement

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Pop Quiz

- Which of the following are extralymphatic sites?
  - Spleen
    - No
  - Colon
    - Yes
  - Tonsils
    - No
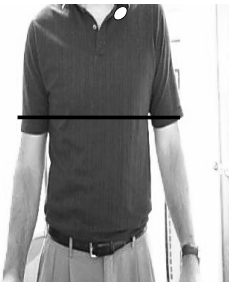 - Stomach
    - Yes

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CS Extension

Hodgkin and Non-Hodgkin Lymphoma

- Notes
3. If there is no mention of extranodal involvement but several diagnostic procedures were done, including laparotomy, interpret as no involvement
4. Involvement of adjacent soft tissue does not alter classification

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Staging

- CS Codes 10-12
  - Involvement of a single region

Stage I

CS Extension

Hodgkin and Non-Hodgkin Lymphoma

- Code 10:
  - Involvement of a single lymph node region; Stage I
- Code 11:
  - Involvement of a single <u>extralymphatic</u> organ; Stage IE
- Code 12:
  - Involvement of spleen only; Stage IS

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Stage I

- Single lymph node region
  - Right cervical
    - Cervical, supraclavicular, occipital, preauricular
  - Left cervical
    - Cervical, supraclavicular, occipital, preauricular
  - Right infraclavicular
  - Left infraclavicular
  - Right axillary
  - Left axillary

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Stage I

- Single lymph node region
  - Right pelvic
  - Left pelvic
  - Right inguinal/femoral
  - Left inguinal/femoral

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Stage I

- Single lymph node region
  - Ipsilateral or bilateral (one side or both sides)
    - Mediastinal
    - Hilar
    - Para-aortic
    - Mesenteric

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Stage I

- Single lymph node region
  - Ipsilateral or bilateral
    - Epitochlear
    - Popliteal
    - Internal mammary
    - Occipital
    - Submental
    - Preauricular

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Stage I

- **Extralymphatic** sites each count as 1 region
  - If both sides of a lateral organ are involved, it is considered involvement of a single extralymphatic organ
    - Involvement of both breasts counts as a single primary.

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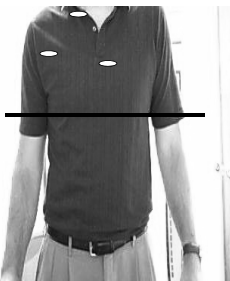
Pop Quiz

- Would the following be considered 1 or 2 regions?
  - Left and right mediastinal lymph nodes
    - 1
  - Right and left inguinal nodes
    - 2
  - Bilateral cervical lymph nodes
    - 2
  - Spleen and mesenteric lymph nodes
    - 2
  - Right and left breast
    - 1

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Staging

Stage II

- CS Codes 20-23
  - Two or more node regions on the same side of the diaphragm

CS Extension

Hodgkin and Non-Hodgkin Lymphoma

- Code 20:
  - Involvement of 2 or more lymph nodes regions on the SAME side of diaphragm;
  - Stage II

CS Extension

Hodgkin and Non-Hodgkin Lymphoma

- Code 21:
  - Localized involvement of a single extralymphatic organ with involvement of its regional nodes with or without other nodes on SAME side of diaphragm
  - Direct extension to adjacent organs
  - Stage IIE

CS Extension

Hodgkin and Non-Hodgkin Lymphoma

- Code 22: Involvement of spleen plus lymph nodes BELOW the diaphragm; Stage IIS
- Code 23: Involvement of spleen plus involvement of single extralymphatic site BELOW the diaphragm with/without involvement of lymph nodes below the diaphragm; Stage IIES

Staging

- CS Codes 30-33
  - Nodal involvement on both sides of the diaphragm

Stage III

CS Extension

Hodgkin and Non-Hodgkin Lymphoma

- Code 30: Involvement of lymph node regions on BOTH sides of the diaphragm; Stage III
- Code 31: Involvement of extralymphatic organ plus involvement of lymph nodes on OPPOSITE side of the diaphragm; Stage IIIE

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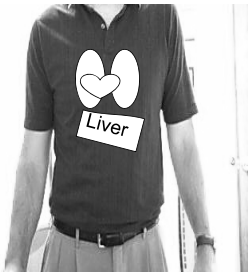
CS Extension

Hodgkin and Non-Hodgkin Lymphoma

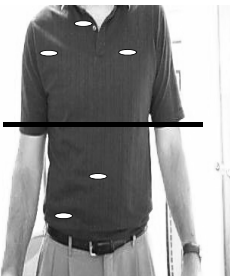- Code 32: Involvement of spleen plus lymph nodes above the diaphragm; involvement of spleen plus lymph nodes on both sides of the diaphragm; Stage IIIS
- Code 33: (31) + (32); Stage IIIES

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Staging

- CS Code 80
  - Diffuse or disseminated involvement of one or more extralymphatic organs or any involvement of the liver, bone marrow or nodular involvement of the lungs

Stage IV

Defining Involvement by Lymphoma

- Lymph node
  - Clinical enlargement (without other explanation such as infection)
  - Enlargement on imaging
    - Nodes larger than 1.5 cm are considered abnormal
  - Pathologic diagnosis

Defining Involvement by Lymphoma

- Spleen - NHL
  - Unequivocal palpable splenomegaly
  - Equivocal palpable splenomegaly with radiologic confirmation
  - Enlargement or multiple focal defects that are neither cystic nor vascular
    - Radiologic enlargement alone is inadequate

Defining Involvement by Lymphoma

- Spleen – HL
  – Evidence on imaging of 1 or more nodule of any size in the spleen
  – Histologic involvement documented by biopsy or splenectomy

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Defining Involvement by Lymphoma

- Liver
  – Multiple focal defects that are neither cystic nor vascular
    • Clinical enlargement alone is not adequate
  – Liver biopsy
  – One or more liver nodules on imaging

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Defining Involvement by Lymphoma

- Lung
  – Radiologic evidence of parenchymal involvement in absence of other likely causes, especially infection
  – Lung biopsy
  – Lung involvement representing extension from adjacent mediastinal or hilar nodes is extralymphatic (E) extension
  – Pulmonary nodule disease is diffuse extralymphatic disease (stage IV)

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Defining Involvement by Lymphoma

- Bone marrow
  - Aspiration and bone marrow biopsy

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CS TS/Ext Eval
Hodgkin and Non-Hodgkin Lymphoma

- Note: Pathologic staging (eval code 3) only when staging laparotomy is done (rarely)
- Unique code structure
  - 0   No staging laparotomy
  - 3   Staging laparotomy
  - 8   Autopsy
  - 9   Unknown

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Site-Specific Factor (SSF) 1 Associated with HIV/AIDS

Code	Description
001	Yes/Present
002	No/Not present
999	Unknown

•Code as 999 rather than 002 if AIDS status is not documented

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SSF 2
Systemic Symptoms

- Note 1. Each stage should be classified as either A or B according to the absence or presence of defined constitutional symptoms, such as:
    1. Fevers: Unexplained fever with temperature above 38 degrees C or 100.4 degrees F
    2. Night sweats: Drenching sweats that require change of bedclothes
    3. Weight loss: Unexplained weight loss of more than 10% of the usual body weight in the 6 months prior to diagnosis.
- Note 2. Pruritus alone does not qualify for B classification, nor does alcohol intolerance, fatigue, or a short, febrile

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SSF 2
Systemic Symptoms

Code	Description	Modifier
000	No B symptoms (asymptomatic)	A
010	Any B symptoms	B
020	Pruritis (recurrent & unexplained)	A
030	B symptoms + pruritis	B
999	Unknown	Blank

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SSF 3 International Prognostic Index (IPI) Score

Code	Description	Risk Group
000	0 points	Low
001	1 point	Low
002	2 points	Low intermediate
003	3 points	High intermediate
004	4 points	High
005	5 points	High
999	Unknown	

SSF3
IPI Score

Good Prognostic Factors	Adverse Prognostic Factors (Count 1 point for each factor below)
Age below 60	Age 60 and above
Stage I and II	Stage III and IV
No more than one area of lymphoma outside of nodes	More than one area of extra nodal involvement
Performance status – able to function normally	Performance status – needs a lot of help with daily activities
Serum LDH is normal	Serum LDH is elevated

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Collaborative Staging

Hematopoietic, Reticuloendothelial,
Immunoproliferative, and
Myeloproliferative

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CS Extension
Hematopoietic

Code 10: Localized disease

- Plasmacytoma
- Plasmacytoma, extramedullary
- Mast cell sarcoma
- Malignant histiocytosis
- Histiocytic sarcoma
- Langerhans cell sarcoma
- Dendritic cell sarcoma
- Myeloid sarcoma

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CS Extension Hematopoietic

- Code 80: Systemic disease
  - All histologies including those in code 10
- Code 99: Unknown

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Quiz

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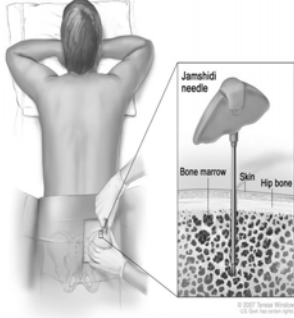
Diagnosis and Work-Up

- Lymphoma
  - Peripheral blood smear
  - Excisional biopsy
  - Imaging
    - CT
    - PET/ PET-CT
  - Immunophenotyping
  - Bone marrow biopsy
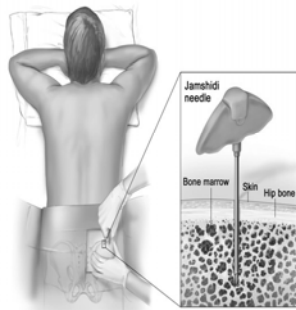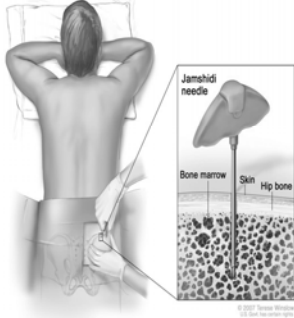
Diagnosis and Workup

- Leukemia
  - Peripheral blood smear
  - Bone Marrow Biopsy
  - Immunophenotyping
  - Cytochemistry

Diagnosis and Workup

- Multiple Myeloma
  - Serum analysis
  - Bone Marrow Biopsy
  - Chromosomal Analysis

First Course Treatment

Lymphoma

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First Course Treatment

- Intended to affect tumor by
  - Modification
  - Control
  - Removal
  - Destruction
- Includes curative and palliative treatment

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Surgical Procedure of Primary Site: Lymphoma

- Lymph nodes
  - FORDS page 283
- Site-specific codes for extranodal sites
  - Example: Patient has partial gastrectomy; path documents primary lymphoma of stomach
    - Assign code 30 from surgical procedure of primary site codes for stomach

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Surgical Procedure of Primary Site: Lymph Nodes

- Code 00
  - None; no surgery of primary site; autopsy only
- Code 19
  - Local tumor destruction or excision, NOS
    - Principally for cases diagnosed prior to 1/1/2003

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**Surgical Procedure of Primary Site:
Lymph Nodes**

- Codes 15
    – Local tumor destruction <u>without</u> pathology
      specimen
- Code 25
    – Local tumor excision, NOS

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**Surgical Procedure of Primary Site:
Lymph Nodes**

- Excisional biopsy of a lymph node
    – If the intent of the procedure was diagnostic,
      assign code 02 under Diagnostic Staging
      Procedure
    – If the intent was treatment, use code 25 for
      Surgical Procedure of Primary Site

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**Surgical Procedure vs. Diagnostic
Staging Procedure**

- Example 1: Patient with hilar and mediastinal
  lymphadenopathy presents for
  mediastinoscopy; lymph node removed and
  found to be lymphoma
    – Assign code 02 for diagnostic staging procedure

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Surgical Procedure vs. Diagnostic Staging Procedure

- Example 2: Patient with palpable cervical lymph node presents for excisional biopsy; staging workup failed to reveal any additional disease
  - Assign code 25 for surgical procedure of primary site

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Surgical Procedure of Primary Site: Lymph Nodes

- Code 30 - 32
  - Lymph node dissection
  - Code 30: NOS
    - Code 31: One chain
    - Code 32: Two or more chains

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Surgical Procedure of Primary Site: Lymph Nodes

- Code 40 - 42
  - Lymph node dissection PLUS splenectomy
  - Code 40: NOS
    - Code 41: One chain
    - Code 42: Two or more chains

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Surgical Procedure of Primary Site:
Lymph Nodes

- Code 50 - 52
  - Lymph node dissection and partial/total removal of adjacent organs
  - Code 50: NOS
    - Code 51: One chain
    - Code 52: Two or more chains

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Surgical Procedure of Primary Site:
Lymph Nodes

- Code 60 - 62
  - Lymph node dissection and partial/total removal of adjacent organs PLUS splenectomy
  - Code 60: NOS
    - Code 61: One chain
    - Code 62: Two or more chains

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Surgical Procedure of Primary Site:
Lymph Nodes

- Code 90
  - Surgery, NOS
- Code 99
  - Unknown if surgery performed

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Surgical Procedure of Primary Site: Hematopoietic

- Code 98
  - All hematopoietic, reticuloendothelial, immunoproliferative, or myeloproliferative disease sites and/or histologies with or without surgical treatment

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Radiation Therapy
External Beam Radiation

Radiation Therapy for Lymphoma

I Mantle field

II Spade field

I+II Subtotal nodal irradiation

III Inverted Y

I+III Total nodal irradiation
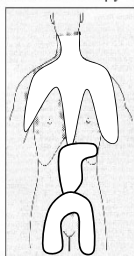
Image source: SEER Training Website

- Radiotherapy uses radiation, such as X-rays, to kill non-Hodgkin's lymphoma cells or to slow down their growth and development

Radiation Therapy
Other Hematopoietic Diseases

- Radiation is not usually part of treatment for leukemia
- Patients with other hematopoietic diseases may receive radiation therapy
  - Langerhan cell histiocytosis
  - Histiocytic sarcoma
  - Waldenstrom macroglobulinemia

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Radiation Therapy for Lymphoma

- Assign code 60, radioisotopes, NOS, in data item, regional treatment modality
  – Drugs combine the cell targeting ability of a monoclonal antibody with the additional cell killing ability of a radioactive particle, or radioisotope
    - Bexxar (iodine-131 tositumomab)
    - Zevalin (yttrium 90 ibritumomab tiuxitan)

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Chemotherapy

- Single or multi agent may be adjuvant treatment with radiation therapy for lower stage non-Hodgkin lymphoma
- More aggressive regimens given for higher stage non-Hodgkin lymphoma
- Multi agent regimens usually given for leukemia and other hematopoietic diseases
- Code Rituxan as chemotherapy

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Hormone Therapy

- Code hormonal agents given with chemotherapy regimens in the hormone therapy data item
  – Prednisone (ACVBP, CHOP, CNOP, EPOCH, MOCOP-B, MOPP)
  – Halotestin (EPOCH)

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Immunotherapy

- Monoclonal antibodies (MABs or MOABs)
- Vaccines
- T-cell immunotherapy
- Interferon alpha

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Hematologic Transplant

- Bone marrow transplant
  - Code 11: autologous
  - Code 12: allogenic
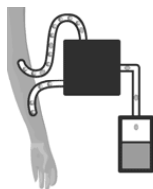- Peripheral blood stem cell transplant
  - Code 20

Image source: http://www.lymphoma-net.org/transplantation.cfm

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Other Treatment

0. None. All cancer treatment was coded in other treatment fields (surgery, radiation, systemic therapy). Patient received no cancer treatment. Diagnosed at autopsy.

1. Other cancer treatment that cannot be appropriately assigned to specified treatment data items (surgery, radiation, systemic). Use this code for treatment unique to hematopoietic diseases.

2. Other—Experimental. This code is not defined. It may be used to record participation in institution based clinical trials.

3. Other—Double Blind. A patient is involved in a double-blind clinical trial. Code the treatment actually administered when the double-blind trial code is broken.

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Other Treatment

6. Other.

   Unproven Cancer treatments administered by nonmedical personnel.

7. Refusal Other treatment was not administered.

   It was recommended by the patient's physician, but this treatment (which would have been coded 1, 2, or 3) was refused by the patient, a patient's family member, or the patient's guardian. The refusal was noted in the patient record.

8. Recommended; unknown if administered.

   Other treatment was recommended, but it is unknown whether it was administered.

9. Unknown

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Other Treatment

- Assign code 1
  - Anagrelide (platelet inhibitor) for essential thrombocythemia
  - Aspirin for essential thrombocythemia
    - Dose is approximately 70-100 mg per day
  - Bisphosphonates for multiple myeloma
  - Deferoxamine (iron chelating agent) for chronic myelomonocytic leukemia

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Other Treatment

- Assign code 1
  - Phlebotomy for polycythemia vera
  - PUVA for cutaneous T-cell lymphoma, Langerhans cell histiocytosis, disseminated (with skin involvement)
  - Red blood cell transfusion for chronic myelomonocytic leukemia, myelodysplastic syndrome, refractory anemia
  - Thalidomide (anti-angiogenesis agent) for myelosclerosis with meyloid metaplasia

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Questions?

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Thank you for participating in today's webinar!

- The next webinar is scheduled for 1/8/09, and the topic is 'Managing and Minimizing the Disclosure Risk of Cancer Data for Research and Dissemination'.
- Forward questions from today's webinar to us. Per request of CoC, we will forward questions to them.
- Contact us at
  - Shannon Vann – svann@naaccr.org; 217-698-0800 X9
  - Jim Hofferkamp – jhofferkamp@naaccr.org; 217-698-0800 X5

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