

CRITERIA FOR DETERMINING MULTIPLE PRIMARIES OF LYMPHATIC AND HEMATOPOIETIC DISEASES

Note: The new 2007 multiple primary and histology rules (Appendix O) do not apply to hematopoietic primaries (lymphoma and leukemia) of any site or to the reportable benign or borderline intracranial or CNS tumors.

The following rules are to be used as a guide for identifying lymphomas and leukemias with second primaries. Note that the rules refer to general headings followed by the ICD-O morphology codes included in each heading. For specific terms such as “histiocytic,” “diffuse,” “nodular” and “granulocytic,” check the ICD-O Alphabetic Index to determine into which general category a specific term falls. Complete instructions for determining subsequent primaries in lymphatic and hematopoietic diseases are available in both the SEER Program Code Manual 2004 and the FORDS.

Note: Different histologic terms are sometimes used to describe progressive stages or phases of the same disease process.

Lymphoma Codes: Lymphomas present some unique coding difficulties because of the complexity of the classification and the variety of terminologies in use. The following rules will be helpful in choosing the correct ICD-O-3 code for the histologic type:

1. The current preferred terminology is the World Health Organization Classification of Tumors of the Hematopoietic and Lymphoid Tissues.
2. If this terminology is not what is stated in the diagnosis, the following guidelines from older classifications apply:
 - a. When the terms “diffuse” and “nodular” (follicular) are both mentioned in a diagnosis, ignore the term “diffuse” in coding, because most nodular tumors progress to diffuse or have some diffuse aspects.
 - b. If neither diffuse nor nodular (follicular) is mentioned, presume the lymphoma is diffuse.
 - c. The terms lymphoma, malignant lymphoma, and non-Hodgkin’s lymphoma may be used interchangeably.
 - d. Avoid using non-specific or unclassified lymphoma terms if there are specific diagnoses that can be coded.
 - e. Some terms have equivalent meanings, for example:
 - i. Centробlastic = non-cleaved
 - ii. Centrocytic = cleaved
 - iii. Follicular = nodular
 - iv. Histiocytic = large (cell)
 - v. Lymphocytic = small (cell)
 - vi. Mixed lymphocytic and histiocytic = mixed small and large (cell)

- f. When the term “mixed cellularity” is used with non-Hodgkin’s lymphoma, it means mixed lymphocytic-histiocytic lymphoma.

DEFINITIONS OF SINGLE AND SUBSEQUENT PRIMARIES FOR HEMATOLOGIC MALIGNANCIES BASED ON ICD-O-3 REPORTABLE MALIGNANCIES, EFFECTIVE WITH DIAGNOSES 01/01/2001 AND AFTER

Cancer registrars are often faced with multiple pathology reports in patients with hematologic malignancies, and the diagnoses reported may require different morphology codes. This is due in part to the fact that more intensive diagnostic study may yield a more specific diagnosis, and in part due to the natural histories of hematopoietic diseases, which may progress from one disease into another.

The following chart was prepared by Seer Program, NCI, and provided to aid the registrar in determining single versus subsequent primary.

The following guidelines are employed:

1. “Lymphoma” is a general term for hematopoietic solid malignancies of the lymphoid series. “Leukemia” is a general term for liquid malignancies of either the lymphoid or the myeloid series. While it is recognized that some malignancies occur predominantly (or even exclusively) in liquid or solid form, because so many malignancies can potentially arise as either leukemias or lymphomas (or both), all hematopoietic malignancies are assumed to have this potential.
2. Malignancies of the lymphoid series are considered to be different from those of the myeloid series. Therefore, a lymphoid malignancy arising after diagnosis of a myeloid malignancy (or Myelodysplastic or myeloproliferative disorder) would be considered a subsequent primary; however, a myeloid malignancy diagnosed after a previous myeloid malignancy would not count as a subsequent primary. Histiocytic malignancies are considered different from both lymphoid and myeloid malignancies.
3. Hodgkin lymphoma is considered to be different from non-Hodgkin lymphoma (NHL). Among the NHLs, B-cell malignancies are considered different from T-cell/NK cell malignancies. Therefore, a B-cell malignancy arising later in the course of a patient previously diagnosed with a T-cell malignancy would be considered a subsequent primary; however, a T-cell malignancy diagnosed later in the same patient would not be considered a subsequent primary.
4. The sequence of diagnoses affects whether a diagnosis represents a subsequent primary. In some cases, the order of occurrence of the two diagnoses being compared is a factor in the decision whether the second diagnosis is a new primary.

To use the table, assign the ICD-O-3 code to the first diagnosis and find the row containing that code. Assign the ICD-O-3 code for the second diagnosis and find the column containing that code. In

the cell at the intersection of the first diagnosis row and the second diagnosis column, a "S" symbol indicates that the two diagnoses are most likely the **same** disease process (prepare/update a single abstract), and a "D" indicates that they are most likely **different** disease processes (prepare more than one abstract).

Note: If one of the two diagnoses is an NOS (not otherwise specified) term and the other is more specific and determined to be the same disease process, code the more specific diagnosis regardless of the sequence. For example, if a diagnosis of non-Hodgkin lymphoma, NOS is followed by a diagnosis of follicular lymphoma, assign the morphology code for the follicular lymphoma.

Note: The table "Single versus Subsequent Primaries of Lymphatic and Hematopoietic Diseases" and the "Complete Diagnostic Terms for Table (based on ICD-O-3)" display only the ICD-O-3 primary (boldfaced) term associated with the code. Refer to the International Classification of Diseases, Third Edition (ICD-O-3) for a complete list of related terms and synonyms.

Complete Diagnostic Terms for Table (Based on ICD-O-3):

1. 9590 Malignant lymphoma, NOS
2. 9591 Malignant lymphoma, non-Hodgkin, NOS
3. 9596 Composite Hodgkin and non-Hodgkin lymphoma
4. 9650-9667 Hodgkin lymphoma (all subtypes)
5. 9670-9671 Malignant lymphoma, small B lymphocytic
6. 9673 Mantle cell lymphoma
7. 9675-9684 Malignant lymphoma, diffuse large B-cell
8. 9687 Burkitt lymphoma
9. 9689, 9699 Marginal zone B-cell lymphoma
10. 9690-9698 Follicular lymphoma
11. 9700-9701 Mycosis fungoides and Sezary syndrome
12. 9702-9719 T/NK-cell non-Hodgkin lymphoma
13. 9727 Precursor cell lymphoblastic lymphoma, NOS
14. 9728 Precursor B -cell lymphoblastic lymphoma
15. 9729 Precursor T -cell lymphoblastic lymphoma
16. 9731 -9734 Plasma cell tumors
17. 9740 -9742 Mast cell tumors
18. 9750 -9756 Histiocytosis/Langerhans cell histiocytosis
19. 9757 -9758 Dendritic cell sarcoma
20. 9760 Immunoproliferative disease, NOS
21. 9761 Waldenstrom macroglobulinemia
22. 9762 Heavy chain disease, NOS
23. 9764 Immunoproliferative small intestinal disease
24. 9800 -9801 Leukemia, NOS/Acute leukemia, NOS
25. 9805 Acute biphenotypic leukemia
26. 9820 Lymphoid leukemia, NOS
27. 9823 B -cell chronic lymphocytic leukemia/small lymphocytic lymphoma

28. 9826 Burkitt cell leukemia
29. 9827 Adult T -cell leukemia/lymphoma (HTLV-1 positive)
30. 9832 Prolymphocytic leukemia, NOS
31. 9833 Prolymphocytic leukemia, B -cell type
32. 9834 Prolymphocytic leukemia, T -cell type
33. 9835 Precursor cell lymphoblastic leukemia, NOS
34. 9836 Precursor B -cell lymphoblastic leukemia
35. 9837 Precursor T -cell lymphoblastic leukemia
36. 9840 -9910 Myeloid leukemias
37. 9920 Therapy related acute myelogenous leukemia
38. 9930 Myeloid sarcoma
39. 9931 Acute panmyelosis with myelofibrosis
40. 9940 Hairy cell leukemia
41. 9945 Chronic myelomonocytic leukemia, NOS
42. 9946 Juvenile myelomonocytic leukemia
43. 9948 Aggressive NK -cell leukemia
44. 9950 Polycythemia vera
45. 9960 Chronic myeloproliferative disease, NOS
46. 9961 Myelosclerosis with myeloid metaplasia
47. 9962 Essential thrombocythemia
48. 9963 Chronic neutrophilic leukemia
49. 9964 Hypereosinophilic syndrome
50. 9980 -9986 Refractory anemias
51. 9987 Therapy related myelodysplastic syndrome, NOS
52. 9989 Myelodysplastic syndrome, NOS

SINGLE VERSUS SUBSEQUENT PRIMARIES OF LYMPHATIC AND HEMATOPOIETIC DISEASES

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SECOND DX ACROSS			1. 9590 Malignant lymphoma, NOS	2. 9591 NHL, NOS	3. 9596 Composite HD/NHL	4. 9650-9667 Hodgkin lymphoma	5. 9670-9671 ML, small B lymph	6. 9673 Mantle cell lymph	7. 9675-9684 ML, diff large B-cell	8. 9687 Burkitt lymphoma	9. 9689, 9699 Marg zn. B-cl lym	10. 9690-9698 Follicular lymphoma
FIRST DX DOWN												
1. Malignant lymphoma, NOS	9590	S	S	S	S	S	S	S	S	S	S	S
2. NHL, NOS	9591	S	S	D	D	S	S	S	S	S	S	S
3. Composite HD/NHL	9596	S	S	S	S	S	S	S	S	S	S	S
4. Hodgkin lymphoma	9650-9667	S	D	D	S	D	D	D	D	D	D	D
5. ML, small B lymphocytic	9670-9671	S	S	D	D	S	D	D	S	D	D	D
6. Mantle cell lymphoma	9673	S	S	D	D	D	S	D	D	D	D	D
7. ML, diffuse, large B-cell	9675-9684	S	S	D	D	S	D	S	S	D	S	S
8. Burkitt lymphoma	9687	S	S	D	D	D	D	D	S	D	D	D
9. Marg zone, B-cell lymphoma	9689, 9699	S	S	D	D	D	D	D	D	S	D	D
10. Follicular lymphoma	9690-9698	S	S	D	D	D	D	D	S	D	D	S
11. Mycos fung, Sezary disease	9700-9701	S	S	D	D	D	D	D	D	D	D	D
12. T/NK-cell NHL	9702-9719	S	S	D	D	D	D	D	D	D	D	D
13. Precurs lym'blas lymph NOS	9727	S	S	D	D	D	D	D	D	D	D	D
14. Precurs lym'blas lymph B-cell	9728	S	S	D	D	D	D	D	D	D	D	D
15. Precurs lym'blas lymph T-cell	9729	S	S	D	D	D	D	D	D	D	D	D
16. Plasma cell tumors	9731-9734	D	D	D	D	D	D	D	D	D	D	D
17. Mast cell tumors	9740-9742	D	D	D	D	D	D	D	D	D	D	D
18. Histiocytosis/Langerhans cell	9750-9756	D	D	D	D	D	D	D	D	D	D	D
19. Dendritic cell sarcoma	9757-9758	S	S	D	D	D	D	D	D	D	D	D
20. Immunoprolif disease, NOS	9760	S	S	D	D	S	D	S	D	D	D	D
21. Waldenstrom macroglob	9761	S	S	D	D	S	D	S	D	D	D	D
22. Heavy chain disease, NOS	9762	S	S	D	D	D	D	D	D	D	D	D
23. Immun sm intest disease	9764	S	S	D	D	D	D	D	D	D	D	D
24. Leuk/Acute leuk, NOS	9800-9801	S	S	D	D	D	D	D	S	D	D	D
25. Acute biphenotypic leukem	9805	S	S	D	D	S	S	S	S	S	S	S
26. Lymphocytic leukem, NOS	9820	S	S	D	D	D	D	D	S	D	S	S
27. BCLL/SLL	9823	S	S	D	D	S	D	S	D	D	D	D
28. Burkitt cell leukemia	9826	S	S	D	D	D	D	D	S	D	D	D
29. Adult T-cell leuk/lymph	9827	S	S	D	D	D	D	D	D	D	D	D
30. Prolym'cyt leuk, NOS	9832	D	D	D	D	S	D	D	D	D	D	D
31. Prolym'cyt leuk, B-cell	9833	D	D	D	D	S	D	D	D	D	D	D
32. Prolym'cyt leuk, T-cell	9834	D	D	D	D	D	D	D	D	D	D	D
33. Precurs lym'cyt leuk, NOS	9835	S	S	D	D	D	D	D	D	D	D	D
34. Precurs B-cell leuk	9836	S	S	D	D	D	D	D	D	D	D	D
35. Precurs T-cell leuk	9837	S	S	D	D	D	D	D	D	D	D	D
36. Myeloid leukemias	9840-9910	D	D	D	D	D	D	D	D	D	D	D
37. Therapy related AML	9920	D	D	D	D	D	D	D	D	D	D	D
38. Myeloid sarcoma	9930	D	D	D	D	D	D	D	D	D	D	D
39. Acute panmyelosis	9931	D	D	D	D	D	D	D	D	D	D	D
40. Hairy cell leukemia	9940	D	D	D	D	D	D	D	D	D	D	D
41. Chron myelomonocyt leuk	9945	D	D	D	D	D	D	D	D	D	D	D
42. Juvenile myelomonocyt leuk	9946	D	D	D	D	D	D	D	D	D	D	D
43. NK-cell leukemia	9948	S	S	D	D	D	D	D	D	D	D	D
44. Polycythemia vera	9950	D	D	D	D	D	D	D	D	D	D	D
45. Chron myeloprolif disease	9960	D	D	D	D	D	D	D	D	D	D	D
46. Myeloid sclerosis	9961	D	D	D	D	D	D	D	D	D	D	D
47. Essen thrombocythem	9962	D	D	D	D	D	D	D	D	D	D	D
48. Chron neutrophilic leukemia	9963	D	D	D	D	D	D	D	D	D	D	D
49. Hypereosinophilic syndrome	9964	D	D	D	D	D	D	D	D	D	D	D
50. Refractory anemias	9980-9986	D	D	D	D	D	D	D	D	D	D	D
51. Therapy related MDS	9987	D	D	D	D	D	D	D	D	D	D	D
52. Myelodysplastic syndr, NOS	9989	D	D	D	D	D	D	D	D	D	D	D

Codes: S--one primary only; D--presumably a subsequent primary

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SINGLE VERSUS SUBSEQUENT PRIMARIES OF LYMPHATIC AND HEMATOPOIETIC DISEASES

February 28, 2001 PAGE 2 SECOND DX ACROSS FIRST DX DOWN		11. 9700-9701 MF, Sezary disease	12. 9702-9719 T/NK-cell lymphoma	13. 9727 Precurs lymb'blas lymph NOS	14. 9728 Precurs lymb'blas lymph B-cl	15. 9729 Precurs lymb'blas lymph T-cl	16. 9731-9734 Plasma cell tumors	17. 9740-9742 Mast cell tumors	18. 9750-9756 Histiocytos, LCH	19. 9757-9758 Dendritic cell sarc	20. 9760 Immunoprolif dis
1. Malignant lymphoma, NOS	9590	S	S	S	S	S	S	S	S	S	S
2. NHL, NOS	9591	S	S	S	S	S	D	D	D	S	S
3. Composite HD/NHL	9596	S	S	S	S	S	D	D	D	D	S
4. Hodgkin lymphoma	9650-9667	D	D	D	D	D	D	D	D	D	D
5. ML, small B lymphocytic	9670-9671	D	D	D	D	D	D	D	D	D	D
6. Mantle cell lymphoma	9673	D	D	D	D	D	D	D	D	D	D
7. ML, diffuse, large B-cell	9675-9684	D	D	D	D	D	D	D	D	D	S
8. Burkitt lymphoma	9687	D	D	D	D	D	D	D	D	D	D
9. Marg zone, B-cell lymphoma	9689, 9699	D	D	D	D	D	D	D	D	D	D
10. Follicular lymphoma	9690-9698	D	D	D	D	D	D	D	D	D	D
11. Mycos fung, Sezary disease	9700-9701	S	D	D	D	D	D	D	D	D	D
12. T/NK-cell NHL	9702-9719	D	S	D	D	D	D	D	D	D	S
13. Precurs lym'blas lymph NOS	9727	D	D	S	S	S	D	D	D	D	D
14. Precurs lym'blas lymph B-cell	9728	D	D	S	S	D	D	D	D	D	D
15. Precurs lym'blas lymph T-cell	9729	D	D	S	D	S	D	D	D	D	D
16. Plasma cell tumors	9731-9734	D	D	D	D	D	S	D	D	D	D
17. Mast cell tumors	9740-9742	D	D	D	D	D	D	S	D	D	D
18. Histiocytos/Langerhans cell	9750-9756	D	D	D	D	D	D	D	S	D	D
19. Dendritic cell sarcoma	9757-9758	D	D	D	D	D	D	D	D	S	D
20. Immunoprolif disease, NOS	9760	D	D	D	D	D	S	D	D	D	S
21. Waldenstrom macroglob	9761	D	D	D	D	D	D	D	D	D	S
22. Heavy chain disease, NOS	9762	D	D	D	D	D	D	D	D	D	S
23. Immun sm intest disease	9764	D	D	D	D	D	S	D	D	D	S
24. Leuk/Acute leuk, NOS	9800-9801	D	S	S	S	S	D	D	D	D	D
25. Acute biphenotypic leukem	9805	S	S	S	S	S	D	D	D	D	D
26. Lymphocytic leukem, NOS	9820	S	S	S	S	S	D	D	D	D	S
27. BCLL/SLL	9823	D	D	D	D	D	D	D	D	D	S
28. Burkitt cell leukemia	9826	D	D	D	D	D	D	D	D	D	D
29. Adult T-cell leuk/lymph	9827	D	D	D	D	D	D	D	D	D	D
30. Prolym'cyt leuk, NOS	9832	D	D	D	D	D	D	D	D	D	D
31. Prolym'cyt leuk, B-cell	9833	D	D	D	D	D	D	D	D	D	D
32. Prolym'cyt leuk, T-cell	9834	D	D	D	D	D	D	D	D	D	D
33. Precurs lym'cyt leuk, NOS	9835	D	D	S	S	S	D	D	D	D	D
34. Precurs B-cell leuk	9836	D	D	S	S	D	D	D	D	D	D
35. Precurs T-cell leuk	9837	D	D	S	D	S	D	D	D	D	D
36. Myeloid leukemias	9840-9910	D	D	D	D	D	D	D	D	D	D
37. Therapy related AML	9920	D	D	D	D	D	D	D	D	D	D
38. Myeloid sarcoma	9930	D	D	D	D	D	D	D	D	D	D
39. Acute panmyelosis	9931	D	D	D	D	D	D	D	D	D	D
40. Hairy cell leukemia	9940	D	D	D	D	D	D	D	D	D	D
41. Chron myelomonocyt leuk	9945	D	D	D	D	D	D	D	D	D	D
42. Juvenile myelomonocy leuk	9946	D	D	D	D	D	D	D	D	D	D
43. NK-cell leukemia	9948	D	S	D	D	D	D	D	D	D	D
44. Polycythemia vera	9950	D	D	D	D	D	D	D	D	D	D
45. Chron myeloprolif disease	9960	D	D	D	D	D	D	D	D	D	D
46. Myelosclerosis	9961	D	D	D	D	D	D	D	D	D	D
47. Essen thrombocythem	9962	D	D	D	D	D	D	D	D	D	D
48. Chron neutrophilic leukemia	9963	D	D	D	D	D	D	D	D	D	D
49. Hypereosinophilic syndrome	9964	D	D	D	D	D	D	D	D	D	D
50. Refractory anemias	9980-9986	D	D	D	D	D	D	D	D	D	D
51. Therapy related MDS	9987	D	D	D	D	D	D	D	D	D	D
52. Myelodysplastic syndr, NOS	9989	D	D	D	D	D	D	D	D	D	D

Codes: S--one primary only; D--presumably a subsequent primary

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SINGLE VERSUS SUBSEQUENT PRIMARIES OF LYMPHATIC AND HEMATOPOIETIC DISEASES

February 28, 2001 PAGE 3 SECOND DX ACROSS FIRST DX DOWN		21. 9761 Waldenstrom	22. 9762 Heavy chain dis	23. 9764 Imm sm intest dis	24. 9800-9801 Leuk/Acu leuk NOS	25. 9805 Acute biphenotypic leuk	26. 9820 Lym'cyt leuk. NOS	27. 9823 BCLL/SLL	28. 9826 Burkitt leukemia	29. 9827 Adult T-cell leuk/lym	30. 9832 Prolym leuk. NOS
1. Malignant lymphoma, NOS	9590	S	S	S	S	S	S	S	S	S	S
2. NHL, NOS	9591	S	S	S	S	S	S	S	S	S	D
3. Composite HD/NHL	9596	S	S	S	S	D	S	S	S	S	D
4. Hodgkin lymphoma	9650-9667	D	D	D	D	D	D	D	D	D	D
5. ML, small B lymphocytic	9670-9671	S	D	D	D	S	S	S	D	D	S
6. Mantle cell lymphoma	9673	D	D	D	D	S	D	D	D	D	D
7. ML, diffuse, large B-cell	9675-9684	S	S	S	D	S	S	S	D	D	S
8. Burkitt lymphoma	9687	D	D	D	S	S	S	D	S	D	D
9. Marg zone, B-cell lymphoma	9689, 9699	D	D	D	D	S	D	D	D	D	D
10. Follicular lymphoma	9690-9698	D	D	D	D	S	D	D	D	D	D
11. Mycos fung, Sezary disease	9700-9701	D	D	D	D	S	S	D	D	D	D
12. T/NK-cell NHL	9702-9719	D	D	D	D	S	S	D	D	D	D
13. Precurs lym'blas lymph NOS	9727	D	D	D	S	S	S	D	D	D	D
14. Precurs lym'blas lymph B-cell	9728	D	D	D	S	S	S	D	D	D	D
15. Precurs lym'blas lymph T-cell	9729	D	D	D	S	S	S	D	D	D	D
16. Plasma cell tumors	9731-9734	D	D	D	D	D	D	D	D	D	D
17. Mast cell tumors	9740-9742	D	D	D	D	D	D	D	D	D	D
18. Histiocytos/Langerhans cell	9750-9756	D	D	D	D	D	D	D	D	D	D
19. Dendritic cell sarcoma	9757-9758	D	D	D	D	D	D	D	D	D	D
20. Immunoprolif disease, NOS	9760	S	S	S	D	D	D	D	D	D	D
21. Waldenstrom macroglob	9761	S	D	D	D	D	S	S	D	D	D
22. Heavy chain disease, NOS	9762	D	S	S	D	D	S	S	D	D	D
23. Immun sm intest disease	9764	D	S	S	D	D	D	D	D	D	D
24. Leuk/Acute leuk, NOS	9800-9801	D	D	D	S	S	S	D	S	S	D
25. Acute biphenotypic leukem	9805	D	D	D	S	S	S	S	S	S	S
26. Lymphocytic leukem, NOS	9820	S	S	D	S	S	S	S	S	S	S
27. BCLL/SLL	9823	D	D	D	D	S	S	S	D	D	S
28. Burkitt cell leukemia	9826	D	D	D	S	S	S	D	S	D	D
29. Adult T-cell leuk/lymph	9827	D	D	D	D	S	S	D	D	S	D
30. Prolym'cyt leuk, NOS	9832	D	D	D	D	S	S	S	D	D	S
31. Prolym'cyt leuk, B-cell	9833	D	D	D	D	S	S	S	D	D	S
32. Prolym'cyt leuk, T-cell	9834	D	D	D	D	S	S	D	D	S	S
33. Precurs lym'cyt leuk, NOS	9835	D	D	D	S	S	S	D	D	D	D
34. Precurs B-cell leuk	9836	D	D	D	S	S	S	D	D	D	D
35. Precurs T-cell leuk	9837	D	D	D	S	S	S	D	D	D	D
36. Myeloid leukemias	9840-9910	D	D	D	S	S	D	D	D	D	D
37. Therapy related AML	9920	D	D	D	S	S	D	D	D	D	D
38. Myeloid sarcoma	9930	D	D	D	S	S	D	D	D	D	D
39. Acute panmyelosis	9931	D	D	D	S	S	D	D	D	D	D
40. Hairy cell leukemia	9940	D	D	D	S	S	D	D	D	D	D
41. Chron myelomonocyt leuk	9945	D	D	D	S	S	D	D	D	D	D
42. Juvenile myelomonocyt leuk	9946	D	D	D	S	S	D	D	D	D	D
43. NK-cell leukemia	9948	D	D	D	S	S	S	D	D	D	D
44. Polycythemia vera	9950	D	D	D	S	D	D	D	D	D	D
45. Chron myeloprolif disease	9960	D	D	D	S	S	D	D	D	D	D
46. Myeloid sclerosis	9961	D	D	D	S	S	D	D	D	D	D
47. Essen thrombocythem	9962	D	D	D	S	D	D	D	D	D	D
48. Chron neutrophilic leukemia	9963	D	D	D	S	D	D	D	D	D	D
49. Hypereosinophilic syndrome	9964	D	D	D	S	D	D	D	D	D	D
50. Refractory anemias	9980-9986	D	D	D	S	S	D	D	D	D	D
51. Therapy related MDS	9987	D	D	D	S	S	D	D	D	D	D
52. Myelodysplastic syndr, NOS	9989	D	D	D	S	S	D	D	D	D	D

Codes: S--one primary only; D--presumably a subsequent primary SEER Program, NCI. E-mail: seerweb@ims.nci.nih.gov

SINGLE VERSUS SUBSEQUENT PRIMARIES OF LYMPHATIC AND HEMATOPOIETIC DISEASES

February 28, 2001 PAGE 4 SECOND DX ACROSS FIRST DX DOWN		31. 9833 Prolym leuk, B-cell	32. 9834 Prolym leuk, T-cell	33. 9835 Precurs leuk, NOS	34. 9836 Precurs leuk, B-cell	35. 9837 Precurs leuk, T-cell	36. 9840-9910 Myeloid leukemias	37. 9920 Therapy rel AML	38. 9930 Myeloid sarcoma	39. 9931 Acute panmyelosis	40. 9940 Hairy cell leukemia	41. 9945 Chr myelomono leu
1. Malignant lymphoma, NOS	9590	S	S	S	S	S	S	S	S	S	S	S
2. NHL, NOS	9591	D	D	S	S	S	D	D	D	D	D	D
3. Composite HD/NHL	9596	D	D	S	S	S	D	D	D	D	D	D
4. Hodgkin lymphoma	9650-9667	D	D	D	D	D	D	D	D	D	D	D
5. ML, small B lymphocytic	9670-9671	S	D	D	D	D	D	D	D	D	D	D
6. Mantle cell lymphoma	9673	D	D	D	D	D	D	D	D	D	D	D
7. ML, diffuse, large B-cell	9675-9684	S	D	D	D	D	D	D	D	D	D	D
8. Burkitt lymphoma	9687	D	D	D	D	D	D	D	D	D	D	D
9. Marg zone, B-cell lymphoma	9689, 9699	D	D	D	D	D	D	D	D	D	D	D
10. Follicular lymphoma	9690-9698	D	D	D	D	D	D	D	D	D	D	D
11. Mycos fung, Sezary disease	9700-9701	D	D	D	D	D	D	D	D	D	D	D
12. T/NK-cell NHL	9702-9719	D	D	D	D	D	D	D	D	D	D	D
13. Precurs lym'blas lymph NOS	9727	D	D	S	S	S	D	D	D	D	D	D
14. Precurs lym'blas lymph B-cell	9728	D	D	S	S	D	D	D	D	D	D	D
15. Precurs lym'blas lymph T-cell	9729	D	D	S	D	S	D	D	D	D	D	D
16. Plasma cell tumors	9731-9734	D	D	D	D	D	D	D	D	D	D	D
17. Mast cell tumors	9740-9742	D	D	D	D	D	D	D	D	D	D	D
18. Histiocytos/Langerhans cell	9750-9756	D	D	D	D	D	D	D	D	D	D	D
19. Dendritic cell sarcoma	9757-9758	D	D	D	D	D	D	D	D	D	D	D
20. Immunoprolif disease, NOS	9760	D	D	D	D	D	D	D	D	D	D	D
21. Waldenstrom macroglob	9761	D	D	D	D	D	D	D	D	D	D	D
22. Heavy chain disease, NOS	9762	D	D	D	D	D	D	D	D	D	D	D
23. Immun sm intest disease	9764	D	D	D	D	D	D	D	D	D	D	D
24. Leuk/Acute leuk, NOS	9800-9801	D	D	S	S	S	S	S	S	D	D	S
25. Acute biphenotypic leukem	9805	S	S	S	S	S	S	S	S	S	S	S
26. Lymphocytic leukem, NOS	9820	S	S	S	S	S	D	D	D	D	S	D
27. BCLL/SLL	9823	S	D	D	D	D	D	D	D	D	D	D
28. Burkitt cell leukemia	9826	D	D	D	D	D	D	D	D	D	D	D
29. Adult T-cell leuk/lymph	9827	D	D	D	D	D	D	D	D	D	D	D
30. Prolym'cyt leuk, NOS	9832	S	S	D	D	D	D	D	D	D	D	D
31. Prolym'cyt leuk, B-cell	9833	S	D	D	D	D	D	D	D	D	D	D
32. Prolym'cyt leuk, T-cell	9834	D	S	D	D	D	D	D	D	D	D	D
33. Precurs lym'cyt leuk, NOS	9835	D	D	S	S	S	D	D	D	D	D	D
34. Precurs B-cell leuk	9836	D	D	S	S	D	D	D	D	D	D	D
35. Precurs T-cell leuk	9837	D	D	S	D	S	D	D	D	D	D	D
36. Myeloid leukemias	9840-9910	D	D	D	D	D	S	S	S	S	D	S
37. Therapy related AML	9920	D	D	D	D	D	S	S	S	S	D	S
38. Myeloid sarcoma	9930	D	D	D	D	D	S	S	S	S	D	S
39. Acute panmyelosis	9931	D	D	D	D	D	S	S	S	S	D	S
40. Hairy cell leukemia	9940	D	D	D	D	D	D	D	D	D	S	D
41. Chron myelomonocyt leuk	9945	D	D	D	D	D	S	S	S	S	D	S
42. Juvenile myelomonocy leuk	9946	D	D	D	D	D	S	S	S	S	D	S
43. NK-cell leukemia	9948	D	D	D	D	D	D	D	D	D	D	D
44. Polycythemia vera	9950	D	D	D	D	D	D	D	D	D	D	D
45. Chron myeloprolif disease	9960	D	D	D	D	D	S	S	S	S	D	S
46. Myelosclerosis	9961	D	D	D	D	D	S	S	S	S	D	S
47. Essen thrombocythem	9962	D	D	D	D	D	S	S	S	S	D	S
48. Chron neutrophilic leukemia	9963	D	D	D	D	D	S	S	S	S	D	S
49. Hypereosinophilic syndrome	9964	D	D	D	D	D	S	S	S	S	D	S
50. Refractory anemias	9980-9986	D	D	D	D	D	S	S	S	S	D	S
51. Therapy related MDS	9987	D	D	D	D	D	S	S	S	S	D	S
52. Myelodysplastic syndr, NOS	9989	D	D	D	D	D	S	S	S	S	D	S

Codes: S--one primary only; D--presumably a subsequent primary

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SINGLE VERSUS SUBSEQUENT PRIMARIES OF LYMPHATIC AND HEMATOPOIETIC DISEASES

February 28, 2001 PAGE 5 SECOND DX ACROSS FIRST DX DOWN		42. 9946 Juv myelomonoc leu	43. 9948 NK-cell leukemia	44. 9950 Polycythemia vera	45. 9960 Chr myeloprolif dis	46. 9961 Myeloclerosis	47. 9962 Ess thrombocythem	48. 9963 Chr neutrophil leu	49. 9964 Hypereosin syndr	50. 9980-9986 Refract anemias	51. 9987 Therapy rel MDS	52. 9989 Myelodys syn NOS
1. Malignant lymphoma, NOS	9590	S	S	D	D	D	D	D	D	D	D	D
2. NHL, NOS	9591	D	D	D	D	D	D	D	D	D	D	D
3. Composite HD/NHL	9596	D	D	D	D	D	D	D	D	D	D	D
4. Hodgkin lymphoma	9650-9667	D	D	D	D	D	D	D	D	D	D	D
5. ML, small B lymphocytic	9670-9671	D	D	D	D	D	D	D	D	D	D	D
6. Mantle cell lymphoma	9673	D	D	D	D	D	D	D	D	D	D	D
7. ML, diffuse, large B-cell	9675-9684	D	D	D	D	D	D	D	D	D	D	D
8. Burkitt lymphoma	9687	D	D	D	D	D	D	D	D	D	D	D
9. Marg zone, B-cell lymphoma	9689, 9699	D	D	D	D	D	D	D	D	D	D	D
10. Follicular lymphoma	9690-9698	D	D	D	D	D	D	D	D	D	D	D
11. Mycos fung, Sezary disease	9700-9701	D	D	D	D	D	D	D	D	D	D	D
12. T/NK-cell NHL	9702-9719	D	D	D	D	D	D	D	D	D	D	D
13. Precurs lym'blas lymph NOS	9727	D	D	D	D	D	D	D	D	D	D	D
14. Precurs lym'blas lymph B-cell	9728	D	D	D	D	D	D	D	D	D	D	D
15. Precurs lym'blas lymph T-cell	9729	D	D	D	D	D	D	D	D	D	D	D
16. Plasma cell tumors	9731-9734	D	D	D	D	D	D	D	D	D	D	D
17. Mast cell tumors	9740-9742	D	D	D	D	D	D	D	D	D	D	D
18. Histiocytos/Langerhans cell	9750-9756	D	D	D	D	D	D	D	D	D	D	D
19. Dendritic cell sarcoma	9757-9758	D	D	D	D	D	D	D	D	D	D	D
20. Immunoprolif disease, NOS	9760	D	D	D	D	D	D	D	D	D	D	D
21. Waldenstrom macroglob	9761	D	D	D	D	D	D	D	D	D	D	D
22. Heavy chain disease, NOS	9762	D	D	D	D	D	D	D	D	D	D	D
23. Immun sm intest disease	9764	D	D	D	D	D	D	D	D	D	D	D
24. Leuk/Acute leuk, NOS	9800-9801	S	D	D	S	S	D	S	S	D	S	S
25. Acute biphenotypic leukem	9805	S	S	D	S	S	D	D	D	S	S	S
26. Lymphocytic leukem, NOS	9820	D	S	D	D	D	D	D	D	D	D	D
27. BCLL/SLL	9823	D	D	D	D	D	D	D	D	D	D	D
28. Burkitt cell leukemia	9826	D	D	D	D	D	D	D	D	D	D	D
29. Adult T-cell leuk/lymph	9827	D	D	D	D	D	D	D	D	D	D	D
30. Prolym'cyt leuk, NOS	9832	D	D	D	D	D	D	D	D	D	D	D
31. Prolym'cyt leuk, B-cell	9833	D	D	D	D	D	D	D	D	D	D	D
32. Prolym'cyt leuk, T-cell	9834	D	D	D	D	D	D	D	D	D	D	D
33. Precurs lym'cyt leuk, NOS	9835	D	D	D	D	D	D	D	D	D	D	D
34. Precurs B-cell leuk	9836	D	D	D	D	D	D	D	D	D	D	D
35. Precurs T-cell leuk	9837	D	D	D	D	D	D	D	D	D	D	D
36. Myeloid leukemias	9840-9910	S	D	D	S	S	S	S	S	D	S	S
37. Therapy related AML	9920	S	D	D	D	S	D	D	D	D	S	S
38. Myeloid sarcoma	9930	S	D	D	S	S	S	S	D	D	S	S
39. Acute panmyelosis	9931	S	D	D	D	S	D	D	D	D	S	S
40. Hairy cell leukemia	9940	D	D	D	D	D	D	D	D	D	D	D
41. Chron myelomonocyt leuk	9945	S	D	D	S	S	D	S	D	D	S	S
42. Juvenile myelomonocyt leuk	9946	S	D	D	D	S	D	D	D	D	S	S
43. NK-cell leukemia	9948	D	S	D	D	D	D	D	D	D	D	D
44. Polycythemia vera	9950	D	D	S	S	S	D	D	D	D	D	D
45. Chron myeloprolif disease	9960	D	D	D	S	S	S	S	D	D	D	D
46. Myeloclerosis	9961	S	D	D	S	S	S	S	D	D	S	S
47. Essen thrombocythem	9962	D	D	D	S	S	S	S	D	D	D	D
48. Chron neutrophilic leukemia	9963	D	D	D	S	S	S	S	D	D	D	D
49. Hypereosinophilic syndrome	9964	S	D	D	S	S	D	D	S	D	D	D
50. Refractory anemias	9980-9986	S	D	D	S	S	D	D	D	S	S	S
51. Therapy related MDS	9987	S	D	D	S	S	D	D	D	S	S	S
52. Myelodysplastic syndr, NOS	9989	S	D	D	S	S	D	D	D	S	S	S

Codes: S--one primary only; D--presumably a subsequent primary

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