

Bone Marrow

Protocol applies to acute leukemias, myelodysplastic syndromes, myeloproliferative disorders, chronic lymphoproliferative disorders, malignant lymphomas, plasma cell dyscrasias, histiocytic and dendritic cell neoplasms and mastocytosis.

*Protocol revision date: January 2005
No AJCC/UICC staging system*

Procedures

- **Blood Film**
- **Aspirate, Cell Block**
- **Trephine Biopsy, Touch Imprint**

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The College of American Pathologists offers these protocols to assist pathologists in providing clinically useful and relevant information when reporting results of surgical specimen examinations of surgical specimens. The College regards the reporting elements in the “Surgical Pathology Cancer Case Summary (Checklist)” portion of the protocols as essential elements of the pathology report. However, the manner in which these elements are reported is at the discretion of each specific pathologist, taking into account clinician preferences, institutional policies, and individual practice.

The College developed these protocols as an educational tool to assist pathologists in the useful reporting of relevant information. It did not issue the protocols for use in litigation, reimbursement, or other contexts. Nevertheless, the College recognizes that the protocols might be used by hospitals, attorneys, payers, and others. Indeed, effective January 1, 2004, the Commission on Cancer of the American College of Surgeons mandated the use of the checklist elements of the protocols as part of its Cancer Program Standards for Approved Cancer Programs. Therefore, it becomes even more important for pathologists to familiarize themselves with the document. At the same time, the College cautions that use of the protocols other than for their intended educational purpose may involve additional considerations that are beyond the scope of this document.

Summary of Changes to Checklist(s)

Protocol revision date: January 2005

No changes have been made to the data elements of the checklist(s) since the January 2004 protocol revision.

Surgical Pathology Cancer Case Summary (Checklist)

*Protocol revision date: January 2005
Applies to hematopoietic and lymphoid disorders
of the bone marrow only
No AJCC/UICC staging system*

**BONE MARROW: Blood Film, Aspirate, Cell Block,
Trephine Biopsy, Touch Imprint**

Patient name:

Hematopathology/Surgical pathology number:

Note: Check 1 response unless otherwise indicated.**MACROSCOPIC****Specimen Type**

- Aspirate
 Biopsy
 Both aspirate and biopsy
 Blood film
 Cell block (clot section)
 Not specified

***Biopsy Site**

- * Not applicable
* Right posterior iliac crest
* Left posterior iliac crest
* Other (specify): _____
* Not specified

***Aspirate Site**

- * Not applicable
* Right posterior iliac crest
* Left posterior iliac crest
* Sternum
* Other (specify): _____
* Not specified

Adequacy of Specimen

- Satisfactory
 Limited
 Unsatisfactory

Phenotyping

- Performed, see separate report
 Performed
 Specify method and results: _____

 Not performed

Cytogenetics

- Performed (see separate report)
 Performed
 Specify results: _____
 Not performed

Disease Type (WHO Classification) (check all that apply)Chronic Myeloproliferative Diseases

- Chronic myelogenous leukemia
 Chronic neutrophilic leukemia
 Chronic eosinophilic leukemia/hypereosinophilic syndrome
 Polycythemia vera
 Chronic idiopathic myelofibrosis
 Essential thrombocythemia
 Myeloproliferative disease, unclassifiable

Myelodysplastic/Myeloproliferative Diseases

- Chronic myelomonocytic leukemia
 Atypical chronic myeloid leukemia
 Juvenile myelomonocytic leukemia
 Myelodysplastic/myeloproliferative disease, unclassifiable

Myelodysplastic Syndromes

- Refractory anemia
 Refractory anemia with ringed sideroblasts
 Refractory cytopenia with multilineage dysplasia
 Refractory cytopenia with multilineage dysplasia and ringed sideroblasts
 Refractory anemia with excess blasts (RAEB)
 RAEB-1
 RAEB-2
 Myelodysplastic syndrome, unclassifiable
 Myelodysplastic syndrome associated with isolated del(5q)

* Data elements **with asterisks** are **not required** for accreditation purposes for the Commission on Cancer. These elements may be clinically important, but are not yet validated or regularly used in patient management. Alternatively, the necessary data may not be available to the pathologist at the time of pathologic assessment of this specimen.

Acute Myeloid Leukemias (AMLs)

- Acute myeloid leukemia with recurrent genetic abnormalities
 - AML with t(8;21)(q22;q22)
 - AML with abnormal bone marrow eosinophils inv(16) or t(16;16) or t(16;16)(p13;q22);CBF β /MYH11)
 - Acute promyelocytic leukemia t(15;17)(q22;q12) and variants
 - AML with 11q23 (MLL) abnormality
- Acute myeloid leukemia with multilineage dysplasia
 - Following a myelodysplastic syndrome or myelodysplastic syndrome/myeloproliferative disorder
 - Without antecedent myelodysplastic syndrome
- Acute myeloid leukemia and myelodysplastic syndromes, therapy-related
 - Alkylating agent-related
 - Topoisomerase type II inhibitor-related (some may be lymphoid)
 - Other types (specify): _____
- Acute myeloid leukemia not otherwise categorized
 - AML minimally differentiated
 - AML without maturation
 - AML with maturation
 - Acute myelomonocytic leukemia
 - Acute monoblastic and monocytic leukemia
 - Acute erythroid leukemia
 - Acute megakaryoblastic leukemia
 - Acute basophilic leukemia
 - Acute panmyelosis with myelofibrosis
 - Myeloid sarcoma
- Acute leukemia of ambiguous lineage
 - Undifferentiated acute leukemia
 - Bilineal acute leukemia
 - Biphenotypic acute leukemia

Precursor B-cell and T-cell Neoplasms

- Precursor B lymphoblastic leukemia/lymphoblastic lymphoma
- Precursor T lymphoblastic leukemia/lymphoblastic lymphoma

Mature B-cell Neoplasms

- Chronic lymphocytic leukemia/small lymphocytic lymphoma
- B-cell prolymphocytic leukemia
- Lymphoplasmacytic lymphoma
- Splenic marginal zone lymphoma
- Hairy cell leukemia
- Plasma cell myeloma
- Monoclonal gammopathy of undetermined significance (MGUS)
- Solitary plasmacytoma of bone
- Extraosseous plasmacytoma
- Primary amyloidosis
- Heavy chain disease
- Extranodal marginal zone B-cell lymphoma of mucosa-associated lymphoid tissue (MALT-lymphoma)
- Nodal marginal zone B-cell lymphoma
- Follicular lymphoma
 - Grade 1
 - Grade 2
 - Grade 3
- Mantle cell lymphoma
- Diffuse large B-cell lymphoma
- Mediastinal (thymic) large B-cell lymphoma
- Primary effusion lymphoma
- Burkitt lymphoma / leukemia

B-cell Proliferations of Uncertain Malignant Potential

- Lymphomatoid granulomatosis
- Post-transplant lymphoproliferative disorder, polymorphic

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Mature T-cell and NK-cell Neoplasms*Leukemic / Disseminated*

- T-cell prolymphocytic leukemia
- T-cell large granular lymphocytic leukemia
- Aggressive NK-cell leukemia
- Adult T-cell leukemia/lymphoma

Cutaneous

- Mycosis fungoides
- Sézary syndrome
- Primary cutaneous anaplastic large cell lymphoma
- Lymphomatoid papulosis

Other Extranodal

- Extranodal NK/T-cell lymphoma, nasal-type
- Enteropathy-type T-cell lymphoma
- Hepatosplenic T-cell lymphoma
- Subcutaneous panniculitis-like T-cell lymphoma

Nodal

- Angioimmunoblastic T-cell lymphoma
- Peripheral T-cell lymphoma, unspecified
- Anaplastic large cell lymphoma

Neoplasm of Uncertain Lineage and Stage of Differentiation

- Blastic NK-cell lymphoma

Hodgkin Lymphoma

- Nodular lymphocyte predominant Hodgkin lymphoma
- Classical Hodgkin lymphoma
 - Nodular sclerosis classical Hodgkin lymphoma
 - Lymphocyte-rich classical Hodgkin lymphoma
 - Mixed cellularity classical Hodgkin lymphoma
 - Lymphocyte-depleted classical Hodgkin lymphoma

Histiocytic and Dendritic-cell Neoplasms

- Histiocytic sarcoma
- Langerhans cell histiocytosis
- Langerhans cell sarcoma
- Interdigitating dendritic cell sarcoma / tumor
- Follicular dendritic cell sarcoma / tumor
- Dendritic cell sarcoma, not otherwise specified

Mastocytosis

- Indolent systemic mastocytosis
- Systemic mastocytosis with associated clonal, hematologic non-mast-cell lineage disease
- Aggressive systemic mastocytosis
- Mast cell leukemia
- Mast cell sarcoma

Other

- Malignant neoplasm, type cannot be determined

***Additional Pathologic Findings**

*Specify: _____

***Comment(s)**

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