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

* 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.
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)

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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);CBFβ/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 monocytic and monocyctic 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

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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

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**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)**