

**RECOMMENDATIONS FOR THE REPORTING OF PLEURAL
MESOTHELIOMA**

**ASSOCIATION OF DIRECTORS OF ANATOMIC AND SURGICAL
PATHOLOGY**

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Introduction for ADASP Reporting Guidelines

It has been evident for decades that pathology reports are very variable even within a single institution. Standardization of reporting is the optimal way to insure that information necessary for patient management, prognostic and predictive factor assessment, grading, staging, analysis of outcomes and tumor registries are included in pathology reports. In recent years, two societies (first ADASP and then the CAP), have undertaken to publish guidelines for the reporting of common cancers. The CAP assigned multidisciplinary groups of pathologists, surgeons, radiation and medical oncologists to develop the protocols. Other pathologists and clinicians then reviewed them. After those reviews the protocols were reviewed by multiple CAP committees and finally approved by the Board of Governors.

The ADASP, in contrast, chose a pathologist expert in each field to assemble a group from within the pathology community (with clinician input if desired) to write specific cancer protocols. These were then approved by the ADASP council and subsequently by the membership. Even though both societies began the process at approximately the same time the streamlined approach adopted by the ADASP enabled them to publish years earlier in pathology journals frequented by anatomic pathologists. While the formats are somewhat different, the contents are essentially the same.

The American College of Surgery (ACS) Commission on Cancer (COC) accredits cancer centers in the USA. Recently, the COC decided to require elements, deemed as essential by the CAP, to be described in all pathology reports in their accredited cancer centers as of January 2004. Importantly they do not require that the specific CAP protocols or synoptic reports be utilized. ADASP has updated all of its protocols to comply with the COC requirements in the form of 37 uniform checklists. The checklists use the staging criteria cited in the American Joint Committee on Cancer (AJCC) 2002 staging manual (sixth edition) but include a variety of other references listed in each of the checklists. Moreover, the checklists are formatted for ease of use. They may be used as templates for uniform reporting and are designed to be compatible with voice-activated transcription.

The different elements in these revised ADASP Diagnostic Checklists have been divided into *Required* and *Optional*. The term *Required* in this context only signifies compliance with the COC guidelines. ADASP realizes that specimens and practices vary and it will not be possible to report these elements in every case. However, ADASP hopes that pathologists will find these checklists to be useful in daily clinical practice, while facilitating compliance with the new COC requirements.

The checklists are in standard PDF file format, and may be easily downloaded from the ADASP website. They are not to be reproduced, altered or used for commercial purposes without consent from ADASP.

Features Recommended to be Included in the Final Report

The following features are recommended by the Association to be included in the final report because they are generally accepted as being of prognostic importance, required for therapy and/or traditionally expected.

A. Gross Description

1. How the specimen was received – unfixed or in formalin, intact or disrupted, oriented or not
2. How the specimen was identified and procedure – labeled with (patient's name, medical record number, surgical pathology accession number, etc.), designated as pleura (and other organs, where applicable), laterality, and procedure (core needle biopsy, thoracoscopic biopsy, thoracotomy and incisional biopsy, pleurectomy, or extrapleural pneumonectomy)
3. Size and tissue(s) included – the overall size of the specimen should be measured in three dimensions and the tissues included in the specimen (pleura, chest wall adipose tissue and/or skeletal muscle, rib(s), diaphragm, lymph nodes, mediastinal structures, etc.) should be documented
4. Tumor description
 - a. distribution – diffuse, nodular, localized/solitary
 - b. extent of pleura involved (circumferential, subtotal) and presence or absence of involvement of fissures and interlobular septa
 - c. document dominant tumor mass(es) and size
 - d. appearance – color(s), texture (e.g. firm, soft, gritty), infiltrative

e. distance to closest resection margins [lateral soft tissue (chest wall) margin, bronchus, pulmonary vessels, mediastinal structures (if included), diaphragm]

f. document appearance of excised thoroscopic sites, if applicable (usually submitted separately)

Note: Closest resection margins should be inked and sampled using perpendicular sections for areas where there is gross suspicion of involvement of adjacent tissues (e.g. diaphragm, pericardium, lung, ribs, chest wall adipose tissue or skeletal muscle)

g. lymph nodes - number received (if any), site of origin, size, and description of cut surface

h. specify location or orientation of each tissue block taken for routine processing

i. description of the non-neoplastic pleura, lung, and other tissues

j. whether a diagnostic frozen section was performed and the intraoperative diagnosis

B. Diagnostic Information

1. Site, laterality, and procedure

2. Histologic type –

- Epithelioid
- Sarcomatoid
- Biphasic
- Desmoplastic
- Other (specify)

3. Extent of invasion – document involvement of parietal and visceral pleura, diaphragm, lung, endothoracic fascia, mediastinal adipose tissue and/or organs, chest wall soft tissue (solitary or diffuse involvement), rib(s)

4. Resection margin status – positive (state which margin) or negative
5. Lymph node status (if present) – specific site(s) and number involved out of total for each site

Features Optional for the Final Report

Features listed below may impact on either the likelihood of recurrence or overall prognosis. They represent specific institutional preferences or they are considered inconclusive vis-à-vis prognostic significance.

- Lymphovascular invasion
- Blood vessel invasion
- Findings in the non-neoplastic pleura/lung (e.g. changes consistent with prior talc pleurodesis, plaques, fibrosis, asbestos bodies, asbestosis)

Note: Due to the etiologic association between asbestos exposure and malignant mesothelioma, quantitative fiber burden analysis may be requested in cases that include lung tissue as part of the specimen. Formalin-fixed non-neoplastic lung tissue (at least 5 gm), preferably from the lower lobe, may be stored for this purpose.

- Results of any ancillary studies (e.g. histochemical stains, immunohistochemistry, electron microscopy)

Note: Given the cytomorphologic overlap between malignant epithelioid mesothelioma and metastatic adenocarcinoma or malignant sarcomatoid mesothelioma and primary or metastatic sarcomas, ancillary techniques (e.g. immunohistochemistry and/or electron microscopy) are routinely utilized to facilitate diagnosis. As no single immunohistochemical marker is entirely sensitive or specific for malignant mesothelioma, a panel of stains should be employed. The Association does not prescribe

a particular panel of markers, but recommends that at least two mesothelial-associated marker (e.g. calretinin, cytokeratins 5/6, D2-40, WT1) be used in conjunction with two or more markers that are usually negative in malignant mesothelioma (e.g. CEA, TTF-1, Ber-EP4, MOC-31). The results of ancillary techniques should be carefully correlated with the radiographic and gross distribution of tumor.

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