APPENDIX B

RADIOGRAPHIC FINDINGS SUGGESTIVE OF TB OR OTHER DISEASE

Chest Radiographic Findings Suggestive of TB disease:

_Chest Radiographic Findings that Can Suggest ACTIVE TB disease:_

This category comprises all findings typically associated with active pulmonary TB. An applicant with any of the following findings must be referred to the TB Control Program of the health department and submit specimens for smear and culture.

1. **Infiltrate or consolidation**—Opacification of airspaces within the lung parenchyma. Infiltrate or consolidation can be dense or patchy and may have irregular, ill-defined, or hazy borders.

2. **Any cavitary lesion**—Lucency (darkened area) within the lung parenchyma, with or without irregular margins that may be surrounded by air-space consolidation, or by nodular or reticular opacities, or both. The walls surrounding the lucent area can be thick or thin. Calcification can exist around a cavity.

3. **Nodule with poorly defined margins**—Round opacity within the lung parenchyma, consistent with a tuberculoma. Nodules included in this category are those with margins that are indistinct or poorly defined. The surrounding haziness can be either subtle or readily apparent, suggesting coexisting air-space consolidation.

4. **Pleural effusion**—Presence of a significant amount of fluid within the pleural space. This finding must be distinguished from blunting of the costophrenic angle, which may or may not represent a small amount of fluid within the pleural space (except in children, for whom even minor blunting must be considered a finding that can suggest active TB).

5. **Hilar or mediastinal lymphadenopathy**—Enlargement of lymph nodes in one or both hila and/or within the mediastinum, with or without associated atelectasis (volume loss) or consolidation.

6. **Other**—Any other finding suggestive of active TB, such as miliary TB. Miliary TB demonstrates nodules that are uniform in size, measuring 1 to 2 mm (millet size), distributed throughout the parenchyma.
Technical Instructions for Civil Surgeons

_Chest Radiographic Findings that Can Suggest INACTIVE TB disease:_

This category includes findings that are suggestive of prior TB disease that is inactive. **Assessments of the activity of TB disease cannot be made accurately on the basis of a single radiograph.** An applicant with any of the following findings must be referred to the health department TB Control Program to determine if further evaluation (including specimens for smear and culture) is needed. If sputum smears and cultures are performed, the laboratory results will determine whether Class A or B1 is assigned. If no smears or cultures are performed, Class B2 should be assigned.

1. **Discrete fibrotic scar or linear opacity**—Discrete linear or reticular opacity within the lung. The edges of the opacity should be distinct, and there should be no suggestion of airspace opacification or haziness between or surrounding the linear or reticular lesion. Calcification can be present within the lesion.

2. **Discrete nodule(s) without calcification**—One or more nodular opacities with distinct borders and no surrounding airspace consolidation. Nodules are generally round or have rounded edges, features that distinguish them from airspace consolidation. To be included here, these nodules must be non-calcified. A solitary calcified nodule is included in the category “Other Chest Radiographic Findings, no follow-up needed based solely on radiographic findings”.

3. **Discrete fibrotic scar with volume loss or retraction**—Discrete linear opacities with reduction in the space occupied by the upper lobe. Associated signs include upward deviation of the fissure or hilum on the corresponding side, plus/minus asymmetry of the volumes of the two thoracic cavities.

4. **Other**—Any other finding suggestive of prior TB, such as upper lobe bronchiectasis. Bronchiectasis is bronchial dilation with bronchial wall thickening.

**OTHER Chest Radiographic Findings:**

**Follow-up needed:**

This category includes findings that indicate the need for follow-up evaluation of a non-TB condition.

1. **Musculoskeletal abnormalities**—New fractures or other bony abnormalities, such as scoliosis in a child.
2. **Cardiac abnormalities**—Cardiac enlargement, cardiac anomalies, or vascular abnormalities of significant nature.

3. **Other**—Any other finding that the panel physician believes needs follow-up.

### No follow-up needed based solely on radiographic findings:

This category includes findings that are minor and not specifically suggestive of TB disease. However, referral to the TB Control Program of the local health department for applicants with these radiographic findings may be required or recommended based on TB signs or symptoms or TST result.

1. Pleural thickening—Irregularity or abnormal prominence of the pleural margin, including apical capping (thickening of the pleura in the apical region). Pleural thickening can be calcified.

2. Diaphragmatic tenting—A localized accentuation of the normal convexity of the hemidiaphragm as if “pulled upwards by a string.”

3. Blunting of costophrenic angle (in adults)—Loss of sharpness of one or both costophrenic angles. Blunting can be related to a small amount of fluid in the pleural space or to pleural thickening and, by itself, is a nonspecific finding. In contrast, a larger pleural effusion suggests active TB disease. **Note:** In children, even minor blunting of the costophrenic angle suggests active TB disease.

4. Solitary calcified nodule or lymph node—Discrete calcified nodule (granuloma) within the lung, or calcified lymph node. The calcified lymph node can be within the hilum or mediastinum. The borders must be sharp, distinct, and well defined. **This finding was considered to be Class B3 TB in the previous TIs, but is no longer.**