Sailing the Uncharted Seas of Asbestos Litigation Under the Longshoremen's and Harbor Workers' Compensation Act

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Maritime workers injured through exposure to asbestos dust have a choice of forums in which to process their claims.¹ Most claimants, however, will choose to proceed in the federal forum pursuant to the Longshoremen's and Harbor Workers' Compensation Act (LHWCA)² because the Act is more generous than most

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² 33 U.S.C. §§ 901-950 (1976). In order to be covered by the LHWCA, a claimant must be injured on a covered situs while he or she meets the status test. Generally, status refers to the nature of the work whereas situs refers to the place of performance. The situs test provides compensation for an “employee” whose disability or death “results from an injury occurring upon the navigable waters of the United States (including any adjoining pier, wharf, dry dock, terminal, building way, marine railway, or other adjoining area customarily used by an employer in loading, unloading, repairing, or building a vessel).” Id. § 903(a). The status test defines an employee covered under the Act as “any person engaged in maritime employment, including any longshoreman or other person engaged in longshoring operations, and any harborworker including a ship repairman, shipbuilder, and shipbreaker.” Id. § 902(3). See generally A BENEFITS REV. BD. SERV. (BENDER) 6-8 to 6-18 (1978). Prior to 1972, the LHWCA contained only a strict situs test, which covered only claimants injured “seaward of the gangplank.” Sun Ship, Inc. v. Pennsylvania, 100 S. Ct. 2432, 2436 (1980); A BENEFITS REV. BD. SERV. (BENDER) at 6-8. In 1972, Congress expanded the definition of situs to include injuries occurring on land and also added the status requirement. Longshore-
state compensation statutes. Practitioners representing clients pursuing or defending a claim for compensation under the LHWCA based upon asbestos-related occupational disease will find themselves sailing on largely uncharted seas. The practitioner continually will be confronted with the questions of how to prove or disprove the existence of an asbestos-related disease and its sequelae and how to demonstrate the effects of the disease on the particular claimant alleging some degree of disability from it. In the context of the LHWCA, as in most workers’ compensation schemes, this requires proof of a disability that is either permanent or temporary, and either partial or total. Consequently, the variety of issues lends itself to limited generalization. The object of this article is to emphasize that the practicing attorney can manage the case most effectively by understanding the two primary facets: first, the essential medical aspects of proving the existence and extent of an asbestos-related impairment from the objective medical data; second, the manner in which the impairment created by the disease reduces the person’s ability to perform his or her usual occupation. In short, the practitioner must demonstrate the


Because most state workmen’s compensation awards are not treated as final or conclusive, an injured worker may commence an action in the state forum pursuant to the state compensation statute and then attempt to make up the difference between state and federal benefit levels by seeking relief in the federal forum under the LHWCA. Sun Ship, Inc. v. Pennsylvania, 100 S. Ct. at 2438 & n.6. However, in light of Thomas v. Washington Gas Light Co., 100 S. Ct. 2647 (1980) (plurality opinion), in the subsequent federal adjudication arising out of the same injury, the claimant will be bound by any factual determinations made in the prior state proceeding. Id. at 2660-61.

4. “Sequela” is defined as “any lesion or affectation following or caused by an attack of disease.” DOlRAND’S ILLUSTRATED MEDICAL DICTIONARY 1367 (24th ed. 1965). The extent to which sequelae are compensable under the LHWCA is open to litigation. See Fly v. Peabody Coal Co., 8 BENEFITS REV. BD. SERV. (BENDER) 1001 (1978), and Bennett v. Leckie Smokeless Coal Co., 4 BENEFITS REV. BD. SERV. (BENDER) 420 (1976), modified, 7 BENEFITS REV. BD. SERV. (BENDER) 267 (1977), for examples of the treatment of this issue by the Benefits Review Board. The Board was established pursuant to § 21 of the LHWCA, “to hear and determine appeals raising a substantial question of law or fact taken by any party in interest from decisions with respect to claims of employees” under the Act. 33 U.S.C. § 921 (1976).

basic legal question at issue: the existence of a disability compensable under the Act.

The forum for accomplishing this task is the administrative proceeding. The process begins at the deputy commissioner level, where responsibility for initial adjudication of the claim resides. If an interested party requests a hearing, the deputy commissioner transfers the case to the Office of Administrative Law Judges, where an evidentiary hearing is held under the strictures of the Administrative Procedure Act. Because of the nature of the administrative proceeding, the problems of proof associated with strict adherence to the rules of evidence are eliminated. Conducted under the directive to "inquire fully into all matters at issue" and limited only by the relevance, materiality, and reliability of the evidence presented, the fact-finding process is far reaching in its acceptance of medical documentation, testimony, and hearsay.

As in all adjudicatory proceedings, it is of utmost importance to develop fully the case at the trial or hearing level. Counsel must keep in mind that a decision and order of the administrative law judge is directly appealable to the Benefits Review Board and ultimately appealable to the United States Circuit Court of Appeals for the circuit in which the injury arose. The scope of review for

6. Id. § 919(a).
7. "[U]pon application of any interested party [the deputy commissioner] shall order a hearing [on the claim]." Id. § 919(c).
8. Id. § 919(d).
10. The Board, however, has suggested a particular format for examining physicians in relation to distinguishing multiple pulmonic components in black lung cases. See Blevens v. Peabody Coal Co., 9 Benefits Rev. Bd. Serv. (Bender) 510 (1978). Specifically, the examining attorney must lay a proper foundation for the physician's testimony. He should ask whether it is medically feasible to distinguish the components with any degree of medical certainty, whether the component causing the injury may be determined with a reasonable degree of medical certainty, whether the doctor has an opinion as to the origin, and, finally, what the opinion is. Id. at 516. See also Legate v. Island Creek Coal Co., 9 Benefits Rev. Bd. Serv. (Bender) 113 (1978); Rogers v. Ziegler Coal Co., 9 Benefits Rev. Bd. Serv. (Bender) 62 (1978).
12. Longo v. Bethlehem Steel Corp., 11 Benefits Rev. Bd. Serv. (Bender) 654 (1980) (upholding the admission into evidence of an ex parte medical report which was determined to be hearsay).
the court and the Board is essentially the same; a decision and order of an administrative law judge must be affirmed if it is rational, in accordance with law, and supported by substantial evidence in the record considered as a whole.\textsuperscript{14} In light of this limited scope of review, counsel must convince the administrative law judge of the basic medical and legal theories of the case. Consequently, the attorney's efforts must be directed at building the most favorable record possible at this level. Through presentation of adequate medical data concerning the existence of the disease, the causal nexus between work activity and the disease, and the extent of disability, the administrative law judge's decision can have a basis in the record comporting with the medical realities and the legal requirements of the Act. The otherwise worthy appellant who fails to provide such a record prevents the Benefits Review Board, constrained as it is by its scope of review, from applying its powers of reversal, remand, or affirmation.\textsuperscript{15}

Although the rules of evidence are relaxed, the rules of prudence are not. The practitioner must approach each case for what it is—an adversary proceeding in which the compensation sought for


\textsuperscript{15} The Benefits Review Board also administers Title IV of the Federal Coal Mine Health and Safety Act of 1969, the Black Lung Benefits Act. 30 U.S.C. §§ 901-945 (Supp. II 1978). By comparison, the LHWCA is poorly equipped to deal with occupational lung disease adjudications. The Black Lung Benefits Act provides an irrebuttable presumption of total disability based on a finding of complicated pneumoconiosis, an advanced stage of the disease. \textit{Id.} § 921(c)(3). It also provides for a presumption of causal nexus between the disease and coal mine employment premised on proof of ten years of qualifying coal mine employment. \textit{Id.} § 921(c)(1). The same ten years of employment carries a presumption of death due to the disease if the miner dies of a respirable disease. \textit{Id.} § 921(c)(2). Despite negative x-ray evidence, fifteen years of qualifying employment creates a presumption that pneumoconiosis exists if the miner can show the existence of a totally disabling chronic respiratory or pulmonary impairment. \textit{Id.} § 921(c)(4). Finally, twenty-five years of qualifying employment prior to January 1, 1971, and death prior to March 1, 1978, establishes a presumption of entitlement for survivors' benefits unless it can be shown that the miner was not even partially disabled by the disease prior to death. \textit{Id.} § 921(c)(5). The Department of Labor regulations contain pulmonary function study tables, blood gas tables, and other criteria from which the existence of the disease and its disabling effects can be measured. 20 C.F.R. §§ 410.424, .426, 727.205(a) (1980). In contrast, no medical standards for occupational diseases have been promulgated to date by the Department of Labor for use under the LHWCA. Attorneys litigating asbestos cases would be wise to familiarize themselves with the developing case law construing the Black Lung Benefits Act to apprise themselves of the issues involved in proving an occupational lung disease case.
alleged industrial injury based on occupational disease can easily total over $500,000 in lifetime and survivor's benefits. The practitioner clearly should prepare and try any asbestos case under the Act with the same care and attention to detail as one would use in trying a civil suit of equal monetary value.

**MEDICAL ASPECTS**

Asbestos diseases, whether occupationally related or not, manifest themselves primarily in one of three ways: (1) respiratory or pulmonary effects, (2) cardiac effects, and (3) cancers. To prevail, plaintiff's counsel must offer proof of the existence and extent of an asbestos disease using the most accurate objective medical data relating to each of these manifestations. A large selection of medical diagnostic and testing techniques is available to identify cardio-respiratory impairments. These methods include: physical examination and history; a full battery of pulmonary function studies covering before-exercise, during-exercise, and after-exercise functions, as well as preexercise and postexercise administration of bronchodilators; blood gas analysis with similar variables; x-rays; computerized axial tomographic (CAT) scans; bronchoscopy; biopsy; electrocardiograms; sputum syology; and others. Several of these will be highlighted as the most effective in proving the case. Accurate and complete medical evidence is crucial in asbestos cases. While documentation, interrogatories, and written medical reports may be adequate for the informal adjudication at the deputy commissioner level, live medical testimony will be used by the alert practitioner at the hearing level, because even the most detailed medical report will lack the persuasiveness and flexibility of live medical testimony.

**Pulmonary/Respiratory Effects**

The body's pulmonary or respiratory mechanisms—the trachea, bronchial tree, lungs, pulmonary arteries, veins, capillary bed, and heart—provide the vital ventilation, perfusion, and diffusion functions of the body by replacing carbon dioxide with oxygen in the blood. When inhaled in sufficient quantity, asbestos dust affects all of these functions. Asbestosis is primarily a restrictive disease in
its effect on ventilation.\textsuperscript{16} The organisms and tissue in the lungs react with asbestos dust in such a way as to lay down fibrotic (scar-like) tissue which replaces the normally elastic lung cells. This process makes it increasingly difficult for the lungs to expand and contract when inhaling and exhaling. For this reason, the patient will often complain of the onset of progressive dyspnea (shortness of breath). There may be mild to moderate chest pain and bilateral interstitial rales at the lung bases,\textsuperscript{17} sometimes described as crackling sounds. Findings from pulmonary function data in patients having asbestosis follow the classic pattern of restrictive lung disease. Because of the low compliance (inelasticity) or high recoil pressure, the lung volumes are small, with decreased vital and total lung capacity and increased air flow rates resulting from this "stiff lung" syndrome.\textsuperscript{18}

Following this general medical description, therefore, the diligent attorney should build the record on pulmonary function study data which demonstrate the claimant's total lung volume and vital capacity.\textsuperscript{19} Obstructive manifestations may appear in the maximum breathing capacity (MBV-MVV) and forced expiratory volume (FEV) pulmonary function studies, but are of lesser importance than restrictive symptoms in asbestos disability evaluations.\textsuperscript{20} The practitioner, however, should have a complete battery of tests performed for accurate diagnostic purposes. For example, close examination of the study results may reveal clear distinctions between the obstructive component of a respiratory impairment and the restrictive component. One case study demonstrates that exercise testing, if properly conducted and evaluated, can suggest causes of disability other than a restrictive asbestos-related disease.

\textsuperscript{16} I. Selikoff & D. Lee, Asbestos and Disease 152 (1978). The term "restrictive" refers to the progressively reduced ability of the lung to expand, resulting from interstitial thickening and fibrosis in the lung tissues. \textit{Id.}

\textsuperscript{17} C. Guenter & M. Welch, Pulmonary Medicine 539 (1977).


\textsuperscript{19} Vital capacity refers to the maximal amount of air that can be expelled from the lung after maximum inhalation. \textit{Dorland's Illustrated Medical Dictionary} 246 (24th ed. 1965).

The patient was a cigarette smoker with some obstructive lung disease. Radiographic examination showed small calcified plaques. On exercise, the minute ventilation was appropriate for increasing work load. Furthermore, the alveolar-arterial difference was not large and fell with exercise. In fact, an improving alveolar-arterial oxygen difference on exercise is consistent with chronic bronchitis. In this case we were able to conclude that the patient had been exposed to asbestos—however, pulmonary function on exercise was that of a person with chronic bronchitic changes.\textsuperscript{21}

Pulmonary compliance should be measured as an additional expression of this stiff lung syndrome. Such tests record the change in volume of the lung in relation to a given change in pressure and will reveal any restrictive effect.\textsuperscript{22} Accordingly, counsel should emphasize lung volumes, vital capacity, and pulmonary compliance.

Research has shown that a “cardinal diagnostic sign” of asbestosis is a reduction in the diffusion capacity of the lungs.\textsuperscript{23} Such a dysfunction is best measured by the carbon monoxide diffusing capacity test, the values for which are expressed by the symbol $DL_{co}$. Diffusion defects are often the first detectable abnormality of the pulmonary system.\textsuperscript{24} Such defects are caused by fibrosis/scar tissue completely obliterating the functional lung tissue or by scar tissue forming in the thin membrane wall between the alveoli and the pulmonary capillary. The result in each instance is interference with the flow of oxygen into the blood and of carbon dioxide into the lung. Because of these changes, there will be a widening of the alveolar-arterial oxygen ($A-AO_2$) gradient in these patients.\textsuperscript{25} As the lungs lose their capacity to oxygenate the blood, the patient’s respiration rate increases, and cyanosis and clubbing may develop. Here again, the practitioner must be able to recognize the widening in the $A-AO_2$ gradient and reduction in the $DL_{co}$ value, to interpret the extent of these aberrations, and to determine the effect of these aberrations on the patient’s ability to perform his or her oc-

\textsuperscript{21} Golden, supra note 18, at 230.
\textsuperscript{22} D. Bates, P. Macklem & R. Christie, Respiratory Function in Disease 382 (2d ed. 1971).
\textsuperscript{23} Id.
\textsuperscript{24} I. Selikoff & D. Lee, supra note 16, at 156.
\textsuperscript{25} C. Guenter & M. Welch, supra note 17, at 540.
cupation, that is, to assess their effect in terms of disability.

The physical changes caused by the development of fibrotic tissue in the lungs also manifest themselves on x-rays. Unlike the pulmonary function study and diffusion capacity test, the x-ray is helpful in identifying the presence of asbestosis, but is not determinative of the amount of impairment in lung function,26 because, for example, diffusion impairments often occur prior to x-ray evidence of the disease. As the radiologic appearance of the disease increases, however, the lung impairment generally increases. Therefore, to the extent that x-ray evidence is helpful, the attorney should be searching for the unique signs of asbestos diseases.

In identifying asbestosis radiographically, the practitioner should note its three stages of development: (1) fine fibrotic structures resembling a net located predominantly in the lower lung zones; (2) a combination of more pronounced interstitial fibrosis with chronic pleural thickening; and (3) the latest stage of advanced fibrosis.27 In the early stages of asbestosis, the claimant develops interstitial fibrotic changes sometimes characterized as having a "ground glass" or hazy appearance.28 As the interstitial fibrosis increases, the "honeycomb" lung effect may become prominent on the claimant's x-ray.29 Although the heart borders on the x-ray are frequently described as having a shaggy appearance because of partial obscurations,30 extensive opacities in the lung fields are not common.

In addition to changes in the lungs themselves, x-rays may identify the development of plaques, either calcified or noncalcified, in the pleura (lining of the lungs). While the formation of these plaques may result from other disease processes, some authorities believe that multiple pleural plaques are so specific that asbestos ex-

29. C. Guenter & M. Welch, supra note 17, at 539. "Honeycombed" lungs are characterized by the formation of cysts which thicken the fibrous walls of the lung and by gross distortion and often obliteration of the intervening lung elements. See 1 R. Fraser & J. Pare, supra note 28, at 429.
posure can be concluded, absent other occupational talc or mica exposure.\textsuperscript{31} Multiple pleural plaques often appear on the dia-
phragm and, if bilateral, are a distinctive characteristic of asbestos
exposure.\textsuperscript{32} Plaques may also appear on the pericardium (heart lin-
ing).\textsuperscript{33} Additional pleural changes which may be visualized on x-ray
are chronic thickening and benign pleural effusion.\textsuperscript{34}

\textbf{Cardiac Effects}

Asbestosis has been related to heart disease and, more specifi-
cally, to cor pulmonale.\textsuperscript{35} Cor pulmonale occurs when the fibrosis
and destruction of tissue in the lungs increase the resistance of
blood flow through the pulmonary capillary bed. This creates pul-
monary hypertension which puts a strain on the right ventricle of
the heart. The ventricle becomes hypertrophied (enlarged) and
eventually collapses under the strain. The practitioner should note,
however, that cor pulmonale is a nonspecific response; it can be
triggered by other lung disorders, such as emphysema, which occur
in the absence of occupational asbestos exposure.\textsuperscript{36} It is important,
therefore, either to assign a specific cause to the impairment or to
limit the range of causes through expert testimony based on rea-
sonable medical certitude. Cor pulmonale may be diagnosed from
x-rays showing a skewed cardiothoracic ratio, from electrocardio-
grams displaying specific changes, or from actual measurement
during autopsy. However, the practitioner should distinguish mere
right ventricular hypertrophy, which may accompany arterioscle-
rotic heart disease, from a true diagnosis of cor pulmonale.

\textsuperscript{31} 3 R. Fraser & J. Pare, \textit{supra} note 28, at 1781.
\textsuperscript{32} Golden, \textit{supra} note 18, at 226.
\textsuperscript{33} J. Crofton & A. Douglas, \textit{supra} note 26, at 526.
\textsuperscript{34} 3 R. Fraser & A. Pare, \textit{supra} note 28, at 1781; I. Selikoff & D. Lee, \textit{supra} note 16,
at 191-200.
\textsuperscript{35} I. Selikoff & D. Lee, \textit{supra} note 16, at 14. \textit{See} 2 W. Anderson & J. Kissane, Pathol-
ogy 1095 (7th ed. 1977). Cor pulmonale is defined as "heart disease secondary to disease of
the lungs or of their blood vessels." \textit{Dorland's Illustrated Medical Dictionary} 343 (24th
ed. 1965). In asbestos exposure cases, this disease may result from the destruction of the
\textsuperscript{36} D. Bates, P. Macklem & R. Christie, \textit{supra} note 22, at 164.
Cancers

Since at least 1960, asbestos exposure has been demonstrated to be related to the development of mesothelioma (tumors of the membranes). Generally, this disease is defined as a primary neoplasm (abnormal growth) of the pleura. Unlike the development of asbestosis, there is no dose-response curve which is reliable. For example, increased incidence of mesothelioma tumors has been found in persons who had merely washed the clothing of asbestos workers and in persons who lived in the same household with an asbestos worker. Living in the neighborhood of an asbestos mine or mill has also been found to increase the incidence of mesotheliomas. Additionally, the length of time between the first exposure to asbestos and the tumor development ranges from as little as three and one-half years to a maximum of seventy-three years, with an average latency period of approximately thirty-seven years. Mesothelioma is virtually untreatable and invariably results in early death.

Mesothelioma tumors occur either in the pleura or the peritoneum (lining of the abdominal and pelvic walls). The onset of these tumors is insidious because by the time the tumor manifests itself in loss of breathing capacity and pleural or abdominal pain, it is usually far advanced. Mesothelioma is diagnosed primarily by x-ray, usually after removal of accumulated effusion (fluid) in the pleural space. The practitioner should look for signs of this pleural effusion, irregular pleural thickening, or mass shadows which may appear to be pulmonary rather than pleural. Because of the established causal connection between asbestos exposure and mesothelioma, the claimant's problems center on proving an indus-

38. I. Selikoff & D. Lee, supra note 16, at 262. While a certain "trigger" dose may be required to initiate the carcinogenesis, further dosage does not affect the ultimate appearance of the tumor, assuming the individual lives for the period required for development. Id. Further, the size of the triggering dose varies greatly from individual to individual, depending on such factors as overall tissue susceptibility. Id.
39. Id. at 265-66.
40. Id. at 262-69.
41. Id. at 303; N. Proctor & J. Hughes, supra note 30, at 112-13.
42. I. Selikoff & D. Lee, supra note 16, at 251.
trial exposure to asbestos. The absence of any dose-response relationship and the long latency period, however, make this task extremely difficult.

When defending a mesothelioma claim, the practitioner should contest the identification of the disease. Mesothelioma may be mimicked by other diseases such as anaplastic peripheral carcinoma (relatively undifferentiable cancer) or diffuse fibrosarcoma (widespread lung cancer). In addition, what is diagnosed as mesothelioma may actually be a pleomorphic metastasis (spread of the disease) from a primary tumor located elsewhere. Biopsies and autopsies should be performed properly, with the exact histology of the tumor indicated.

In addition to mesothelioma, significant exposure to asbestos produces a definite increase in the expected incidence of lung carcinoma. Asbestos exposure can also increase stomach, colon, and rectum carcinomas. Although there are indications of a dose-response relationship between lung cancer and asbestos exposure, "short exposure is enough; more raises the prevalence only slightly if at all, but can accelerate the development of the disease." Cigarette smoking, however, plays an important role in the increased lung cancer risk and may indeed be the dominant factor. Cigarette smoking and asbestos appear to be cocarcinogens and together may increase the incidence of lung cancer 100-fold. Consequently

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43. Id. at 244.
44. See, e.g., 2 W. Anderson & J. Kissane, supra note 35, at 1095. See generally N. Proctor & J. Hughes, supra note 30, at 289-94, 313-32; I. Selikoff & D. Lee, supra note 16, at 307-36. Studies indicate the incidence to be as high as seven to ten times the rate otherwise predicted. 2 W. Anderson & J. Kissane, supra note 35, at 1095; C. Guenter & M. Welch, supra note 17, at 540.
47. Id. at 330. See L. Casarett & L. Doull, TOXICOLOGY, THE BASIC SCIENCE OF POISONS 352 (1975); N. Proctor & J. Hughes, supra note 30, at 473-96.
48. C. Guenter & M. Welch, supra note 17, at 540. This synergistic effect makes it nearly impossible to separate causes, especially important in light of the classic aggravation rule as applied in cases under the LHWCA. See Pacific Employers' Ins. Co. v. Pillsbury, 61 F.2d 101 (9th Cir. 1932). In Pacific, a stevedore died as the result of a collapsed lung. Autopsy results revealed the presence of fouled liquid in the lung, indicating a preexisting condition. There was some disagreement as to whether the strain of the decedent's work caused the lung to collapse. The Commissioner had found that the injury was work provoked despite some testimony that the lung could have collapsed without exertion. The
quently, when reductions in pulmonary function or lung cancers are alleged to be the cause of a disability, a history of cigarette smoking will cloud the diagnostic picture and make cases involving marine workers who smoke the most difficult to litigate.

The area encompassing lung, stomach, colon, and rectum carcinomas is a significant battleground in the adjudication of asbestos-related workers' compensation cases under the Act. Problems arise because these diseases are nonspecific to asbestos exposure and may be caused by factors wholly unrelated to work activity. The difficulty in identifying the cause of the tumor is compounded by the virtual impossibility of identifying the exact origin of a large tumor. If asbestos caused development of the tumor, the specific tissue in which the initiating asbestos fibers may be found will have been obliterated by the neoplastic growth. Furthermore, although the epidemiological data clearly show increased incidence of these cancers in asbestos workers, these data are not dispositive evidence that the particular claimant has an asbestos-related cancer. Accordingly, the practitioner must scrutinize the biopsy and autopsy information, especially the histology of the tumor. The attorney must closely question the medical expert concerning the origin of any lung, stomach, colon, or rectum cancer to ascertain if it is a metastatic growth from a distinct source. Objective data such as microscopic pathology reports, including electron microscopy when available, should be used to support any findings. If the origin of the cancer cannot be established conclusively, the physician should testify as to its origin based upon a reasonable degree of medical certainty.

**Legal Aspects**

Proving the existence of an asbestos-related disease is only one-half of the case. Proof of the relationship of the disease to a work activity covered under the LHWCA and of the extent to which the employer argued that the preexisting condition took the death outside of the Act because damage would not have resulted except for the disease. The court rejected this argument. *Id.* at 102.

Practitioners, however, should not overlook the possible application of § 8(f) of the Act in such situations. Section 8(f) provides limitations on employer liability where the injury increased a previously known disability. See notes 72-76 *infra* & accompanying text.
resulting impairment renders the claimant disabled is also re-
quired. The practitioner must distinguish clearly between a medi-
cal determination of the existence and effects of an impairment
and the ultimate legal determination of disability. For example, a
fifty percent reduction in pulmonary diffusing capacity, \( DL_{co} \), is
not necessarily the equivalent of a fifty percent partial disability.
When the extent of impairment is applied to the facts of the case,
a fifty percent reduction may be totally disabling to a claimant in-
volved in heavy manual labor, whereas the same impairment may
not be disabling to a claimant whose duties are sedentary. In mak-
ing this distinction clear, the Benefits Review Board has rejected
specifically automatic equation of the medical impairment with the
extent of disability.49 This position implements the well-known
principle under the LHWCA that disability is not a purely medical
question but an economic one built on a medical foundation.50

What medical standards may be used to establish the extent of
disability? Except for schedule losses,51 the Act and implementing
regulations list no medical standards identifying the extent of disa-
bility associated with specific impairments. Counsel must rely,
therefore, on expert testimony and documentation to prove the ex-
tent of disability. Such proof involves the interrelationship of the
extent of impairment with the physical demands of the usual em-
ployment and the particular claimant’s residual functional capac-
ity. It may be helpful to have the medical expert consider the
Guides to the Evaluation of Disability of the American Medical
Association.52 The practitioner may look to the standards for de-
termining pulmonary total disability used by the Social Security

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52. COMMITTEE ON RATING OF MENTAL AND PHYSICAL IMPAIRMENT, AMERICAN MEDICAL ASSOCIATION, GUIDES TO THE EVALUATION OF PERMANENT IMPAIRMENT 67-77 (1977). Note, however, that the Guides deal primarily with forced expiratory volumes and maximal voluntary ventilation so that any medical evidence would have to substitute diffusion capacity and vital capacity, if possible.
Administration. Additionally, the attorney may use the pulmonary medical standards devised by the Department of Labor for determining total disability for coal miners suffering from pneumoconiosis (black lung disease). It must be emphasized, however, that these standards are not binding on the administrative law judge; rather, counsel must convince the administrative law judge to accept the expert medical testimony. To assist in this task, the services of a vocational expert may be employed. This expert should examine the claimant and the medical record to determine the residual functional capacity and to ascertain whether the injured claimant can continue in his or her usual work activities.

To further complicate matters, determinations of the extent of disability under the LHWCA, as in all workers' compensation schemes, entail proving either partial or total disability. For workers exposed to asbestos dust, these terms assume a special meaning. Although the Benefits Review Board has recognized limited situations in which an employee can continue working at his or her usual job at the same rate of pay and still be considered totally disabled, most working claimants allege partial disability as covered by section 8(c)(21) of the Act. Because in proving a partial disability under the LHWCA the claimant must show the difference between the average weekly wage prior to injury and the wage-earning capacity afterward, claimants having the same or

55. See Pilkington v. Sun Shipbuilding & Dry Dock Co., 9 BENEFITS REV. Bd. SERV. (BENDER) 473 (1978), for the proper use of vocational expert testimony. Once a disability is proven, the employer has the burden of proving that the employee has had actual opportunities to obtain other work. Perini Corp. v. Heyde, 306 F. Supp. 1321, 1325-26 (D.R.I. 1969). See also American Stevedores, Inc. v. Salzano, 538 F.2d 933 (2d Cir. 1976).
57. See Eaddy v. Ruckert Terminals Corp., 10 BENEFITS REV. Bd. SERV. (BENDER) 31 (1979). The Board, however, expressly noted that such situations are the exception and not the rule. Id. at 33. See also Van Dyke v. Newport News Shipbuilding & Dry Dock Co., 8 BENEFITS REV. Bd. SERV. (BENDER) 388, 394 (1978) (indicating that partial disability may become total disability where the claimant voluntarily retires when he is unable or unwilling to continue working because of disability and age).
higher earnings after the discovery of an occupational asbestos disease contend that their postinjury wages are not truly determinative of their wage-earning capacity. On the other hand, claimants who earn less have more tangible evidence of lost earning capacity. When the lost wage-earning capacity is established, the claimant is awarded a percentage of the loss corresponding to the extent of the disability.

Assertions by employers that claimants have no loss in wage-earning capacity because they are fully employed in their usual work activity after discovery of the disease have fallen on deaf ears. The United States Court of Appeals for the First Circuit responded succinctly to such an argument by an employer, stating:

[The claimant’s] asbestosis created a grave risk of additional, severe pulmonary difficulties should he continue his accustomed employment involving asbestos exposure. For there to be a disability within the meaning of section 902(10) . . . an employee need not be in pain, nor is he required, after injury, to continue in employment which is medically contraindicated until his condition and pain render it impossible for him to work at all. "The law does not require, as a prerequisite to recovering compensation for partial disability due to a compensable occupational disease, that the ill employee continue to work, until he becomes physically unable to do so."

To argue that no restrictions were placed on [claimant], ignores the fact that medical advice counseled that [claimant] should work only in an asbestos free environment. That [employer] failed to provide [claimant] with such an environment for several years after the advice was given may suggest a callousness on [employer’s] part; it hardly negates the existence of restrictions on [claimant’s] working activities due to his asbestosis.

If there is, as this case suggests, almost a presumption of total or


at least partial disability for the purpose of section 8(c)(21) in a worker diagnosed as having asbestosis, the focus shifts to establishing the claimant's actual wages or some other figure as his or her postinjury wage-earning capacity. A multitude of factors may influence the establishment of this figure, including those listed in section 8(h) of the Act. Prudent counsel should prepare an estimate of wage-earning capacity based on an analysis of these factors for presentation as a stipulation at the hearing. Due to the wide discretion allowed in adjusting the relevant factors, an estimate agreed upon by counsel is better than an estimate at which the administrative law judge is forced to arrive in the absence of the parties' agreement.

One last comment should be made concerning extent of disability. The Act requires a finding of either permanent or temporary disability. If the claim is based on a progressive and irreversible occupational disease such as asbestosis and its sequelae, the disease is clearly a permanent disability. The maximum medical recovery point is reached on the day the injury is said to occur. Unless the practitioner is dealing with a short-lived exacerbation of the underlying pulmonary impairment, which may constitute a period of temporary total disability, the determination should be

62. In pertinent part, § 8(h) provides:

[If the employee has no actual earnings or his actual earnings do not fairly and reasonably represent his wage-earning capacity, the deputy commissioner may, in the interest of justice, fix such wage-earning capacity as shall be reasonable, having due regard to the nature of his injury, the degree of physical impairment, his usual employment, and any other factors or circumstances in the case which may affect his capacity to earn wages in his disabled condition, including the effect of disability as it may naturally extend into the future.


63. See id. § 908.

64. The maximum medical recovery point is the day on which the claimant's disability ceases to improve. After this day the claimant's condition will remain stable or deteriorate. Gray v. General Dynamics Corp., 5 BENEFITS REV. BD. SERV. (BENDER) 279, 282 (1976). The maximum medical recovery point is important when classifying injuries as either temporary or permanent. "If the claimant has not reached maximum medical improvement, the award should be one for temporary disability; if the claimant has reached maximum medical improvement, the award should be one for permanent disability." McCray v. Leco Steel Co. 5 BENEFITS REV. BD. SERV. (BENDER) 537, 540 (1977). Because a worker's condition only can worsen when he contracts asbestosis, maximum medical recovery is reached on the day the worker first contracts asbestosis. Therefore, once asbestosis is shown, the claimant has proven maximum medical recovery and his disability is permanent.
that of permanent disability.

Extent of disability questions obviously involve a mix of legal, economic, and medical issues. So too does the establishment of causal nexus between asbestos-related diseases and maritime employment. Because the time bar provisions of the Act do not begin to run until the claimant is or should have been aware of his or her injury and of its relation to the employment,\(^6\) the employer may be faced with a claim in which maritime exposure occurred many years ago and subsequent employment intervened. Therefore a complete occupational and personal history must be obtained from the claimant to identify any noncovered work exposure to which the disease may be attributed. In some circumstances, however, the fact that the claimant’s last exposure to asbestos was in a noncovered situs is not dispositive.\(^6\) Because section 20(a) of the Act provides a presumption of the causal connection between covered work activity and injury,\(^6\) the claimant must show only exposure to harmful stimuli while employed and not a distinct aggravation of the pulmonary condition in order to hold the last maritime employer responsible.\(^6\) This presumption, however, may be overcome by the introduction of evidence, such as nonemployment or an alternate employment source of the disease, that controverts the existence of the relationship.\(^6\)

65. Section 12 of the Act requires an employee to give notice of the injury within thirty days unless the employer has knowledge of the injury or death or unless notice is otherwise excused. Id. § 912. Under § 13 of the Act, an employer or beneficiary has one year after death or injury in which to file a claim. Id. § 913(a). Section 13(b) provides, however, that failure to file a claim does not constitute a bar “unless objection to such failure is made at the first hearing of such claim in which all parties in interest are given reasonable notice and opportunity to be heard.” Id. § 913(b). See the rather extensive treatment of these sections contained in A BENEFITS REV. BD. SERV. (BENDER) 6-45 to 6-50, 6-120 to 6-121 (1980).

66. See Fulks v. Avondale Shipyards, Inc., 10 BENEFITS REV. BD. SERV. (BENDER) 340 (1979). In Fulks, the employer was held liable even though the last exposure to the harmful stimulus was on land in a noncovered situs.

67. “In any proceeding for the enforcement of a claim for compensation under this chapter it shall be presumed, in the absence of substantial evidence to the contrary—(a) That the claim comes within the provision of this chapter.” 33 U.S.C. § 920(a) (1976).


Furthermore, under the so-called "last employer" rule, the employer responsible for the payment of benefits is the one during whose employment the claimant was last exposed to injurious stimuli prior to the date of the manifestation of injury to the claimant. Consequently, the allegedly responsible employer may escape liability if it can show that there was no exposure to harmful stimuli or that the injury was manifest at a time prior to its employment of the claimant.

Further assignment of causal connection between the disease

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SERV. (BENDER) 625 (1979). In Jacomino, a shipyard electrician alleged that his exposure to asbestos dust during his employment with defendant between 1943 and 1946 led to the emergence in 1974 of asbestosis symptoms. BENEFITS REV. Bd. SERV. (BENDER) at 682-83. The claimant alleged that he had no exposure after 1946 and the administrative law judge found for the claimant on this point. Despite the employer's evidence that asbestos was used in the shipyards after 1946 and that claimant had continued to work in the shipyards for other employers, the administrative law judge found that the claimant had had no exposure after 1946. Id. Before the Board, the employer renewed his argument that the claimant's subsequent exposure relieved him of responsibility under the LHWCA. Id. at 683. Although the Board found the employer's argument persuasive, it could not "conscientiously" conclude error on the basis of the record and remanded the cause for determination of the responsible employer. Id. at 683-84.

70. Traveler's Ins. Co. v. Cardillo, 225 F.2d 137, 145 (2d Cir.), cert. denied, 350 U.S. 913 (1955). The court considered it of no consequence that the length of employment with this "last employer" was so slight that medically the injury could not be attributed to that employer. Id. The court also held that the carrier who last insured the liable employer prior to the date the claimant became aware of his occupationally derived disease was the responsible carrier. Id. For pre-1972 claims, counsel should be aware that more restrictive status and situs tests are applicable. Thus, the class of employers subject to liability as "last employers" is more limited in pre-1972 claims. See note 2 supra.

For an alternative approach to imposing liability for injury which may be useful under the Act, see Sindell v. Abbott Laboratories, 26 Cal. 3d 598, 607 P.2d 924, 163 Cal. Rptr. 132, cert. denied, 49 U.S.L.W. 3270 (1980). In Sindell, the Supreme Court of California used the concept of "market share" liability. The court held that the plaintiff in a products liability action need not identify the specific manufacturer of the product causing the injury, but that, rather, the burden of proof is shifted to the manufacturers joined in the suit to show that their product did not cause the harm. Id. at ___, 607 P.2d at 924, 163 Cal. Rptr. at 144. Failing in that burden, the defendants share liability on the basis of the percentage of their share of the appropriate market. Id. at ___, 607 P.2d at 936-37, 163 Cal. Rptr. at 144-45. According to this theory, liability would attach to each employer which could not prove that the claimant was not exposed to asbestos while in its employ. The employer's liability would be based on its percentage of the total time the claimant was employed in jobs where he was exposed to asbestos.

and a particular industrial exposure must await development in the medical arts. While some evidence suggests that different asbestos crystalline structures may cause different disease processes and that exposure time and concentration limits are important determinative factors, there is little hard data that can identify positively or eliminate a given industrial exposure from the causation picture.

The practitioner must not overlook the special fund provisions of section 8(f) of the Act in cases of asbestos-related diseases. To the extent that preexisting pulmonary or cardiac conditions can be shown to be an "existing permanent partial disability" and the asbestos exposure can be shown to be a nonoverriding but contributing causative factor, this section permits the party defending the claim to shift liability to a special fund. This may be especially appropriate when the synergistic effect of cigarette smoking and asbestos produces bronchogenic cancer. In addition, the employer should assert section 8(f) when the claimant suffers from a number of nonpulmonary physical disorders which produce a total permanent disability only when the effects of his asbestosis are combined with his nonasbestos caused condition. For example, even in a situation in which the employer knew of the claimant's underlying pulmonary disability and retained the employee in a work environment in which he was exposed to harmful stimuli, the Benefits Review Board has held that section 8(f) is applicable. Reasoning that

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73. Id. §§ 908(f), 944(j)(2). The special fund, established pursuant to § 44 of the Act, 33 U.S.C. § 944 (1976), is maintained by compensation awards for which there is no beneficiary, fines and penalties, and carrier and self-insurer payments. Id. § 944(c). Charged with administration of the fund, the Secretary of Labor authorizes disbursements, id. §§ 944(a), (b), to cover the remainder of benefits to which an employee or his beneficiary is entitled after cessation of the payments required of the employer. Id. § 908(f)(2). Neither the United States nor the Secretary of Labor, however, is liable for any unpaid benefits if the fund is depleted. Id. § 944(g).

Section 8(f) is designed to help prevent discrimination against handicapped employees by allowing employers to limit their liability should a handicapped employee become further handicapped by industrial accident. The section thus removes a hurdle from the retention or hiring of disabled employees. Mellroy v. Jacksonville Shipyards, Inc., 8 BENEFITS REV. BD. SERV. (BENDER) 283, 284 (1978). To avail himself of the benefits of § 8(f), however, the employer must be aware of the disability. Id. at 285.

74. See note 47 supra & accompanying text.
the claimant received special considerations from the employer, the Board found no intent on the part of the employer to expose the claimant to harmful stimuli in order to use the fund as a defense.\textsuperscript{76}

**ACTIONS AGAINST THIRD PARTIES**

Counsel must be aware of claimant or employer actions against third parties, usually shipowners, whose negligence caused the work-related injury. Such actions are governed by the provisions of section 33 of the Act,\textsuperscript{77} a controversial and frequently amended portion of the law, which represents a legislative attempt to deal with the interlocking liabilities of the stevedore-employer and the shipowner arising from the interrelationship of general admiralty law and the LHWCA.\textsuperscript{78}

*Rodriguez v. Compass Shipping Co.*\textsuperscript{79} and *Caldwell v. Ogden Sea Transport, Inc.*\textsuperscript{80} are the most recent developments under section 33. Both cases construed paragraph (b) of the section, which provides:

> Acceptance of such compensation under an award in a compensation order filed by the deputy commissioner or [the Benefits Review Board] shall operate as an assignment to the employer of all right of the person entitled to compensation to recover damages against such third person unless such person shall commence an action against such third person within six months after such award.\textsuperscript{81}

While both the Second Circuit in *Rodriguez* and the Fourth Circuit in *Caldwell* agreed that a plaintiff-longshoreman who fails to file a third-party action within six months from the date of the compensation award effectively assigns the right to sue to the em-

\textsuperscript{76} Mellroy v. Jacksonville Shipyards, Inc. 8 BENEFITS REV. BD. SERV. (BENDER) 283 (1978). But see Frame v. Sun Shipbuilding & Dry Dock Co., 8 BENEFITS REV. BD. SERV. (BENDER) 855 (1978) (§ 8(f)'s limitation of liability is not available to an employer who intentionally places an employee in a dangerous position likely to increase the employee's disability).


\textsuperscript{78} See generally 1A BENEDICT, ADMIRALTY §§ 13-14, at 1-23 to 1-27 (7th ed. 1979).

\textsuperscript{79} 617 F.2d 955 (2d Cir.), cert. granted, 49 U.S.L.W. 3211 (1980).

\textsuperscript{80} 618 F.2d 1037 (4th Cir. 1980).

\textsuperscript{81} 33 U.S.C. § 933 (1976).
ployer or insurer-subrogee, the courts differed on whether that assignment creates a right of action exclusive to the assignee or a right of action held by the assignee but capable of being revested in the longshoreman. The Second Circuit adopted the former position on the ground that the Supreme Court's recognition of revesting in *Czaplicki v. The Hoegh Silvercloud* did not survive the 1959 and 1972 amendments to the Act. Asserting the continued vitality of *Czaplicki*, the Fourth Circuit reached the opposite result.

Construing section 33(b) of the Act as it existed prior to the 1959 and 1972 amendments, the Supreme Court held in *Czaplicki* that the statutory assignment of the right of action from the longshoreman to the employer or insurer-subrogee immediately upon acceptance of compensation under the LHWCA did not bar a suit by the longshoreman when there was a conflict of interest between the employee and the assignee concerning the third-party action. As viewed by the Second Circuit in *Rodriguez*, the *Czaplicki* rule was carefully limited by the Court to the peculiar situation presented there. In addition, the 1959 amendment to section 33(b), granting the employee six months within which to institute suit, obviated the need for the *Czaplicki* rule. Finally, the court felt that the prospect of conflict of interest between the longshoreman and the employer, mentioned by the United States Supreme Court, meant that the rights of action were held by the party most likely to suffer were the rights of action to be successfully enforced.

82. The position of the Fourth Circuit that revesting is still possible may have support in the Third, Fifth, and District of Columbia Circuits. See White v. United States, 507 F.2d 1101 (5th Cir. 1975); McClendon v. Charente S.S. Co., 348 F.2d 298 (5th Cir. 1965); Potomac Elec. Power Co. v. Wynn, 343 F.2d 295 (D.C. Cir. 1965); Johnson v. Sword Line, Inc, 257 F.2d 541 (3d Cir. 1958); Johnson v. Sword Line, Inc., 240 F.2d 954 (3d Cir. 1957). While these cases all consider the 1959 amendments, the 1972 amendments merely added the words "or Board" following "deputy commissioner." Longshoremen's and Harbor Workers' Compensation Act Amendments of 1972, Pub. L. No. 92-576, 86 Stat. 1262 (codified at 33 U.S.C. § 933(b) (1976)). Thus, it seems likely that these courts would reach the same result as the Fourth Circuit in *Caldwell*.

84. Rodriguez v. Compass Shipping Co., 617 F.2d at 960-61.
85. Caldwell v. Ogden Sea Transport, Ltd., 618 F.2d at 1044.
86. 351 U.S. at 530-31 (1956). The conflict of interest in *Czaplicki* involved the insurer's position as the carrier of both the employer and the potentially liable third parties. As the Court stated, "the result is that Czaplicki's rights of action were held by the party most likely to suffer were the rights of action to be successfully enforced." Id. at 530.
87. 617 F.2d at 960. See also Sabol v. Merritt Campan & Scott Corp., 241 F.2d 765, 768 (2d Cir. 1957).
Court in *Ryan Stevedoring Co. v. Pan-Atlantic Steamship Co.*, was alleviated by the 1972 amendments to section 5(b) of the Act, which were designed to eliminate the employer's liability to a ship-owner created by *Ryan*. Accordingly, the court held that unless the longshoreman sues within six months from receipt of compensation pursuant to an award, the right of action is assigned exclusively to the employer.

The Fourth Circuit adopted the alternative position that the *Czaplicki* principles did survive the 1959 and 1972 amendments to the Act. After noting the procedural and substantive difficulties arising from the application of the *Czaplicki* conflict of interest principles, the court formulated a new approach avoiding these difficulties and building on the primary thrust of *Czaplicki*.

The fundamental point in *Czaplicki* is that notwithstanding a statutory assignment of the longshoreman's right of action, that right of action may be revested in the longshoreman when it becomes manifest that the assignee, with knowledge of its exclusive right to control and prosecute the claim, nevertheless, declines to do so for any reason.

Based on principles of subrogation and real party in interest, the Fourth Circuit's new standard conditions revesting on the longshoreman's formally notifying the assignee, either extrajudicially or

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88. 350 U.S. 124 (1956). In *Ryan*, the injured longshoreman sued the shipowner, who filed a third-party complaint against the longshoreman's employer, a stevedoring contractor. The shipowner sought indemnity from the employer for the amount of the shipowner's liability to the longshoreman on the ground that the employer's negligent loading of cargo had caused the employee's injury. Reasoning that the employer had breached its implied obligation to load the cargo onto the ship safely, the Court held that the shipowner was entitled to recover from the employer. *Id.* at 135. The LHWCA did not preclude the shipowner's assertion of the employer's contractual liability.

89. 33 U.S.C. § 905(b) (1976).

90. Rodriguez v. Compass Shipping Co., 617 F.2d at 961.


92. The court identifies the "substantive" problem of *Czaplicki* as its implication that a conflict of interest must be one "specifically related to the assignee's relationship with the third person." Caldwell v. Ogden Sea Transport, Ltd., 618 F.2d at 1045. The "procedural" problem left by *Czaplicki* is described as the allocation of the burden of proof on the issue of conflict of interest. *Id.* at 1045-46 & nn. 8-9.

93. *Id.* at 1046.

94. *Id.* at 1044-45.
through the device of joining the assignee as an involuntary plain-
tiff under rule 19(a) of the Federal Rules of Civil Procedure, of his
desire to prosecute the case. If the assignee then fails to assert
through responsive pleadings its intention to assume control of the
suit, the right of action is said to be reassigned to the
longshoreman. 95

As these cases illustrate, the uncharted seas of asbestos litigation
under the LHWCA do not end in the administrative arena. Not
only must the practitioner review the case to ascertain the likeli-
hood of success in the compensation case, but he or she also must
be prepared to make a relatively quick judgment on the strength of
a third-party action. Until this conflict in the circuits is resolved,
prudent counsel will file suit within six months of the receipt of
compensation in any new case.

Finally, the effect of Bloomer v. Liberty Mutual Insurance Co. 96
should be considered. In Bloomer, an injured longshoreman pre-
vailed in a section 33 third-party action against a shipowner. The
United States Supreme Court held that the stevedore’s lien for the
amount of compensation paid to the longshoreman, provided for in
section 33(e), 97 should not be reduced by a proportionate share of
the longshoreman’s legal expenses in obtaining recovery from the
shipowner. 98 In other words, as a result of the longshoreman’s re-
covery from the shipowner, the stevedore will receive full reim-
bursement for the amount of its compensation payments to the
longshoreman, and the longshoreman will bear the full expense of
litigating his claim against the shipowner. In deciding whether to
sue a third party, counsel must determine whether the proposed
suit will afford the longshoreman additional compensation. If the
potential recovery minus the full amount of attorneys’ fees is less
than the prior recovery from the stevedore, the third-party action
would be ill-advised.

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95. Id. at 1046.
98. 445 U.S. at 86-88. Because of the language and legislative history of the LHWCA, the
Court refused to apply the equitable common fund doctrine that a third party must bear a
portion of the expenses of a suit which, although prosecuted by another, benefits him. Id. at
931.
CONCLUSION

That the practitioner must develop an expertise with both the medical and legal aspects of occupational lung diseases cannot be overemphasized. Basic understanding of the anatomy and physiology of the lungs, medical terminology, diagnostic testing techniques, and the processes by which asbestos dust exposure produce disease and disability is essential to the successful prosecution or defense of a claim under the LHWCA or any state workers' compensation act. Newly developed mass screening techniques which are highly portable, reasonably inexpensive, nonintrusive, reliable, and computerized are available. As recognition of asbestos-related diseases and identification of its victims increase, the proficiency of the bar adjudicating these matters will assure expeditious processing of the claims to the advantage of both worker and employer. The best input from practitioners will enable adjudicatory bodies at all levels to render informed decisions in harmony with the medical realities and legal requirements.

99. Golden, supra note 18, indicates how such mass-screening techniques can be used for static and exercise pulmonary function testing along with a bloodless diffusion measurement using an ear oximeter to measure the oxygen saturation of the blood.