

# **Development Of A Web-Based Tele-Consult Thoracic Tumor Board System**

*CPT William F. Kelly, MD; COL Alfred Brooks, MD; Grigoriy Gadiyak, PhD;  
COL Ronald K. Poropatich, MD*

*Walter Reed Army Medical Center, Washington DC  
Telemedicine and Advanced Technology Research Center, Fort Detrick, MD*

## ***Background***

Published reports of video-teleconferencing (VTC) have increased interest in many medicine specialties to include oncology. We present the design considerations and development of an internet-based tele-consult thoracic tumor board system for lung cancer.

New approaches and novel technologies are needed given this year's estimated 169,000 cases of lung cancer and its disproportionately high mortality. Teams consisting of a nurse coordinator, pulmonologist, thoracic surgeon, radiation oncologist, medical oncologist, chest and nuclear medicine radiologists and pathologists allow for optimal, evidence-based, consensus management but are not readily available to everyone.

## ***Methods***

Our program allows remote, rapid and cost-effective access to such specialists. The referring clinician enrolls the patient using a web-based tele-consulting software program consisting of about 100 windows, an editor, and automated monthly statistics and graphics programs. Patient demographic information as well as laboratory, pathology and radiographic reports are automatically obtained from the healthcare organization's database and securely placed in tables and a Microsoft SQL Server 7.0 database. Radiographic and other images are also placed and electronically submitted. Data is reviewed and consensus opinion on diagnostic or therapeutic plans is electronically returned. Computerized reminders assure continuity of care and outcomes are recorded for research purposes.

## ***Conclusions***

Our tele-thoracic tumor board may improve access and optimize patient outcomes, ensure efficient use of healthcare resources and support physician communication and clinical trials.