PULMONARY COMPLICATIONS IN SURVIVORS OF CHILDHOOD AND 
ADOLESCENT CANCER: A REPORT FROM THE CHILDHOOD CANCER 
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CCSS is a resource designed to investigate long-term effects among five- 
year survivors of childhood and adolescent cancer. Using information obtained from 
questionnaires and medical records on 12,390 subjects with leukemia, lymphoma, 
brain tumors, neuroblastoma, Wilms' tumor, bone tumors and soft tissue sarcoma we 
evaluated the rate of first occurrence of selected pulmonary conditions (PC) during 
three time periods: during therapy (Period-1), end of therapy to 5 years post 
diagnosis (Period-2) and 5+ years post diagnosis (Period-3). Multivariate analyses 
were used to 

determine the relative risk (RR) and 95% Confidence Intervals (CI) associated with 
PC and exposure to radiation therapy to the chest (RTc), Bleomycin (Bleo), 
Cyclophosphamide (CPM), Busulfan (Bu), CCNU, and/or BCNU. During Period-3, 
statistically significant associations were present for: lung fibrosis and RTc (RR 
=4.3, 95% CI=2.9-6.6); supplemental oxygen and RTc (RR=1.8, CI=1.5-2.2), 
BCNU (RR=1.4, CI=1.0-2.0), Bleo (RR=1.7, CI=1.2-2.3), Bu (RR=3.2, CI=1.5-7.0), 
CCNU (RR=2.1, CI=1.4-2.9), CPM (RR=1.5, CI=1.3-1.9; recurrent pneumonia and 
RTc (RR=2.2, CI=1.4-3.5), CPM (RR=1.6, CI=1.0-2.5); dyspnea, chronic cough and 
RTc (RR=2.0, 95% CI=1.6-2.4), Bleo (RR=1.9, CI=1.3-2.6), CPM (RR=1.3, 
CI=1.1-1.6); pleurisy and RTc (RR=1.4, CI=1.1-2.0), Bu (RR=5.1, CI=1.2-21.0). In 
Period 3, RTc was associated with a 5.3% cumulative incidence of lung fibrosis at 20
years. PC continue to manifest 5+ years from diagnosis and treatment-related factors are important determinants of risk. Continued follow-up of childhood cancer survivors is needed to evaluate the impact of PC on quality of life.