The method relies on anatomical and image features less affected by most appearance variations of abnormal lungs and trachea. It consists of a sequence of Image Foresting Transforms (IFTs) organized in three main steps, (i) lung-and-trachea extraction, (ii) seed estimation inside background, trachea, left lung, and right lung, and (iii) their delineation such that each object is defined by an optimum-path forest rooted at its internal seeds.