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**Title:** Bronchoscopic findings and interventions in patients with long-term tracheostomy

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**Body:** Aims: To describe airway abnormalities identified by flexible bronchoscopy (FB) in patients with long-term tracheostomy (LTT) and interventions as a consequence of FB findings. Methods: Records of patients with LTT followed from Jan 08 to Dec 11 were reviewed. FBs were performed as routine surveillance FBs, additional scheduled FBs, or because of disease or tracheostomy related complications. Resulting interventions (ventilator -, cannula -, or medication changes, and surgical interventions) and extra caregiver trainings were recorded. Results: In 52 patients (20 f, 32 m) 210 FBs were performed. 30 patients had LTT for long-term ventilation, 22 as a bypass for upper airway obstruction. Median age was 4.5 yrs (0.1-32.7). In 97 instances FBs were performed transnasally, in 93 via the cannula, and in 20 via both routes. In 13 instances (6%) complications led to FBs; in 23 (11%) additional scheduled FBs, and in 174 (83%) surveillance FBs were performed. The mean frequency of FBs was 1.1/patient and year (0.25-2.7). The most common findings were airway malacia in 38%, clinically relevant granulation tissue in the suprastomal region in 8%, at the end of the cannula in 7%, and in other regions in 13%. Cannula changes were performed in 21%, ventilator changes in 4%, and surgical interventions in 3%. 12% of the caregivers received extra training on correct suction techniques. Conclusions: In this series of patients with LTT we found a high incidence of airway abnormalities. As FB findings resulted in interventions in a quarter of our patients we recommend that FB should be performed at least once a year. Patients with significant airway pathology, however, may benefit from more frequent endoscopic evaluations.