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**Title:** Computed tomography of the paranasal sinuses in chronic obstructive pulmonary disease

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**Body:** Background: Pathologic correlates of the upper airways have been rarely evaluated in chronic obstructive pulmonary disease (COPD). Aims: Assessment of objective and subjective impairment of the upper airways in COPD Methods: Computed tomography (CT) of the paranasal sinuses was performed in patients with COPD and evaluated using the Newman scoring system (>0 points considered abnormal). Nasal endoscopy was performed and scored according to Lund and Kennedy (>1 point considered abnormal). Rhinosinusitis related quality of life and symptoms were assessed with the Sino Nasal Outcome Test-20 (SNOT-20) (>12 points considered abnormal) and the SNOT-primary nasal symptoms score (SNOT-PNS). Spirometry was performed according to established guidelines. Patients were classified into COPD risk groups according to the GOLD guidelines of December 2011 considering symptoms, COPD stages 1-4 and exacerbations. Results: We included 83 patients (35 women) with a mean age of 68 years (range: 44-90). 29 subjects (35%) were in COPD risk group A, 38 subjects (46%) in risk group B and 16 subjects (19%) in risk groups C and D. Abnormal CT scores were observable in 49 subjects (59%) and abnormal endoscopies were found in 51 subjects (61%). 51 subjects (61%) scored abnormal results in the SNOT-20. We found a positive correlation between the CT score and the SNOT-PNS ($r=.22$, $p<.05$). The endoscopic score correlated positively with the SNOT-PNS ($r=.29$, $p<.05$) as well as with the SNOT-20 ($r=.42$, $p<.01$). Subjects in higher risk groups presented higher scores in endoscopy ($p<.05$), SNOT-PNS ($p<.05$) and SNOT-20 ($p<.01$). Conclusion: Pathologic correlates of the upper airways were found in more than half of the patients with COPD.