<table>
<thead>
<tr>
<th>Bibliographic Cite</th>
<th>Literature Type</th>
<th>Level of Evidence</th>
<th>Purpose</th>
<th>Population</th>
<th>Intervention and Outcome Measures</th>
<th>Results/Recommendations</th>
<th>Study Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traczek M, Guzinski M, Moraw ska-Kochman M, et al.</td>
<td>Retrospective cohort study</td>
<td>Low level of evidence</td>
<td>To compare visualisation of the surgically relevant anatomical structures via low- and standard-dose CT in patients with chronic rhinosinusitis (CRS) and higher risk for perioperative complications (i.e. presence of bronchial asthma, history of sinus surgery and advanced nasal polyposis).</td>
<td>History, symptoms, nasal endoscopy, and computed tomography (CT) results were analyzed. Clinical diagnosis was rendered using the 1997 Rhinosinusitis Taskforce (RSTF) guidelines and a modified version eliminating facial pain, ear pain, dental pain, and headache.</td>
<td>Among subjects positive by RSTF guidelines, 45% lacked objective evidence of sinonasal inflammation by CT, 48% by endoscopy, and 34% by either modality. Applying modified RSTF diagnostic criteria, 39% lacked sinonasal inflammation by CT, 38% by endoscopy, and 24% by either modality. Using clinical diagnostic criteria overestimate the prevalence of chronic rhinosinusitis. Removing facial pain, ear pain, dental pain, and headache increased specificity without a concordant loss in sensitivity. Given the high prevalence of sinusitis, improved clinical diagnostic criteria may assist primary care providers in more accurately predicting the presence of inflammation, thereby reducing inappropriate antibiotic use or delayed referral for LBLEvaluation of primary headache syndromes.</td>
<td>Non-consecutive recruitment; Readers were not blinded or no comment was made about the blinding of the readers; Not all patients received the reference (&quot;gold&quot;) standard or &quot;gold&quot; standard or patients received different reference standards; selection bias.</td>
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<td>Hirsch SD, Reiter ER, Ewards LL, et al.</td>
<td>Retrospective cohort study</td>
<td>Low level of evidence</td>
<td>To determine whether the elimination of pain improves accuracy of clinical diagnostic criteria for adult chronic rhinosinusitis.</td>
<td>TOBE adults referred to an academic otolaryngology clinic with presumptive diagnosis of chronic rhinosinusitis. Exclusion criteria included a history of sinonasal surgery, facial trauma, or prior sinus CT, as well as those without subsequent CT or endoscopic evaluation. Four hundred seventy-nine subjects (40%) met inclusion criteria.</td>
<td>To compare inter-observer agreement of anatomical and surgical structures of sinus CT scans.</td>
<td>A random sample of 57 patients suffering from CRS, who were evaluated to benefit from sinus CT scans during 2006–2007 at the Tampere University Hospital, were enrolled in this study.</td>
<td>The patients underwent routine sinus multiple detector computed tomography (MDCT) examinations for clinical purposes. Lund-Mackay (LM) scores and 43 other structural parameters were analyzed blinded. The reproducibility of the findings between three observers, a radiologist, an ear, nose and throat (ENT) surgeon, and an ENT resident, were compared.</td>
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</tbody>
</table>
Rhinosinusitis - Individual Articles


To assess clinical presentations and anatomic variants among patients with recurrent acute rhinosinusitis (RARS), chronic rhinosinusitis (CRS) without nasal polyps (CRSsNP), and CRS with nasal polyps (CRSwNP).

Patients were divided into groups with RARS, CRSsNP, and CRSwNP. Patients had to complete the Sino-Nasal Outcome Test (SNOT-20) on surgery 1 day before and 6 months after surgery. Participants with preoperative SNOT-20 scores of the 3 groups. Patients with CRSwNP were significantly more likely to show agger nasi cells, Haller cells, and septal deviation on computed tomography. Those with CRSsNP had significantly smaller mean infundibular widths. All groups showed significantly improved SNOT-20 scores postoperatively. The different anatomic variants found among patients with RARS, CRSsNP, and CRSwNP can facilitate surgical prognostic evaluation.

No significant differences were found among the average preoperative SNOT-20 scores of the 3 groups. Patients with CRSwNP were significantly less likely to show agger nasi cells, Haller cells, and septal deviation on computed tomography. Those with CRSsNP had significantly smaller mean infundibular widths. All groups showed significantly improved SNOT-20 scores postoperatively. The different anatomic variants found among patients with RARS, CRSsNP, and CRSwNP can facilitate surgical prognostic evaluation.

Author stated limitations include: no control group of patients who didn’t undergo surgery; short follow-up (6 months).

Non-consecutive recruitment; Readers were not blinded or no comment was made about the blinding of the readers; Single reader or no inter-reader reliability was calculated; incomplete reporting due to its retrospective design.

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To evaluate symptoms described by patients with chronic rhinosinusitis with polyposid changes/nasal polyps and their correlation with CT, nasal endoscopy, and intranasal biomarkers.

Prospective multicenter study symptom data from postsurgical adult chronic rhinosinusitis study participants with recurrent disease refractory to medical therapy were analyzed in comparison with objective data. Using logistic regression analysis, participant-rated 16-question surveys from 258 participants were assessed for correlation with nasal endoscopy scores, CT percentage of sinus occlusion, and intranasal biomarkers of fungal antigens (Alternaria and Aspergillus), eosinophilic inflammation (eosinophil-derived neurotoxin [EDN] and major basic protein [MBP]), and inflammatory cytokines (interleukins 5 and 13).

Study participant assessments revealed increased CT occlusion in participants presenting with greater inability to smell (P < .019). Mucosal inflammation identified on nasal endoscopy was positively correlated with congestion (P < .02), sneezing (P < .002), and ear pain (P < .007). Elevated EDN was positively correlated in patients with bothersome congestion (P < .031) and runny nose (P < .031). Sneezing was positively correlated with multiple markers: Alternaria (P < .024), interleukin-13 (P < .027), MBP (P < .034), and interleukin-5 (P < .019). Nasal endoscopy, not CT imaging, has the strongest correlation with the 2 cardinal symptoms of congestion and runny nose in CRS patients; these correlate with biomarkers of eosinophilic inflammation.

Non-consecutive recruitment; Single reader or no inter-reader reliability was calculated; the use of questionnaires developed by patient described symptoms which may be subjective.