

Pocket guide Chronic Rhinosinusitis

DEVELOPED BY EUFOREA EXPERT TEAMS
BASED ON INTERNATIONAL GUIDELINES



What is Chronic Rhinosinusitis (CRS)?

Chronic rhinosinusitis is an inflammation of the inner lining of the nose and paranasal sinuses for over 3 months, giving rise to 2 or more (sino)nasal symptoms, with negative impact on patients' quality of life and high socio- economic burden.

CRS affects around 5% of the total European adult population, and is associated with increased risk of developing asthma.

What should the physician do?

- ✓ Ask about symptoms suggestive for CRS , medical history of the patient and any medication being taken
- ✓ Define the severity of disease on VAS or SNOT-22 scale
- ✓ Perform anterior rhinoscopy (all) and nasal endoscopy (ENT)
- ✓ Ask about history of allergies, asthma, atopic dermatitis and aspirin sensitivity
- ✓ Confirm suspicion of allergy by skin prick test or serum IgE
- ✓ Confirm suspicion of asthma with lung function tests

When to suspect asthma/chronic bronchitis?

Questions to your patient

- Have you had an episode or recurrent episodes of wheezing?
- Do you have a troublesome cough, especially at night/during awakening/exercise?
- Do you cough or wheeze after exercise?
- Do you produce sputum every day?
- Do you experience extended common cold/laryngitis/bronchitis?
- Does your chest feel tight or do you feel impaired breathing out?

If **YES** to any question: your patient should be evaluated by pulmonary function tests (PFTs) and referral to a chest physician advised.

Symptoms suggestive of CRS

- Nasal congestion / obstruction
- Nasal secretions (rhinorrhoea and/or post-nasal drip)
- Smell dysfunction (hyposmia or anosmia)
- Facial pain / headache

Symptoms less suggestive of CRS

- Unilateral symptoms
- Nose bleeding
- Sneezing
- Watery rhinorrhoea
- Runny nose at night
- Itchy nose and/or conjunctiva

How to apply the visual analogue scale (VAS)?



Ask your patient to mark on the horizontal line of 10 cm how bothersome his/her symptoms are. The ends of the horizontal line are defined as the extreme limits of the burden of disease. VAS has been validated for use on smartphones. ⁴

VAS- score is categorised in **mild** (0-3 cm), **moderate** (>3-7 cm), and **severe** (>7-10 cm)

[Fokkens WJ et al. European Position Paper on Rhinosinusitis and Nasal Polyps 2020. Rhinology. 2020 Feb 20;58\(Suppl S29\):1-464. doi: 10.4193/Rhin20.600. PMID: 32077450.](#)

[Orlandi RR et al. International consensus statement on allergy and rhinology: rhinosinusitis 2021. Int Forum Allergy Rhinol. 2021 Mar;11\(3\):213-739. doi: 10.1002/alr.22741. Erratum in: Int Forum Allergy Rhinol. 2022 Mar 11:: PMID: 33236525.](#)

Diagnosis of Smell Dysfunction

History of smell loss:

- hyposmia or anosmia or parosmia
- uni/bilateral, onset, duration, progress, association with taste dysfunction
- exclude acute causes of olfactory dysfunction such as post-viral e.g. COVID infection

+

ENT specialist: nasal endoscopy and smell testing

Value of NASAL ENDOSCOPY

- full evaluation of endonasal status: anatomy, secretions, mucosa, ostiomeatal complex and nasopharynx, specific pathology e.g. nasal polyps
- exclusion of other sinonasal conditions (e.g. neoplasm)

→ Ideal for **diagnosis** and **follow-up** of CRS care, including NP scoring

When to consider a CT scan ?

Diagnostic purpose in case of:

- suspicion of CRS in absence of nasal endoscopy
- discrepancy of symptoms and nasal endoscopy
- suspicion of benign / malignant lesion (unilateral and/or progressive symptoms)
- suspicion of orbital or intracranial complications
- pre-operative setting

→ **NOT** for follow-up of therapy or routine diagnosis of CRS

Diagnosis of Nasal Obstruction

History of nasal obstruction: uni/bilateral, duration, progress, continuous vs intermittent, VAS score

+

Clinical exam: inspection in rest and during inspiration, anterior rhinoscopy, nasal tip support and nasal valve function

+

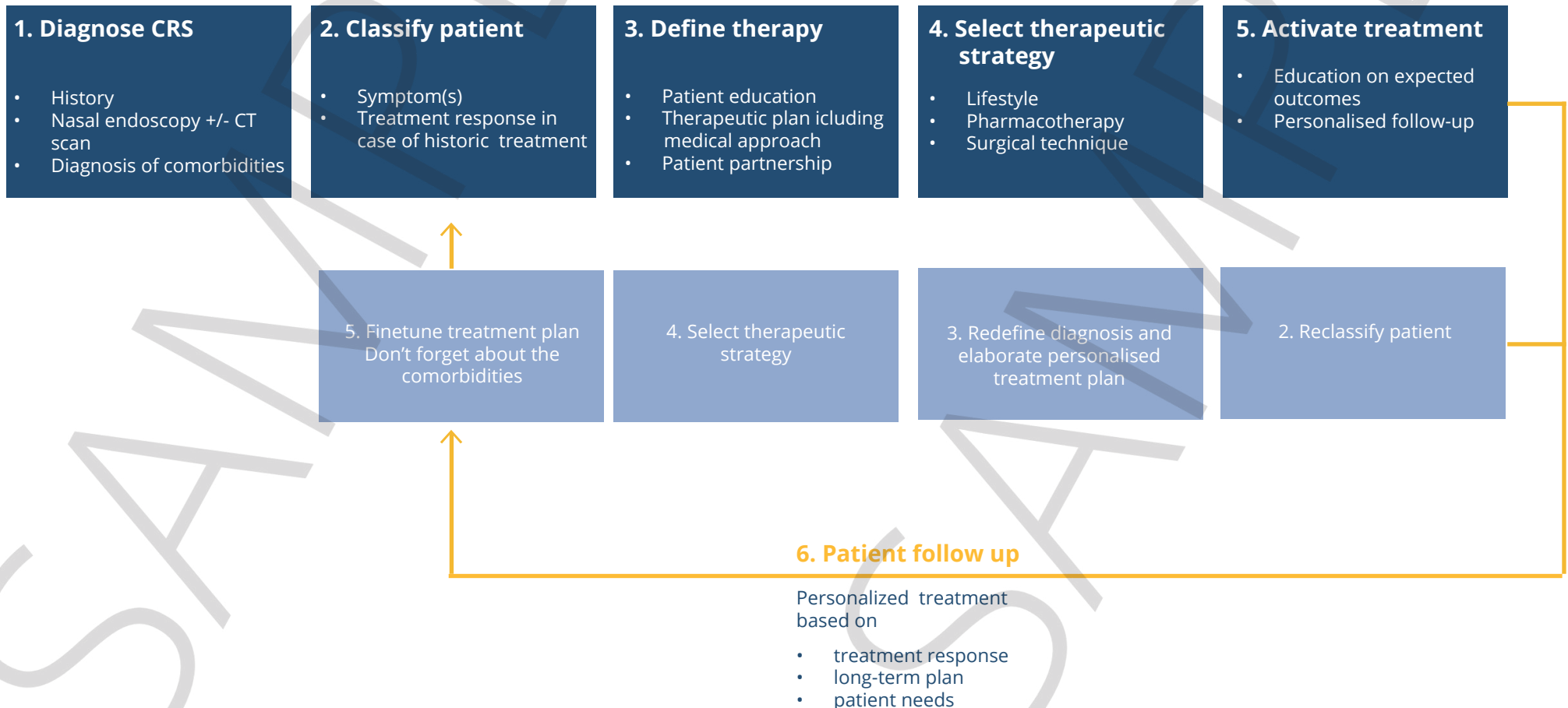
ENT specialist: nasal flow testing: peak nasal inspiratory flow, anterior rhinometry and/or acoustic rhinometry, nasal endoscopy

When to refer to a COLLEAGUE ?

Specialist in:

- **ENT** → persistent CRS symptoms despite first-line care
- **Rhinology / Sinus surgery** → persistent CRS symptoms despite second-line care
- **Pulmonology** → comorbid asthma, COPD or aspirin/NSAID intolerance
- **Immunodeficiencies / Allergology** → suspicion of immunodeficiencies or need for AIT
- **Dermatology** → comorbid AD
- **Ophthalmology** → orbital pain or (unilat/bilat) ocular symptoms
- **Neurology** → headache that cannot be explained by CRS / CT scan findings
- **Odontology** → comorbid periodontitis, temporomandibular joint dysfunction or biting disorders
- **Psychiatry** → functional disorders, psychiatric disorders
- **General practitioner** → work-related disorders, coordination of the treatment and related diseases

How to use the CRS pocket guide in 5 steps



CRS Clinical Presentation



FIRST LINE CARE Primary Care/Pharmacist	SECONDARY CARE ENT - specialist/Allergologist	TERTIARY CARE Rhinologist/Pulmonologist
Educate patient about chronicity of disease, need for optimal adherence and avoidance of infectious, occupational, and environmental triggers e.g. by wearing a mask		
At every stage give basic maintenance therapy: Saline rinses and/or nasal corticosteroid spray or drops		

Step 1

2 or more symptoms suggestive of CRS for > 3 months

- Nasal congestion
- Nasal secretions
- Smell dysfunction
- Facial pain / headache

Basic maintenance therapy:

saline rinses
and/or
nasal corticosteroid spray or drops

Step 2

Failure of previous treatment attempts (Step 1)
OR
Severe CRS

Referral to secondary care

Diagnosis of CRS (incl. Nasal Endoscopy or CT)
Screening for comorbidities (and treatment if necessary)

Basic maintenance therapy (step 1) + Oral corticosteroids and/ or antibiotics

if no improvement
ESS (Endoscopic Sinus Surgery)

Step 3

Failure of previous treatment attempts (Step 2)
OR
Uncontrolled severe CRS

Referral to tertiary care
Endotyping by NE, blood tests and/or histology

Diagnosis + specific therapy of secondary CRS (Ig deficiency, vasculitis)
Criteria for biologics by EUFOREA

Basic maintenance therapy (step 1)

Type 1	Type 2
<ul style="list-style-type: none"> long-term AB xylitol steroid eluting implants revision surgery 	<ul style="list-style-type: none"> biologics aspirin desensitization in case of N-ERD revision surgery

Comorbid asthma / AD / allergies

Treatment of co-morbidities

*Red flags: Periorbital oedema, displaced globe, double vision, ophthalmoplegia, reduced visual acuity, severe headache, frontal swelling, signs of sepsis, signs of meningitis, neurological signs, unilateral symptoms, bleeding, crusting, cacosmia

PATIENT PARTICIPATION IN TREATMENT PLAN

Sinus Surgery (primary / revision)

PRO

- Good outcomes
- Benefits on upper and lower airways
- Better delivery of post-operative intranasal therapy

CON

- Delicate surgery under general (or local) anaesthesia
- Post-operative healing may take several months
- Long-term medical care and post-operative follow-up needed in most patients

Biologics

PRO

- Benefits on upper and lower airways
- Long-term treatment with good outcomes
- Availability of different biologics

CON

- High cost
- Not universally available

Oral Corticosteroids

PRO

- Rapid and major effect on CRS symptoms and severity
- Effective on CRS and comorbidities
- Cheap

CON

- Short-term treatment and short-lasting benefits
- Adverse events if long-term/repeated use and/or contra-indicated in some medical conditions

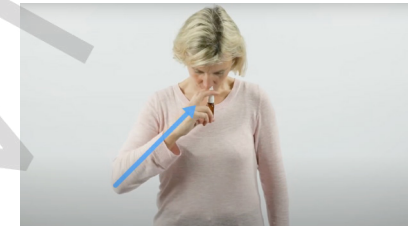
Additional Resources:



SNOT 22 &
EPOS 2020 Criteria of Control



EUFOREA instructional videos
for patients



Abbreviations

AD: Atopic dermatitis

AIT: Allergen immunotherapy

CRS: Chronic rhinosinusitis

CT: Computed tomography scan

EPOS: European Position Paper on Rhinosinusitis and Nasal Polyps

N-ERD: NSAID-exacerbated respiratory disease

NE: Nasal endoscopy

NP: Nasal polyps

NSAID: Non-steroidal anti-inflammatory drugs

PFT: Pulmonary function test

SNOT-22: Sinonasal outcome test

Vision

EUFOREA is an international non-profit organization forming an alliance of all stakeholders dedicated to reducing the prevalence and burden of chronic respiratory diseases through the implementation of optimal patient care via education, research and advocacy.

Mission

Based on its medical scientific core competency, EUFOREA offers a platform to introduce innovation and education in healthcare leading to optimal patient care.

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