

Uluslararası Katılımlı

# AKCİĞER SAĞLIĞI KONGRESİ

25-28 MART 2026

Sueno Deluxe Hotel, Belek/Antalya

*Sizin Sesiniz, Sizin Kongreniz...*



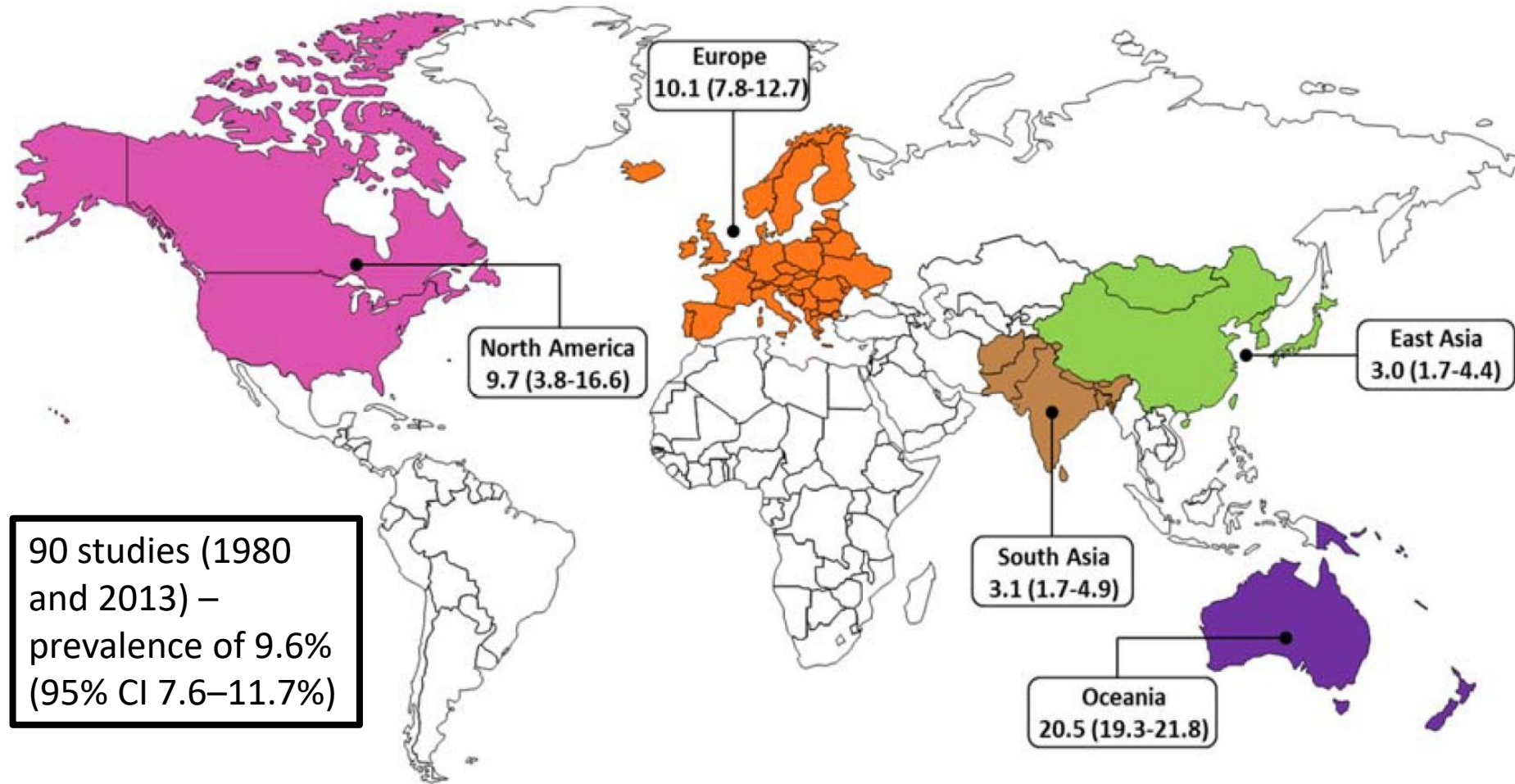
## *An Update on Chronic Cough- Mechanisms, Management and New Treatments*

**Lorcan McGarvey MD FRCP**  
**Professor of Respiratory Medicine**  
**Queen's University Belfast**

# Definitions of cough

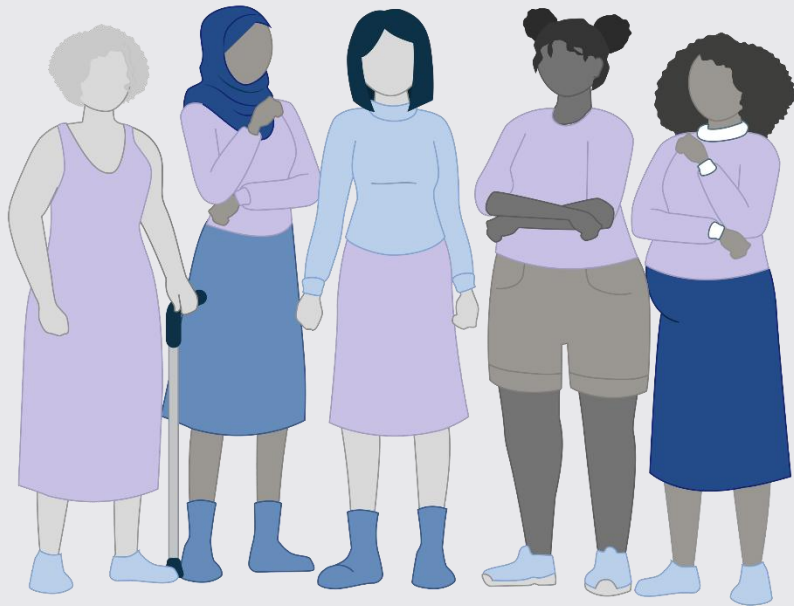


# The global prevalence of chronic cough

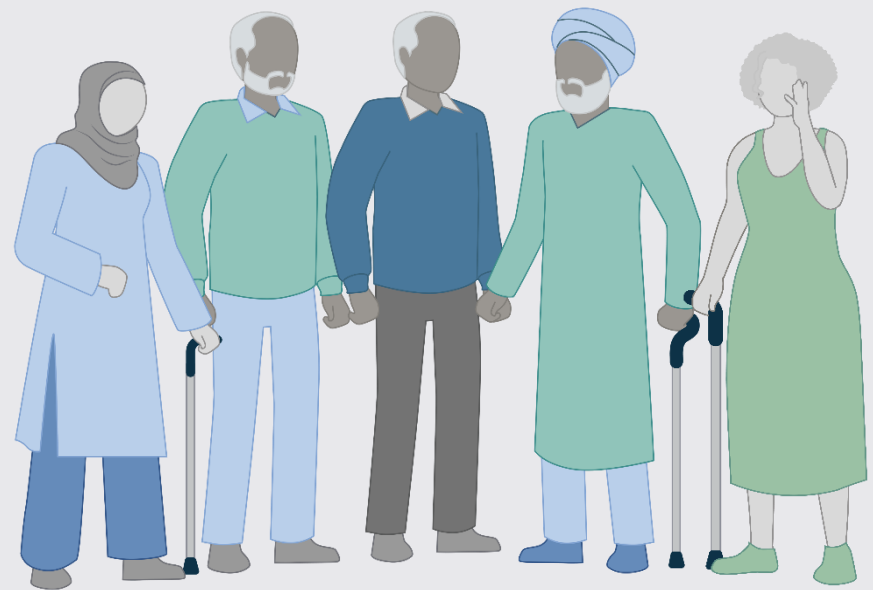


# Epidemiology of Chronic Cough

More common in women than in men



Prevalence increases with age



© Medscape, LLC

# Typical patient referred to a specialist cough clinic<sup>1-3</sup>



Cough as an isolated (or most prominent) problem



Non-smoker (or light ex-smoker)



Normal chest radiograph



Normal spirometry



Female / middle aged

1. McGarvey LP. *Thorax*. 2004;59(4):342–46. 2. Morice AH, et al. *Eur Respir J*. 2020;55(1):1901136. 3. Parker SM, et al. *Thorax*. 2023;78(Suppl 6):s3–19.

# Patients with chronic cough may experience a wide range of negative physical and psychosocial outcomes



## Physical burden of chronic cough<sup>3,4,6,a</sup>

Insomnia	45%
Musculoskeletal complications (pain, fractures)	44%
Excessive perspiration	42%
Urinary incontinence	39%
Nausea, retching, vomiting	16–21%
Syncope or near syncope	5%

75–80%<sup>b</sup>

Interference with daily functioning

76%<sup>b</sup>

Reduced socialisation

63%<sup>b</sup>

Difficulty conversing

34%<sup>c</sup>

Anxiety

27%<sup>c</sup>

Depressive symptoms



## Psychosocial burden of chronic cough<sup>1,2,7</sup>

Psychosocial outcomes of chronic cough are similar to those observed with COPD, congestive heart failure, and diabetes mellitus<sup>5</sup>

<sup>a</sup>Reasons patients with chronic cough seek medical care, as reported in a literature review of PubMed and SCOPUS from the beginning of the database to 6 September 2019.<sup>4</sup> <sup>b</sup>Data from an outpatient clinic survey administered to 136 patients with chronic cough between 1 November 2000 and 28 February 2001.<sup>1</sup> <sup>c</sup>Data from a retrospective cohort study of 141 patients diagnosed with chronic cough between 1 January 2019 and 31 December 2019 at a tertiary academic clinic.<sup>2</sup>

COPD = chronic obstructive pulmonary disease; QoL = quality of life; RCC = refractory chronic cough.

1. Kuzniar TJ, et al. *Mayo Clin Proc.* 2007;82(1):56-60. 2. Hari G, et al. *Ear Nose Throat J.* 2023;1455613231180336. 3. Hanak V, et al. *Mayo Clin Proc.* 2005;80(7):879-882. 4. Irwin RS, et al. *Chest.* 2020;158(5):2058-2073. 5. Iyer VN, et al. *Mayo Clin Proc.* 2013;88(10):1115-1126.

# Patients with chronic cough often experience lengthy diagnostic journeys

## Duration of cough in patients with RCC

Mean duration<sup>1,2,a</sup>



>10

years

## Repeated specialist visits<sup>3,b</sup>

In 3 years prior to entry into a study, the mean number of visits per patient for physician visits due to chronic cough were:



5.2

Pulmonologist



5.2

PCP



2.0

ENT



2.8

Gastroenterologist



2.7

Allergist

## Diagnostics journeys may also be impacted by:



Lack of awareness and application of chronic cough **guidelines** and **best practices** in clinical practice<sup>4</sup>

May lead to



Suboptimal workup, unnecessary tests and trials of multiple treatments<sup>4-6</sup>

<sup>a</sup>Supported by data from COUGH-1, COUGH-2 and SOOTHE clinical trials. <sup>b</sup>In a retrospective, multicentre, non-interventional study of 196 patients with RCC (n=126) or UCC who attended outpatient clinics at representative hospitals from the National Healthcare System of Spain. Mean number of visits per patient was calculated from patients who had visited a given specialty.

ENT = ear, nose and throat; PCP = primary care provider; RCC = refractory chronic cough; UCC = unexplained chronic cough.

1. McGarvey LP, et al. *Lancet*. 2022;399(10328):909-923. 2. Morice AH, et al. *Eur Respir J*. 2022;60(suppl 66):801. 3. Dávila I, et al. *Lung*. 2023;201(3):275-286. 4. Kum E, et al. *Lung*. 2023;201(1):47-55.

5. Patton CM, et al. *Qual Manag Health Care*. 2015;24(4):177-182. 6. Zeiger RS, et al. *Perm J*. 2020;24:1-3.

# Management of chronic cough

## ERS guidelines on the diagnosis and treatment of chronic cough in adults and children

Alyn H. Morice<sup>1</sup>, Eva Millqvist<sup>2</sup>, Kristina Bieksiene<sup>3</sup>, Surinder S. Birring<sup>4,5</sup>, Peter Diczpinigaitis<sup>6</sup>, Christian Domingo Ribas<sup>7</sup>, Michele Hilton Boon <sup>8</sup>, Ahmad Kantar <sup>9</sup>, Kefang Lai<sup>10,21</sup>, Lorcan McGarvey<sup>11</sup>, David Rigau<sup>12</sup>, Imran Satia<sup>13,14</sup>, Jacky Smith<sup>15</sup>, Woo-Jung Song <sup>16,22</sup>, Thomy Tonia<sup>17</sup>, Jan W. K. van den Berg<sup>18</sup>, Mirjam J.G. van Manen<sup>19</sup> and Angela Zacharasiewicz<sup>20</sup>

Eur Respir J 2020; 55: 1901136

## Treatment of Unexplained Chronic Cough CHEST Guideline and Expert Panel Report



*Peter Gibson, MBBS; Gang Wang, MD, PhD; Lorcan McGarvey, MD; Anne E. Vertigan, PhD, MBA, BAppSc (SpPath); Kenneth W. Altman, MD, PhD; and Surinder S. Birring, MB ChB, MD; on behalf of the CHEST Expert Cough Panel*

**CHEST 2016; 149(1):27-44**

# British Thoracic Society Clinical Statement on chronic cough in adults

Sean M Parker,<sup>1</sup> Jaclyn Ann Smith ,<sup>2</sup> Surinder S Birring,<sup>3,4</sup>  
 Sarah Chamberlain-Mitchell,<sup>5</sup> Kevin Gruffydd-Jones,<sup>6</sup> Jemma Haines ,<sup>2,7</sup>  
 Sarah Hennessey,<sup>8</sup> Lorcan P McGarvey,<sup>9</sup> Paul Marsden,<sup>2,7</sup> Matthew James Martin,<sup>10</sup>  
 Alyn Morice,<sup>11,12</sup> James O'Hara,<sup>13,14</sup> Mike Thomas<sup>15</sup>

Parker SM, et al. *Thorax* 2023;**6**(suppl 6):3–19.

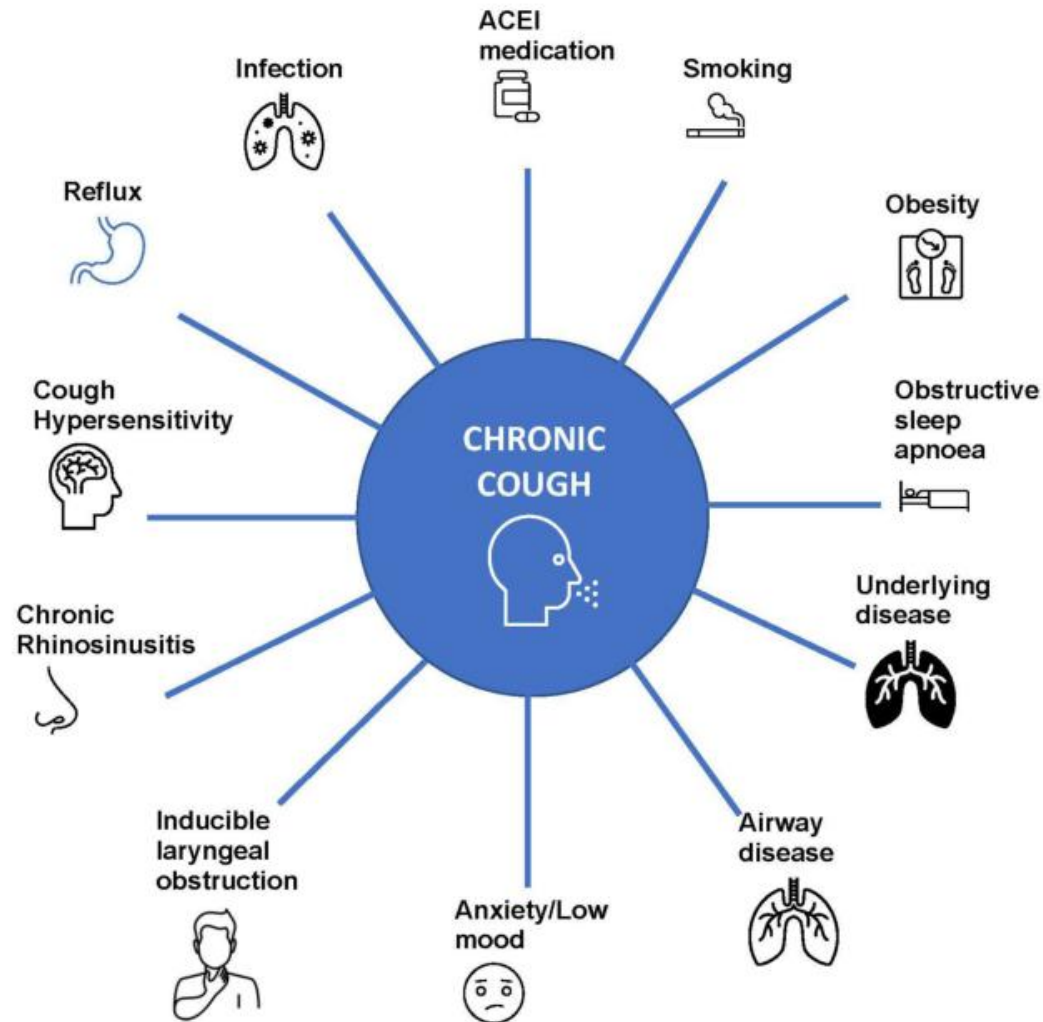


ERJ OPEN RESEARCH  
 ORIGINAL RESEARCH ARTICLE  
 W-J. SONG ET AL.

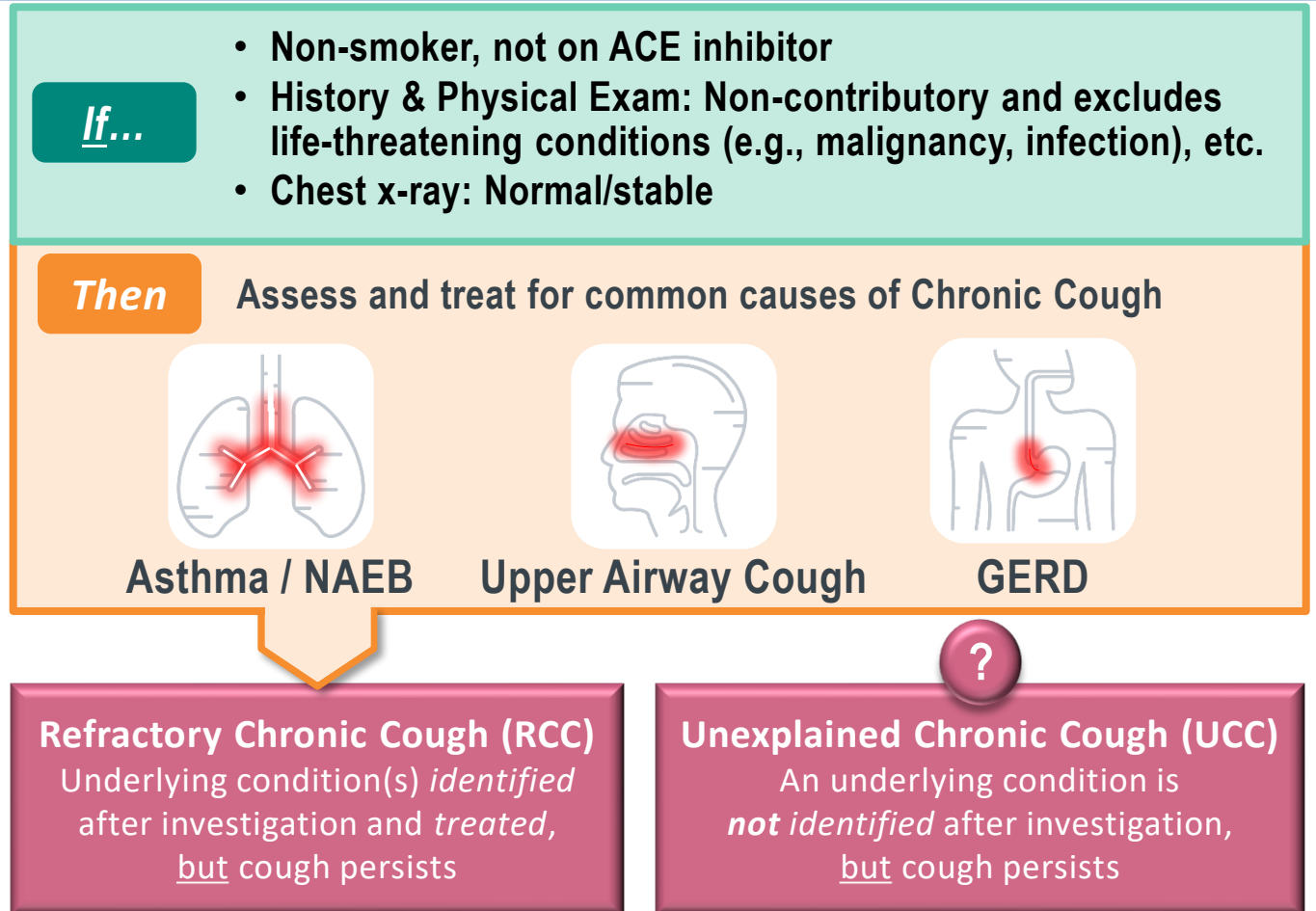
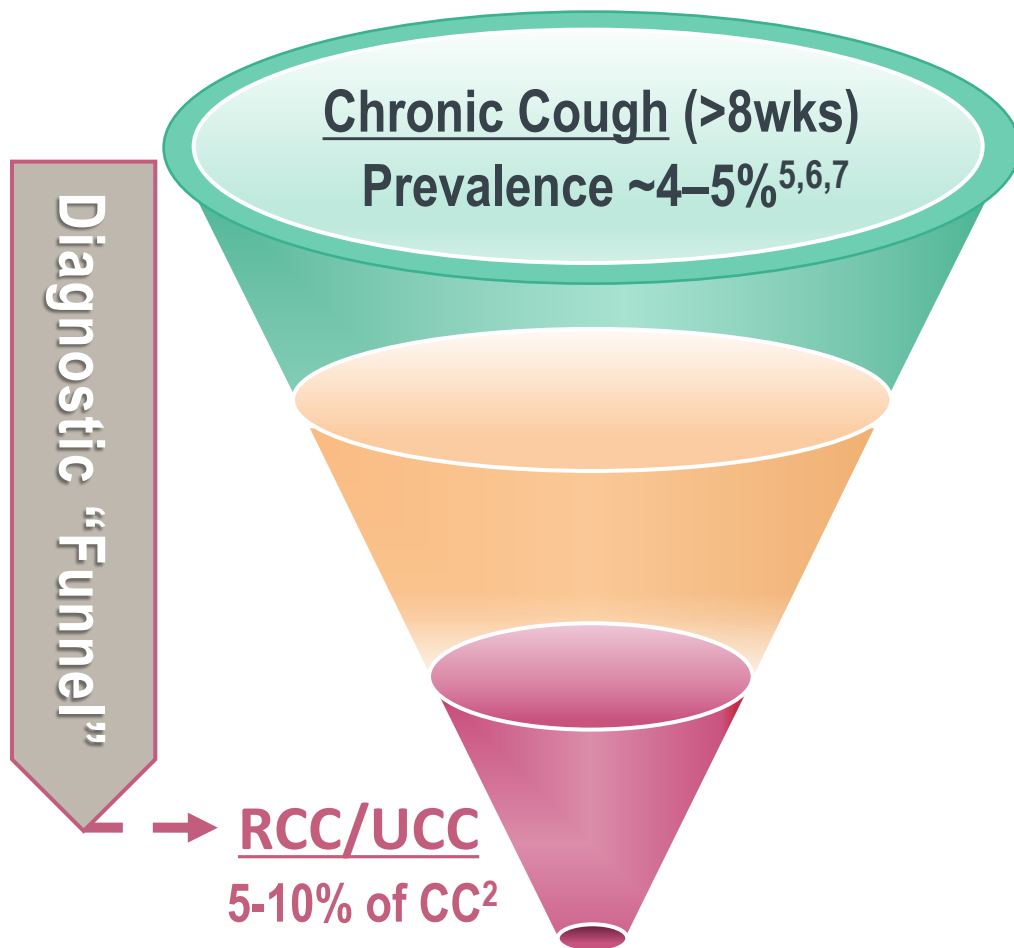
## Consensus goals and standards for specialist cough clinics: the NEUROCOUGH international Delphi study

Woo-Jung Song <sup>1</sup>, Lieven Dupont<sup>2</sup>, Surinder S. Birring<sup>3</sup>, Kian Fan Chung<sup>4</sup>, Marta Dąbrowska <sup>5</sup>,  
 Peter Diczpinigaitis <sup>6</sup>, Christian Domingo Ribas <sup>7</sup>, Giovanni Fontana<sup>8</sup>, Peter G. Gibson <sup>9</sup>,  
 Laurent Guilleminault<sup>10</sup>, James H. Hull <sup>11</sup>, Marco Idzko<sup>12</sup>, Peter Kardos <sup>13</sup>, Hyun Jung Kim<sup>14</sup>,  
 Kefang Lai<sup>15</sup>, Federico Lavorini<sup>8</sup>, Eva Millqvist<sup>16</sup>, Alyn H. Morice <sup>17</sup>, Akio Niimi<sup>18</sup>, Sean M. Parker<sup>19</sup>,  
 Imran Satia <sup>20</sup>, Jaclyn A. Smith <sup>21</sup>, Jan Willem van den Berg <sup>22</sup> and Lorcan P. McGarvey <sup>23</sup> on behalf  
 of the European Respiratory Society NEUROCOUGH Clinical Research Collaboration

# Treatable Traits of Chronic Cough



# A guideline approach to chronic cough<sup>1-4</sup>



ACE = Angiotensin Converting Enzyme, NAEB = non-asthmatic eosinophilic bronchitis, GERD = gastro-esophageal reflux disease.

1. Irwin RS et al., *Chest* 2018; 153(1):196-209. 2. Gibson P et al., *Chest*. 2016 Jan;149(1):27-44. 3. Lee KK et al. *Chest*. 2021;159(1):282-293. 4. Morice AH et al. *Eur Respir J*. 2020; 55: 1901136. 5. Colak Y et al., *Chest* 2017; 152(3):563-573. 6. Meltzer EO et al., *J Allergy Clin Immunol Pract* 2021;9(11):4037-4044.e2. 7. McGarvey L et al., *Eur Respir J*. 2019; 54(suppl 63):PA3327.

# Key points in managing conditions commonly associated with chronic cough<sup>1,2,3</sup>

**Asthma:** First line Rx with ICS (4 week trial e.g. Budesonide DPI 200 g twice daily; Consider step up dose; add in LTRA. Evidence for clinical utility of T2 biomarkers is currently weak.(FeNO >25ppb; BEC  $\geq 0.3 \times 10^9/L$ ). Treat in line with asthma guidelines.

**Reflux:** Diet and weight reduction recommended; against PPI use alone in patients without heartburn or definitive evidence of acid. Investigations reserved for patients refractory to Rx (3 months) and being considered for surgery (e.g fundoplication). Oesophageal dysmotility is common. Ask about it, investigate and consider medical/ surgical intervention.

**UACS:** No evidence to treat or investigate patients with cough who lack nasal symptoms. Newer generation, non-sedating antihistamines ineffective for cough due to PNDS. Features of laryngeal hypersensitivity are common. Sedating anti-histamines can help.

1. Morice AH et al. *ERJ* 2020;55:1901136. 2. Gibson P et al.*Chest*. 2016;149(1):27-44. 3. Parker SM et al. *Thorax* 2023

# Neuromodulatory agents



ERS recommend a trial of low dose opioid in adult patients



Strength of recommendation

STRONG



Level of evidence

MODERATE



ERS suggest a trial of anticonvulsant in adult patients



Strength of recommendation

CONDITIONAL



Level of evidence

LOW

These medicines are not licensed for use in refractory chronic cough.

ERS, European Respiratory Society

Morice AH, et al. *Eur Respir J.* 2020;55:1901136.

# Non pharmacological approach to chronic cough



Secondary care organisations should look to providing specialist speech and language therapy and physiotherapy as part of an MDT to support the diagnosis and management of cough and other upper airway disorders<sup>1</sup>



Endorses cough control therapy<sup>2</sup>



Recommends MDT approach in RCC<sup>3</sup>

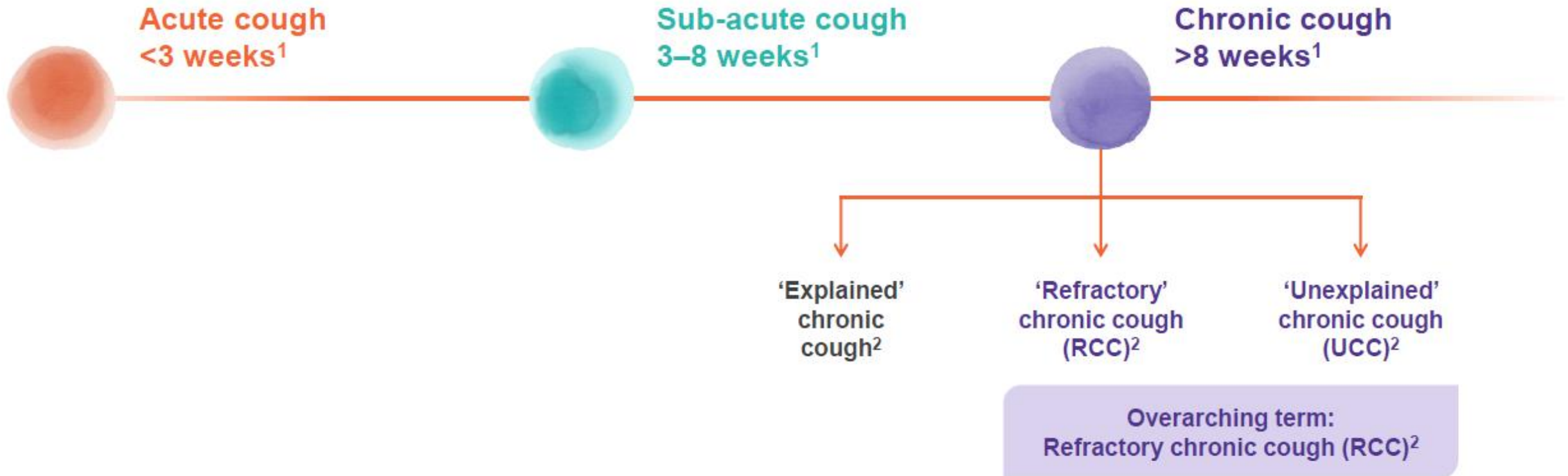


Recommends multidisciplinary management<sup>4</sup>



Suggests a therapeutic trial of multimodality speech pathology therapy<sup>5</sup>

# Definitions of cough



# *The problem with current nomenclature*

Neurogenic cough

Laryngeal hyperresponsiveness

Idiopathic chronic cough

Cough hypersensitivity

Chronic refractory cough

Sensory neuropathic cough

Laryngeal hypersensitivity

Neuropathic cough

Cough hypersensitivity syndrome

Laryngeal hypersensitivity



## **Current 'symptom-based' approach does our patients a disservice**

Fails to address the complex nature of the condition, which is difficult to treat and exerts considerable disability and healthcare burden

Over-emphasis on potential underlying causes and their contribution may lead to unnecessary investigation and overtreatment

# ***What is a disease?***

***A disorder of structure or function in a human, animal, or plant, especially one that has a known cause and a distinctive group of symptoms, signs, or anatomical changes***

**Oxford Dictionary definition**

# Should chronic cough be considered as a disease?

1

Definable (cough lasting >8 weeks)

---

2

Existing model of pathophysiological basis (combination of aggravating stimuli, afferent hypersensitivity and CNS dysfunction)

---

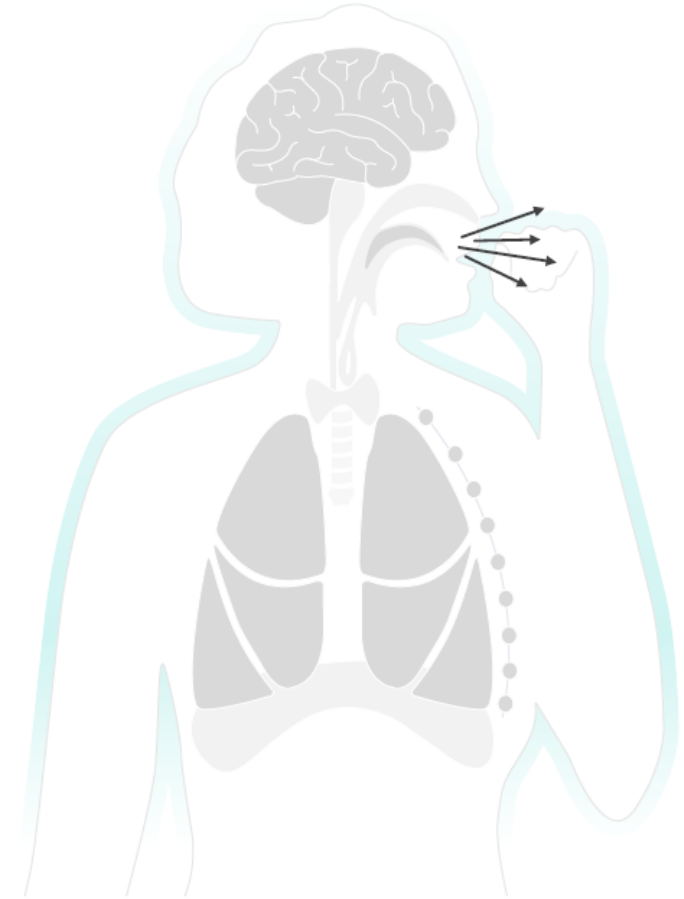
3

Measurable (patient-rated and objective, eg, cough frequency monitoring, cough reflex testing)

---

4

Treatable with specific interventions of proven efficacy (eg, pharmacological treatment or non-pharmacological therapy, such as cough suppression training)





The International Classification of Diseases, 11th Revision (ICD-11), now serves as the primary global standard for recording, defining and classifying health conditions

---



Taking a lead from the pain and allergy community

---

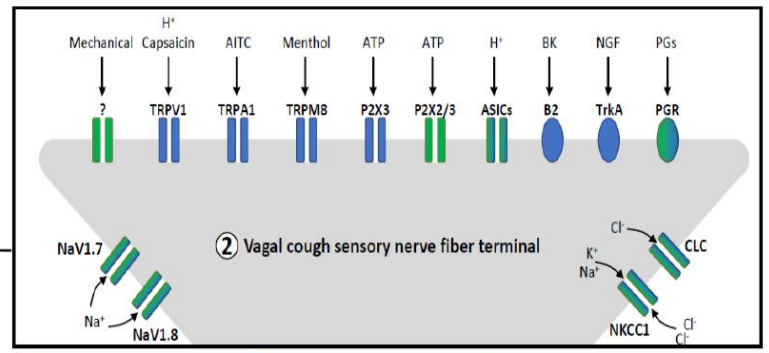
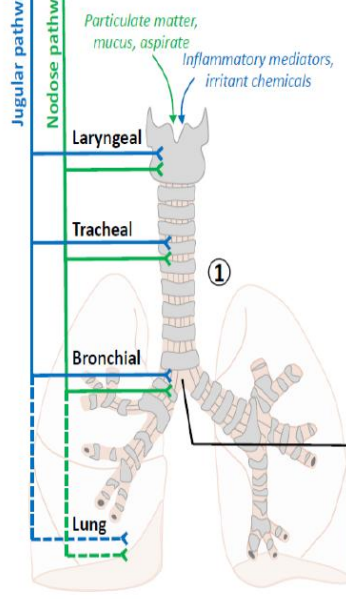
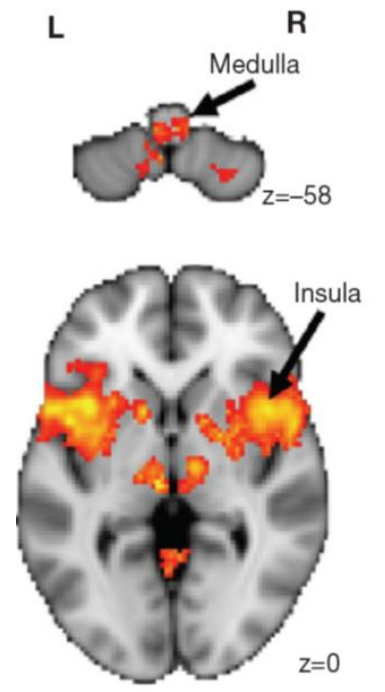
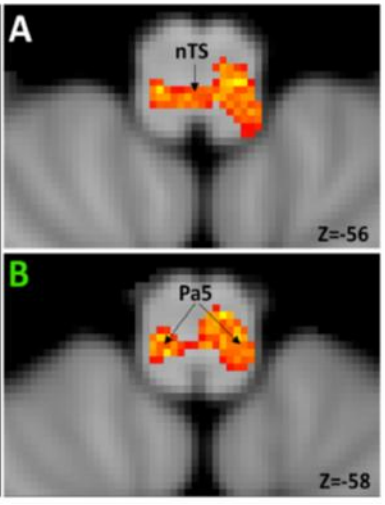
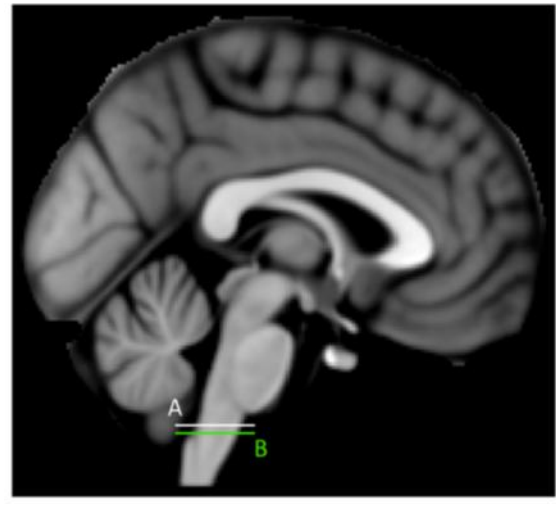
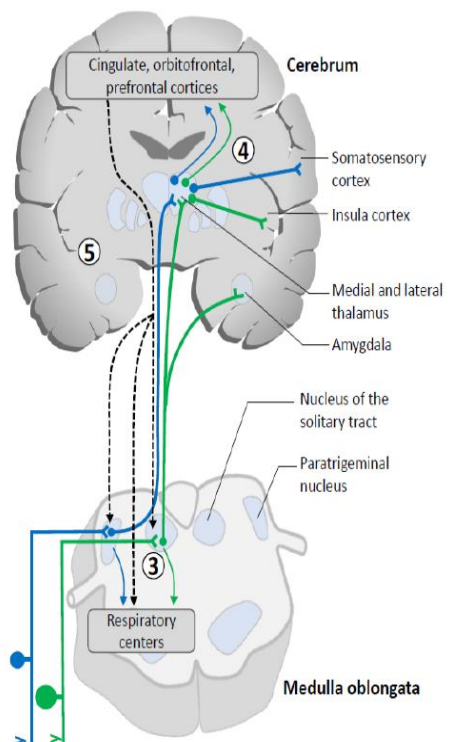


The first steps: ERS NEuroCOUGH Clinical Research Consortium has received approval for the ERS Statement on Defining the Disease Classification and Nomenclature of Chronic Cough in Adults

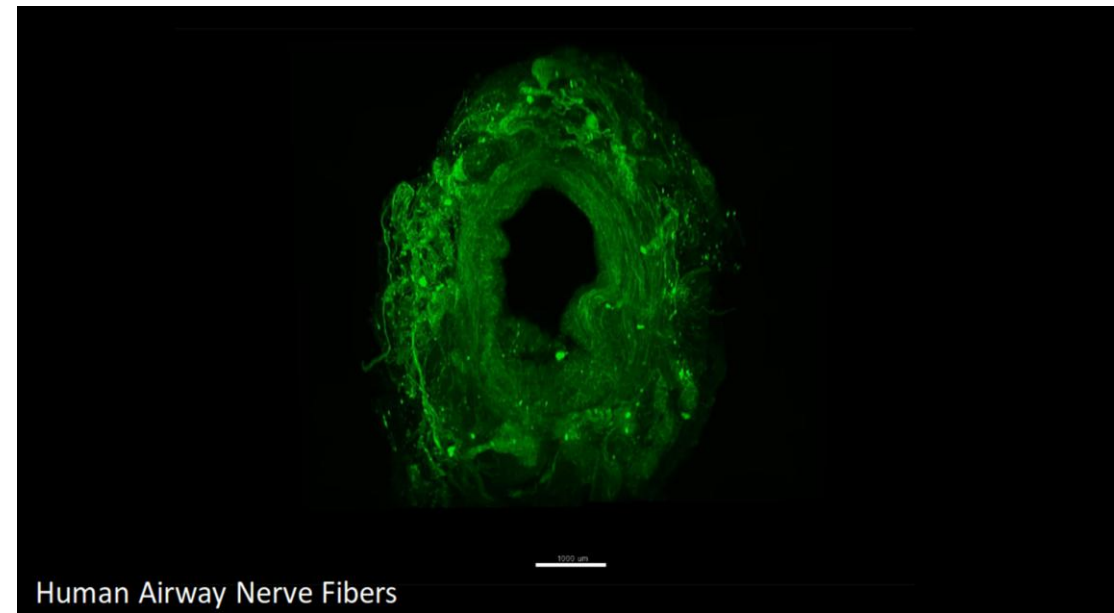


# *Mechanisms of cough*

- *Why do we cough?*
- *How do we cough?*
- *What causes cough to become dysregulated?*

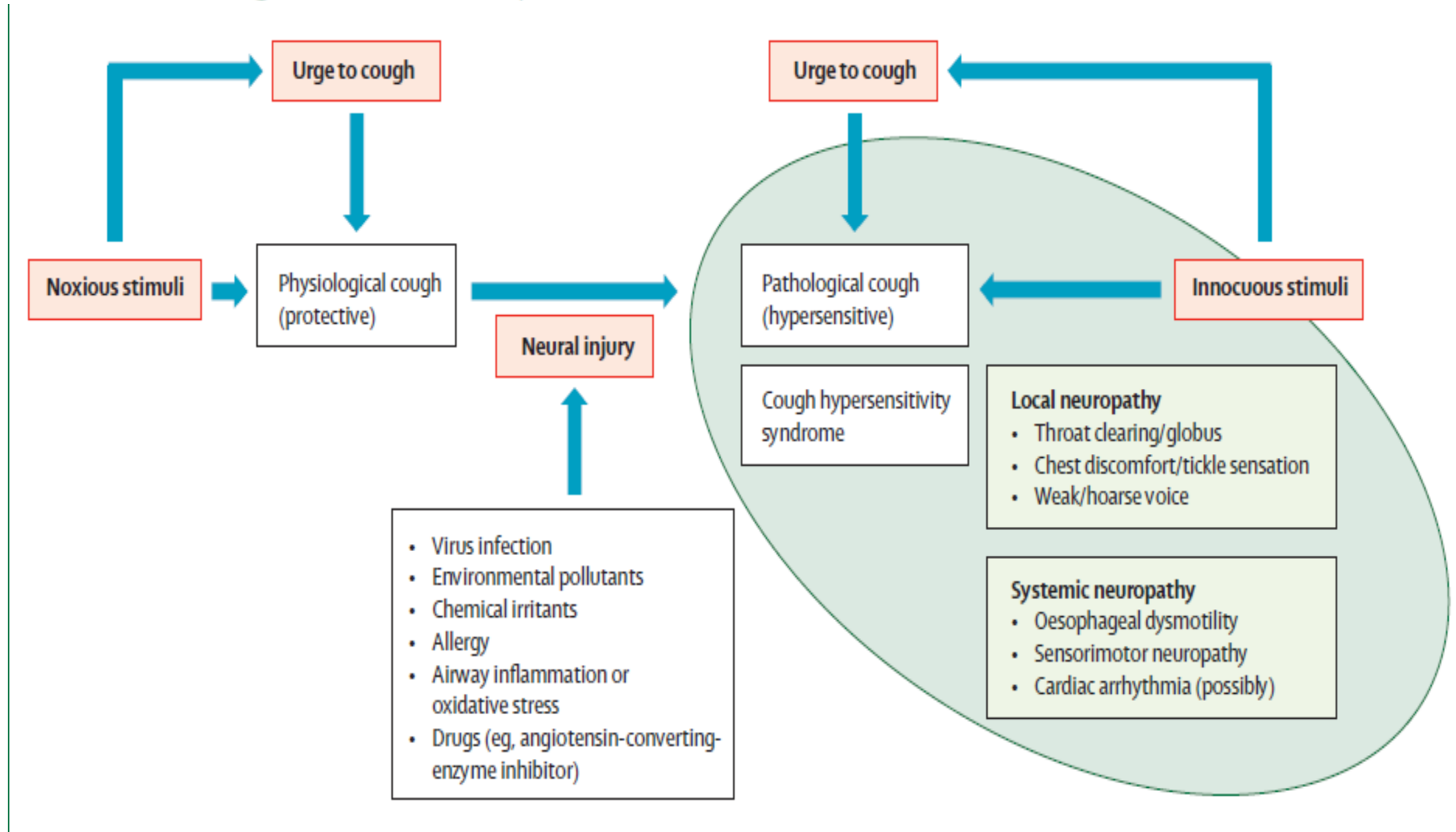


■ Nodose neuron specific   
 ■ Jugular neuron specific   
 ■ Both nodose and jugular neurons

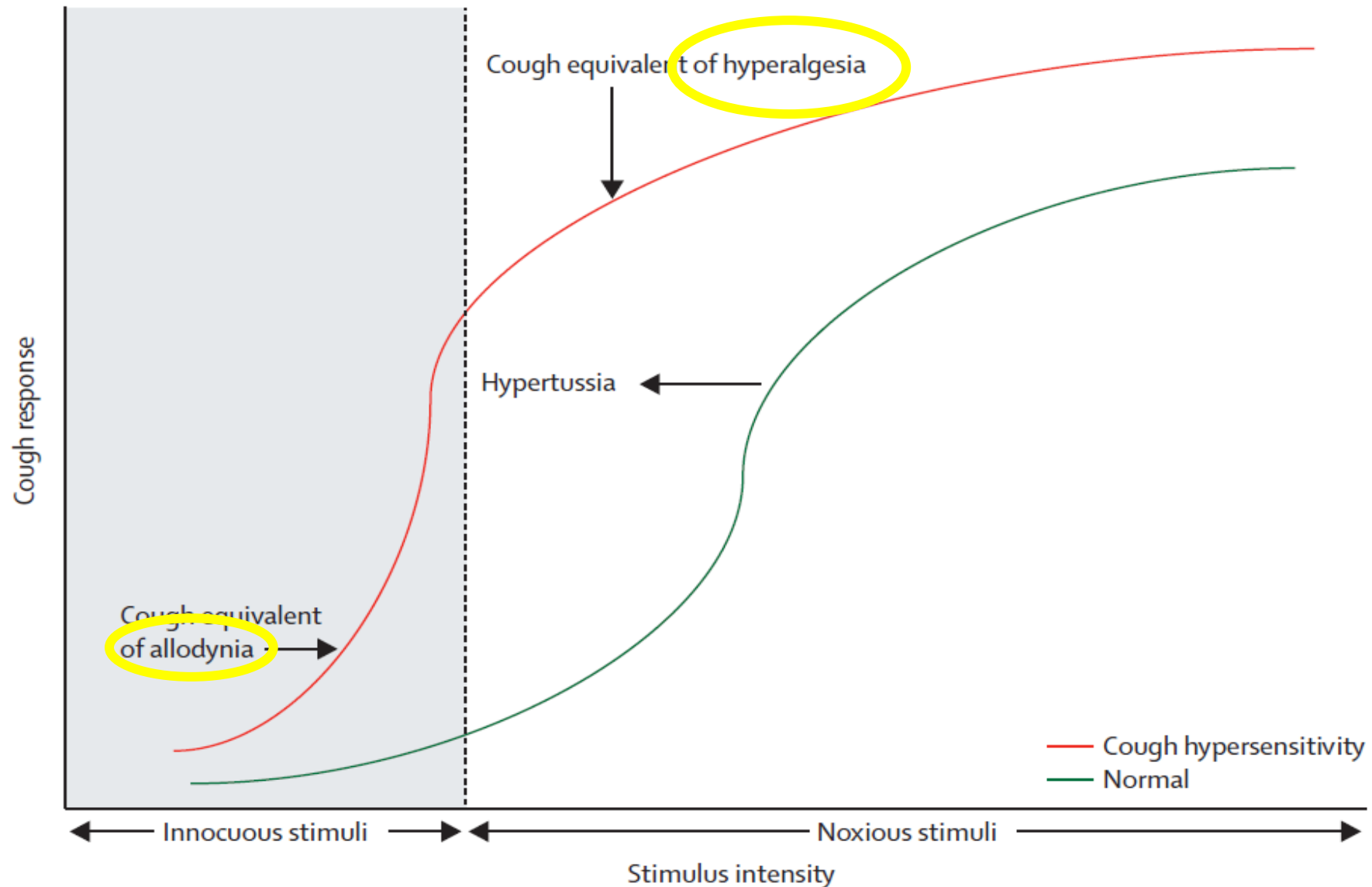


# Chronic cough as a neuropathic disorder

Kian Fan Chung, Lorcan McGarvey, Stuart B Mazzone



# Relation between stimulus intensity and cough response in cough hypersensitivity, and parallel with abnormal pain states



# Expert opinion on the cough hypersensitivity syndrome in respiratory medicine

ERS TASK FORCE REPORT  
COUGH

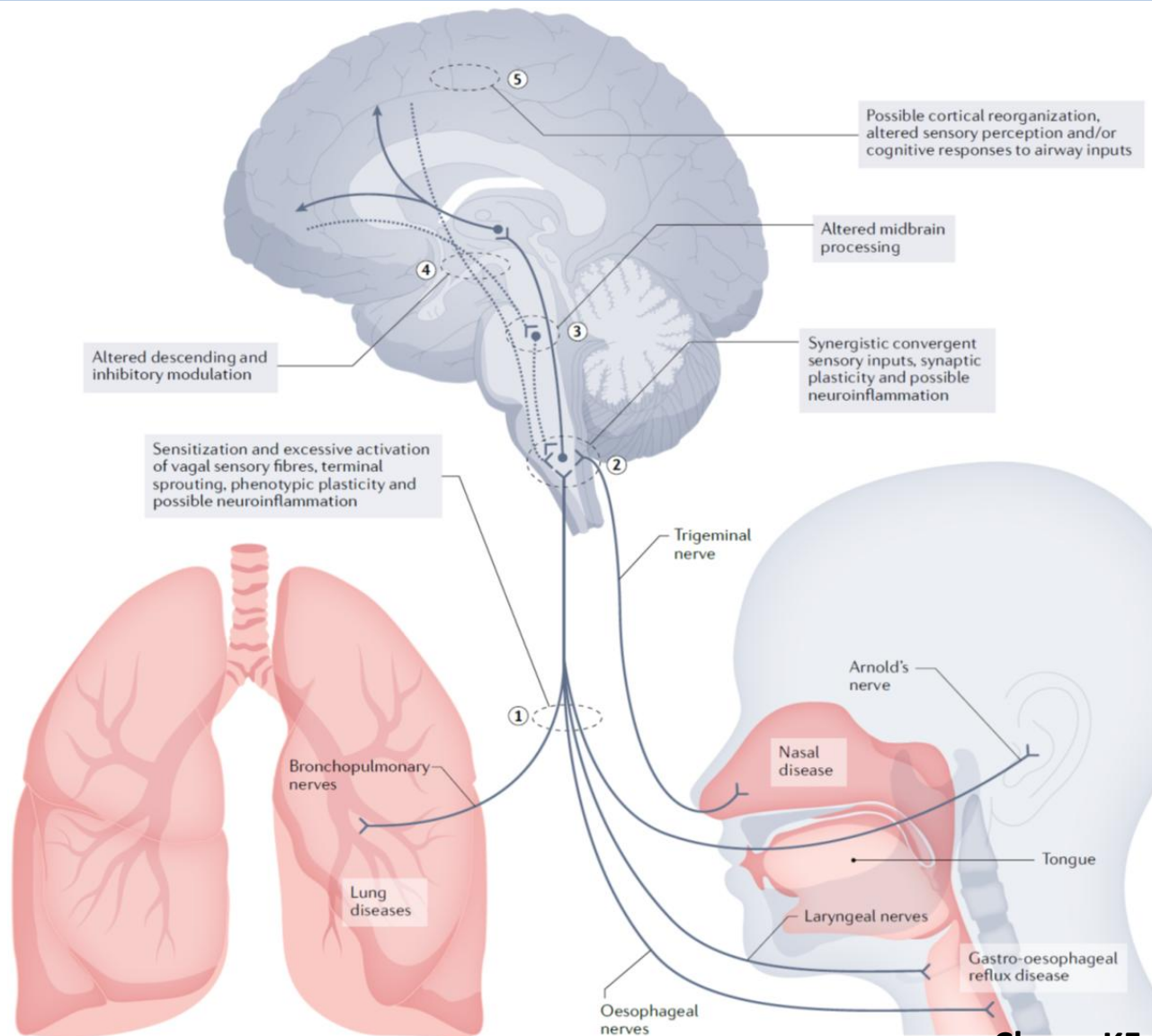
Alyn H. Morice<sup>1</sup>, Eva Millqvist<sup>2</sup>, Maria G. Belvisi<sup>3</sup>, Kristina Bieksiene<sup>4</sup>,  
Surinder S. Birring<sup>5</sup>, Kian Fan Chung<sup>6</sup>, Roberto W. Dal Negro<sup>7</sup>,  
Peter Dicpinigaitis<sup>8</sup>, Ahmad Kantar<sup>9</sup>, Lorcan P. McGarvey<sup>10</sup>,  
Adalberto Pacheco<sup>11</sup>, Raimundas Sakalauskas<sup>4</sup> and Jaclyn A. Smith<sup>12</sup>

Eur Respir J 2014; 44: 1132–1148

***‘Cough hypersensitivity syndrome (CHS) is a clinical syndrome characterised by troublesome coughing often triggered by low levels of thermal, mechanical or chemical exposure’***

*How does the cough reflex become  
**DYSREGULATED?***

# Proposed mechanisms associated with Chronic Cough



## Central sensitization

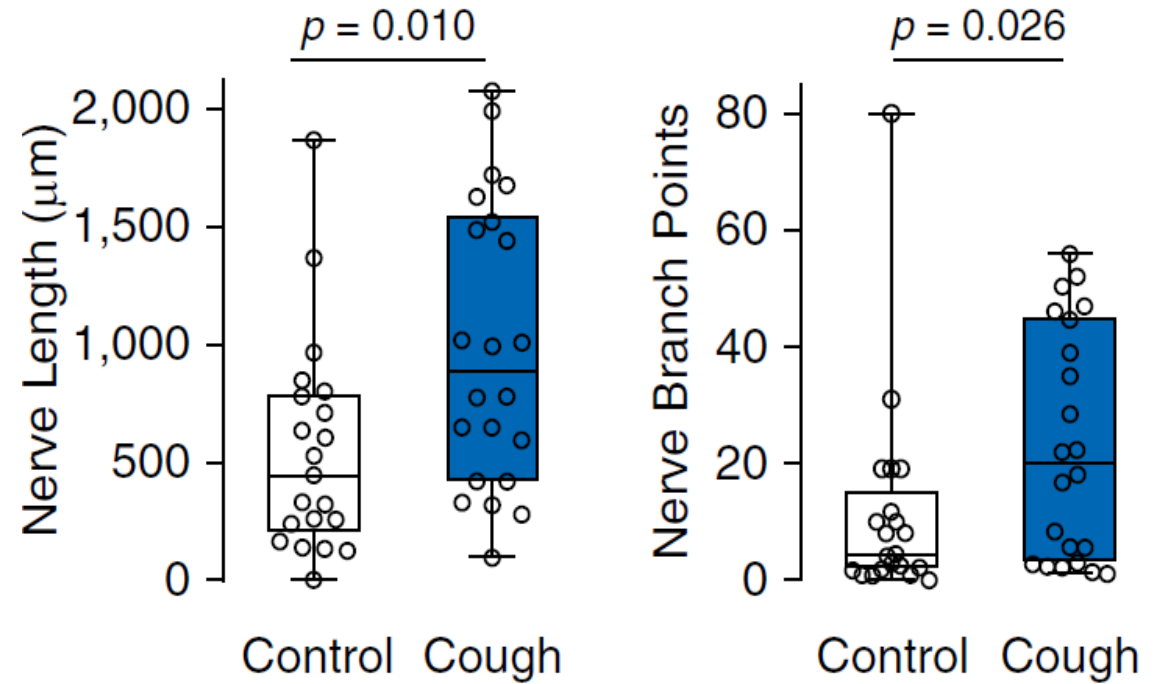
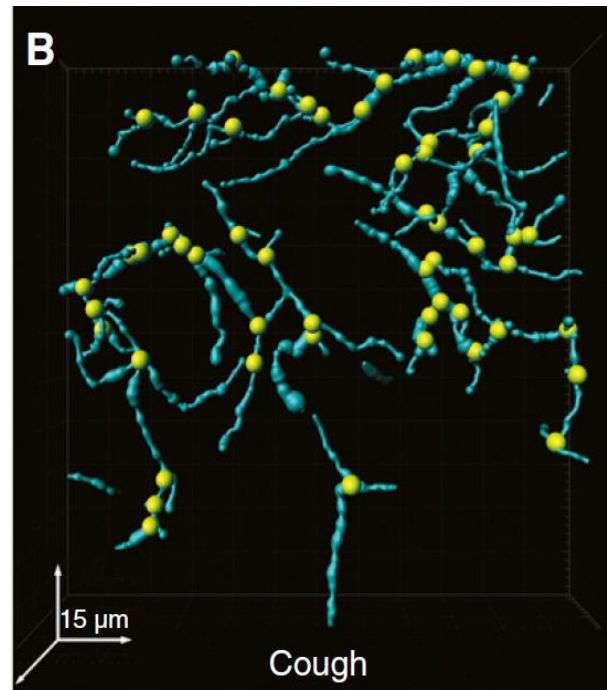
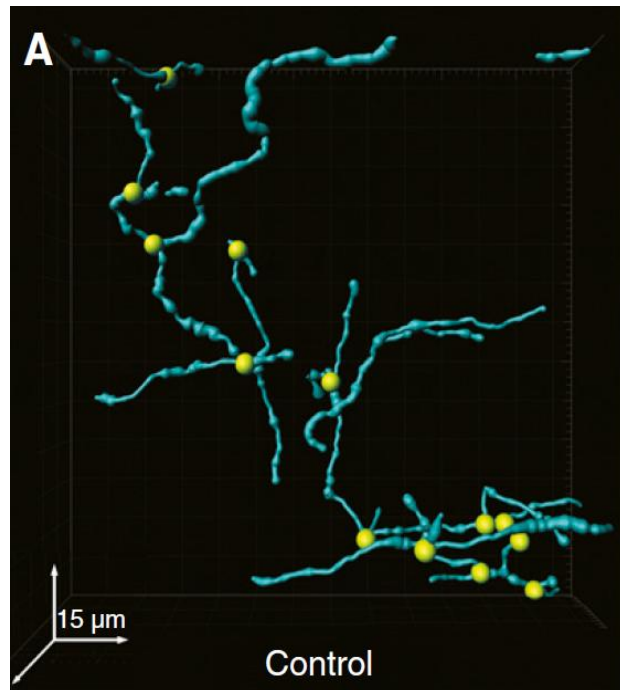
- Amplified inputs from afferent sensory nerves
- Increased activation of brain stem and mid brain pathways
- Altered efficacy of central cough suppression processes

## Peripheral sensitization

- Excess release / impaired metabolism of airway alarmins (e.g. ATP)
- Changes in numbers and activation of receptors
- Increase in nerve fibre density
- Co-activation from sensory nerves from nasal, auricular, oesophageal sites

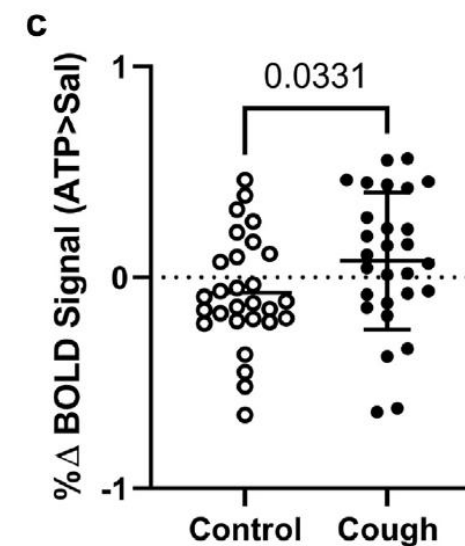
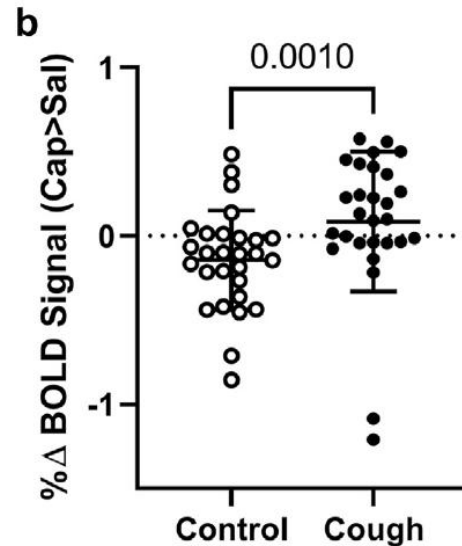
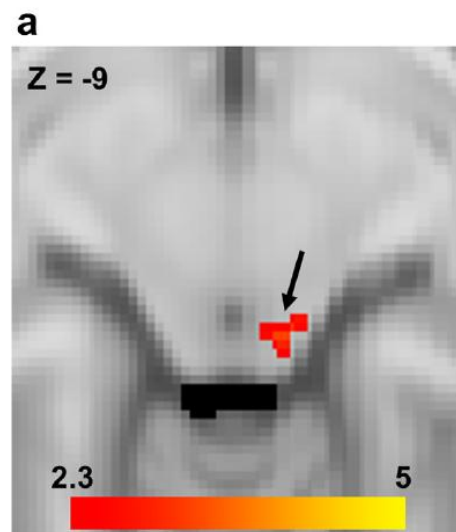
# Airway Sensory Nerve Density Is Increased in Chronic Cough

Clare O. Shapiro<sup>1</sup>, Becky J. Proskocil<sup>1</sup>, Laura J. Oppedard<sup>1</sup>, Emily D. Blum<sup>1</sup>, Nicole L. Kappel<sup>1</sup>, Christopher H. Chang<sup>1</sup>, Allison D. Fryer<sup>1</sup>, David B. Jacoby<sup>1</sup>, Richard W. Costello<sup>2</sup>, and Matthew G. Drake<sup>1</sup>

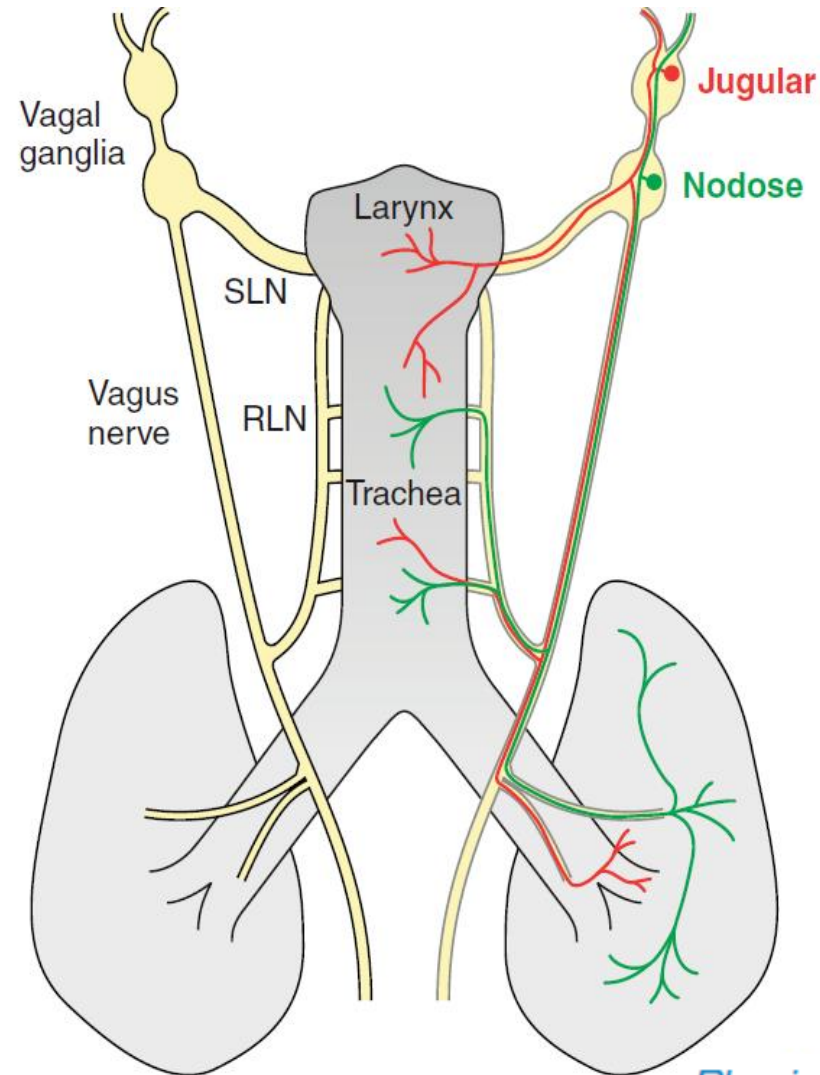


# Brainstem processing of cough sensory inputs in chronic cough hypersensitivity

Aung Aung Kywe Moe,<sup>a,b</sup> Nabita Singh,<sup>b</sup> Matthew Dimmock,<sup>b,c</sup> Katherine Cox,<sup>d</sup> Lorcan McGarvey,<sup>e</sup> Kian Fan Chung,<sup>f,g</sup> Alice E. McGovern,<sup>a</sup> Marcus McMahon,<sup>h</sup> Amanda L. Richards,<sup>i</sup> Michael J. Farrell,<sup>b,j</sup> and Stuart B. Mazzone<sup>a,\*</sup>

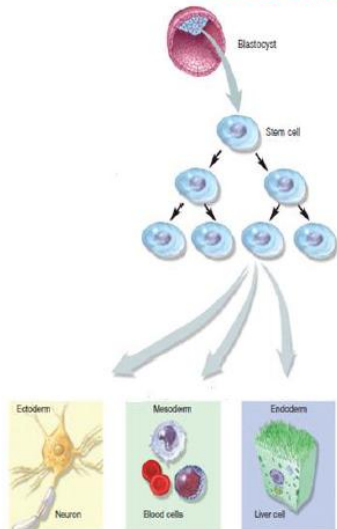


# Embryologically distinct neurons (jugular and nodose vagal ganglia innervate the lungs and airways



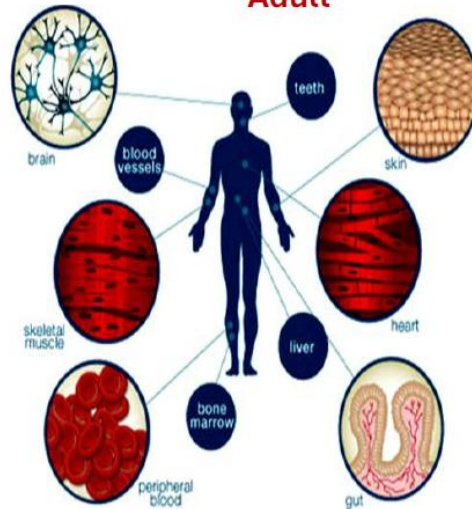
# Human stem cells

## Embryonic



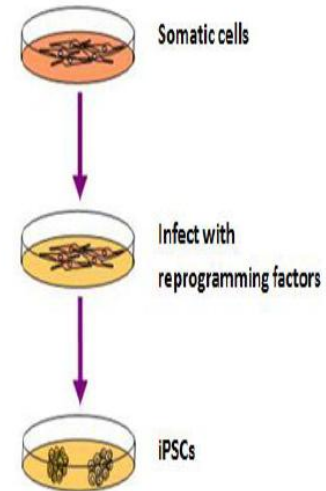
High self renewal potential  
Pluripotent  
Teratoma formation?  
Ethical issues?

## Adult

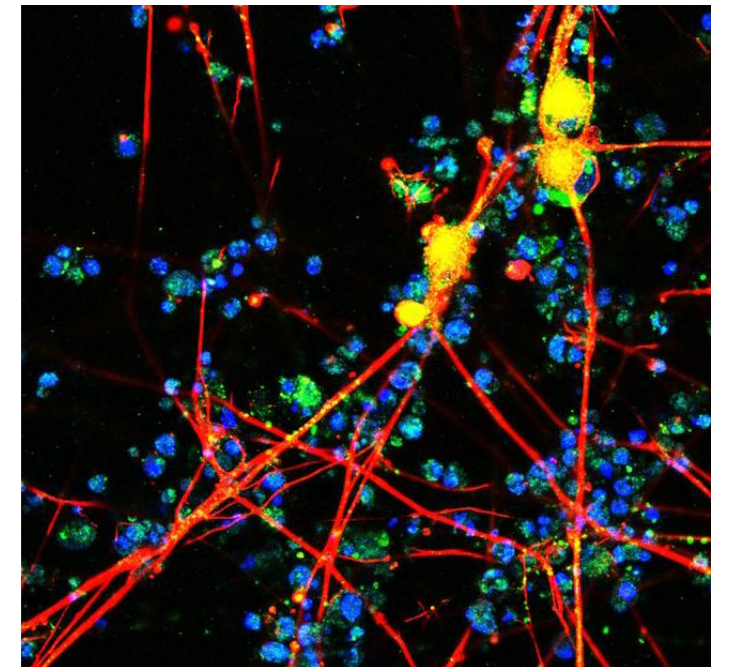
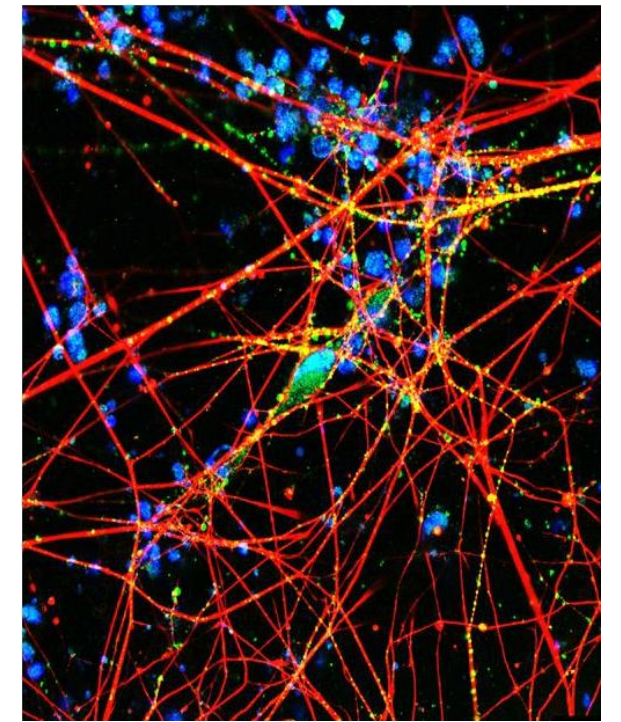


Limited self renewal  
Multipotent  
No ethical issues  
Ease of access

## iPSCs



High self renewal  
Pluripotent  
Genetic stability?

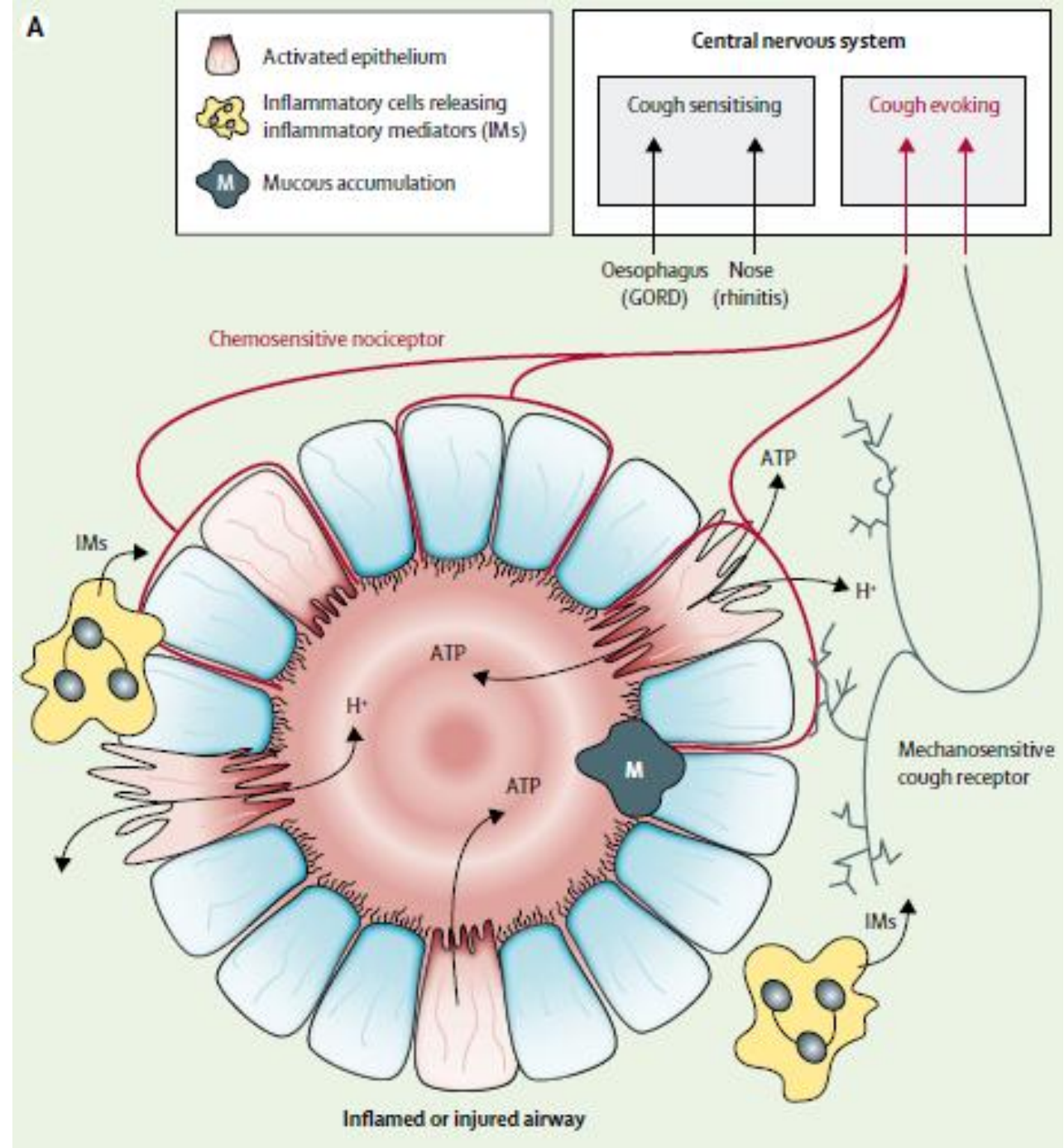


# ***ATP, Cough Hypersensitivity and the role of the Active Airway***

*ATP released from injured or activated airway epithelial cells might similarly represent a common mediator of sensory neuron sensitization or activation*

***Modulating the effects of extracellular ATP on sensory nerves represents a potential target for antitussive therapies***

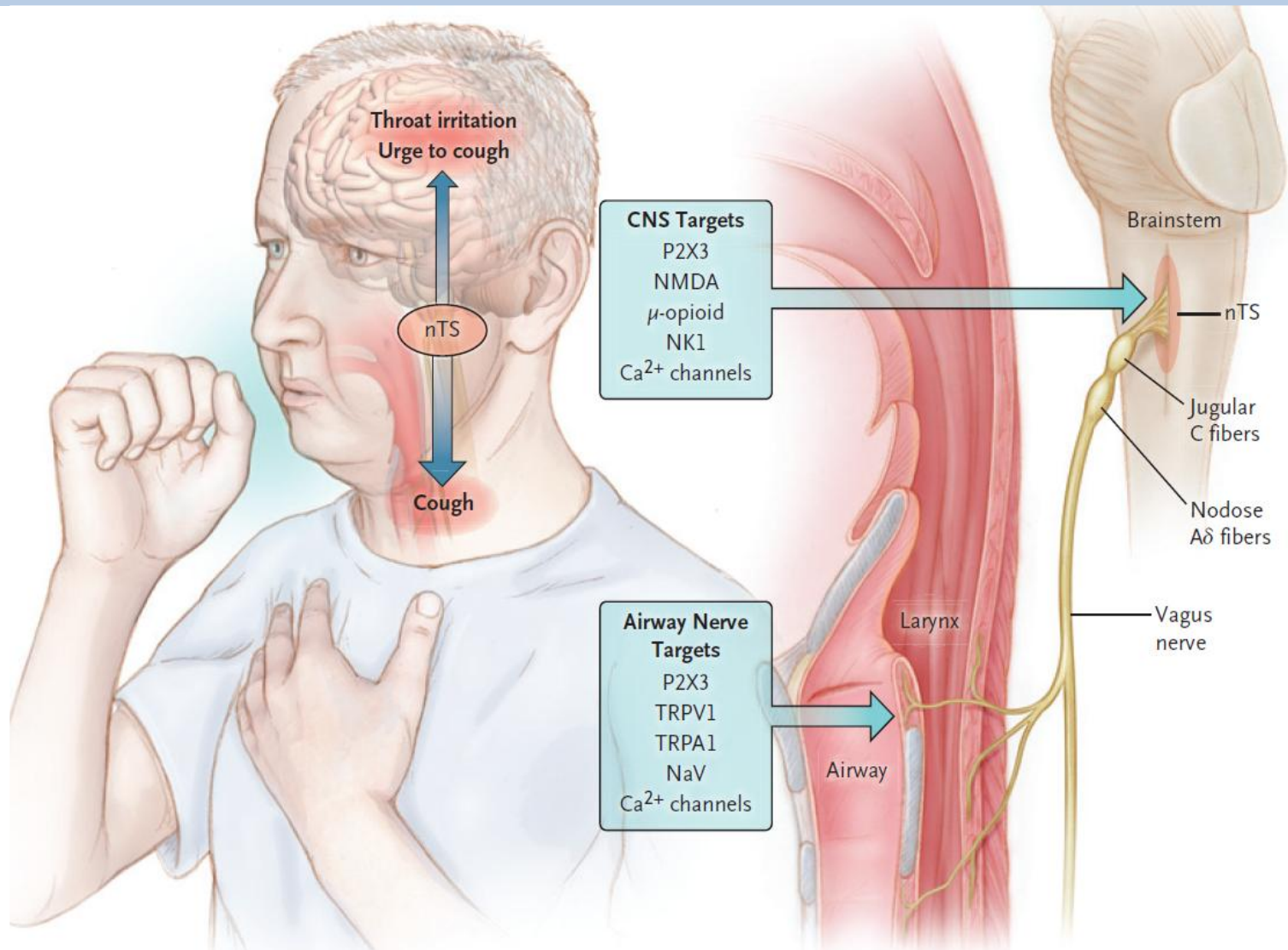
Mazzone, Chung, McGarvey. Lancet Respir Med 2018.



# Take-Home Message

- Coughing represents a complex series of neurobiological processes involving the peripheral nervous system, brainstem and higher brain (subcortical and cortical sites)
- This has become disordered in patients with refractory chronic cough and is manifest clinically by cough hypersensitivity
- Unravelling the factors responsible for peripheral and central neural sensitization is critical to the development of effective therapies

# Therapeutic targets for chronic cough



# *The pipeline for new treatments remains strong*



NaV blockers<sup>1</sup>



P2X3 antagonists<sup>1</sup>



NK-1 antagonists<sup>1</sup>



RASP modulator<sup>2</sup>



NMDA-receptor antagonist<sup>1</sup>



TRPM8 agonists<sup>1</sup>



Opioid receptor mu antagonist / kappa agonist<sup>1</sup>



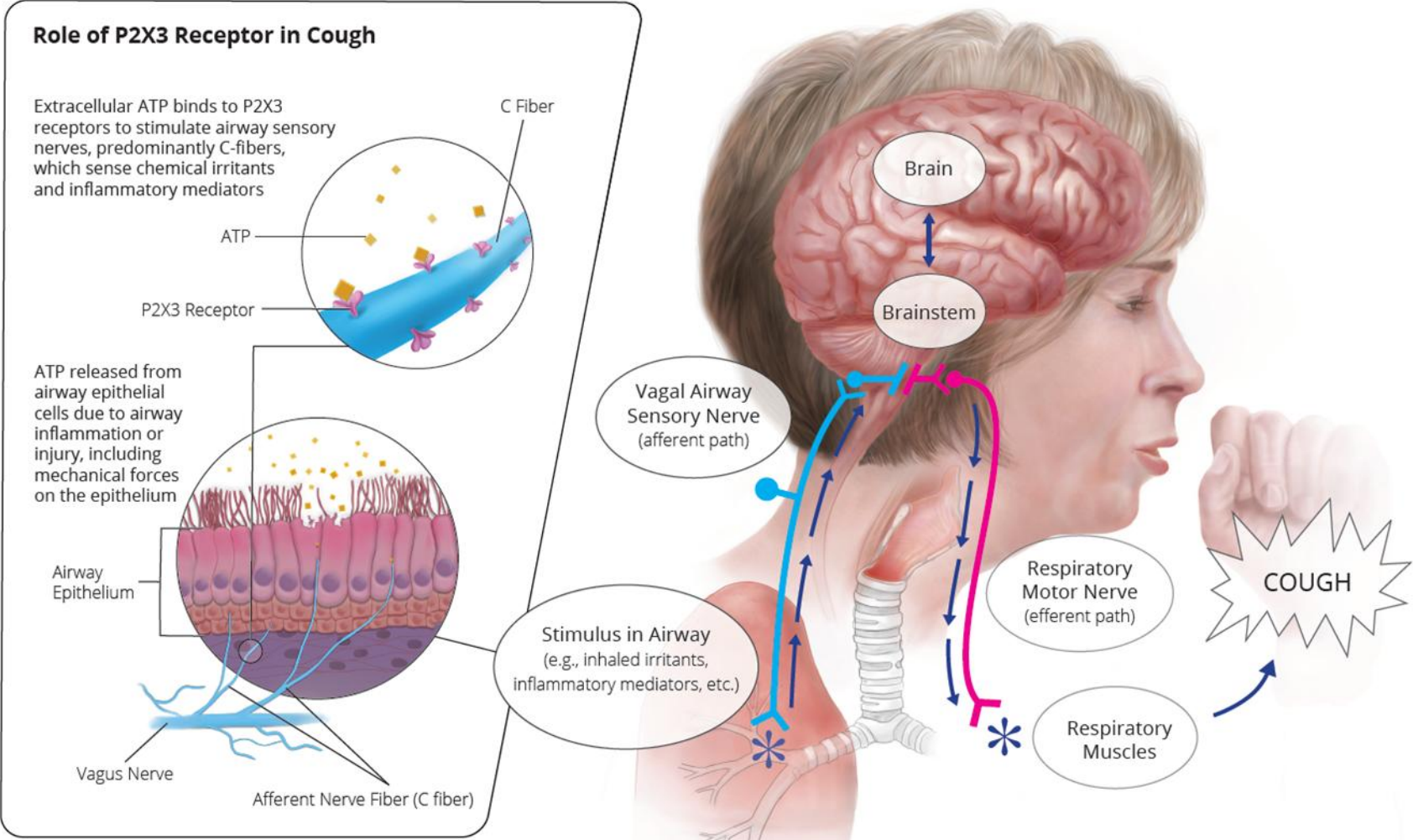
TRPV1/TRPA1 antagonists<sup>1,3</sup>

None of the investigational products in development mentioned in this document are currently approved for the treatment of cough. These are investigational products still undergoing evaluation for safety and efficacy. This content is intended for informational purposes only and does not constitute medical advice or guarantee future approval

NaV = voltage-gated sodium channel; NK-1 = neurokinin-1; NMDA = N-methyl-d-aspartate; P2X3 = purinergic receptor subtype 3; RASP, reactive aldehyde species; RCC = refractory chronic cough; TRPA1 = transient receptor potential ankyrin 1; TRPM8 = transient receptor potential vanilloid potential melastatin 8; TRPV1 = transient receptor potential vanilloid 1.

1. Smith JA. *Lung*. 2024;202(1):5-16. 2. <https://clinicaltrials.gov/study/NCT05392192> (accessed 4 November 2025). 3. Terrett JA, et al. *J Med Chem*. 2024;67(5):3287-3306.

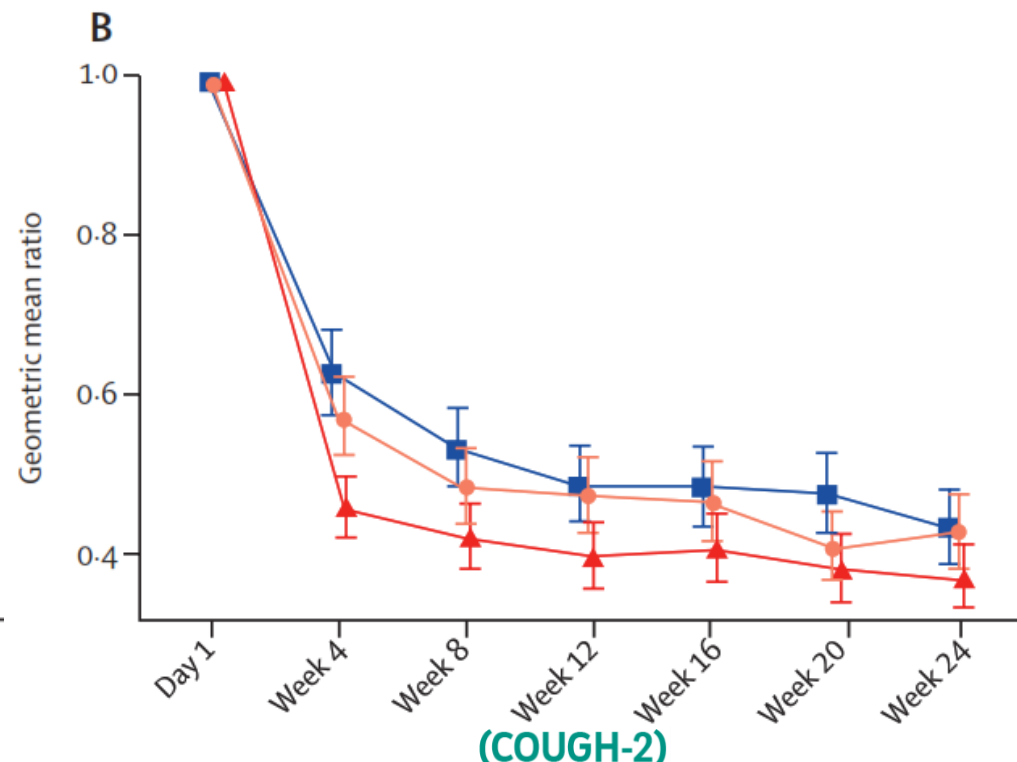
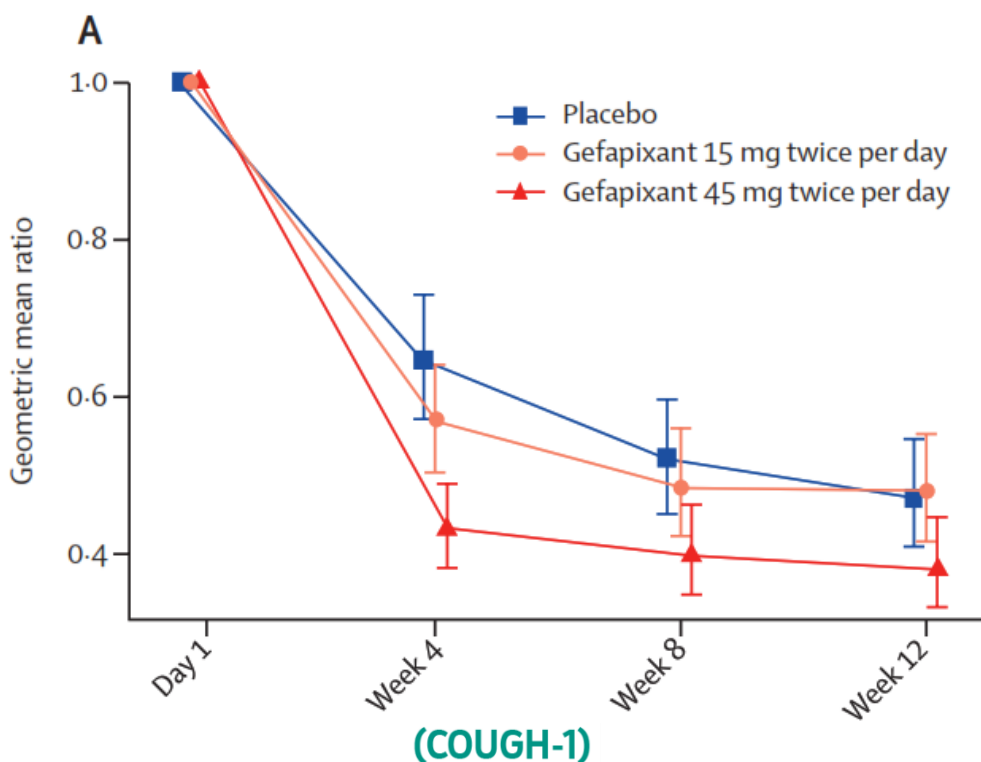
# Rationale for Treatment of Chronic Cough With a P2X3 Receptor Antagonist



# Efficacy and safety of gefapixant, a P2X<sub>3</sub> receptor antagonist, in refractory chronic cough and unexplained chronic cough (COUGH-1 and COUGH-2): results from two double-blind, randomised, parallel-group, placebo-controlled, phase 3 trials



Lorcan P McGarvey, Surinder S Biring, Alyn H Morice, Peter V Dicpinigaitis, Ian D Pavord, Jonathan Schelfhout, Allison Martin Nguyen, Qing Li, Anjela Tzontcheva, Beata Iskold, Stuart A Green, Carmen La Rosa, David R Muccino, Jaclyn A Smith, COUGH-1 and COUGH-2 Investigators\*





ema.europa.eu/en/medicines/human/EPAR/lyfnua



News Travel Imported From IE Connect to Wi-Fi Integrated Research Ap...

All Bookmarks

An official website of the European Union How do you know? ▾



EUROPEAN MEDICINES AGENCY  
SCIENCE MEDICINES HEALTH

Search

Medicines Human regulatory ▾ Veterinary regulatory ▾ Committees ▾ News & events ▾ Partners & networks ▾ About us ▾

# Lyfnua







*gefapixant*

## Table of contents

- [Overview](#)
- [Authorisation details](#)

✓ **AUTHORISED**  
This medicine is authorised for use in the European Union.

# Real-world usage and response to gefapixant in refractory chronic cough

Hisako Matsumoto <sup>1</sup>, Yoshihiro Kanemitsu <sup>2</sup>, Motoki Ohe<sup>3</sup>, Hiroshi Tanaka<sup>4</sup>, Kunihiro Terada<sup>5</sup>, Koichi Nishi<sup>6</sup>, Ryo Atsuta<sup>7</sup>, Johsuke Hara<sup>8</sup>, Junpei Saito<sup>9</sup>, Mitsuhide Ohmichi<sup>10</sup>, Tamotsu Ishizuka <sup>11</sup>, Teruaki Nishiuma<sup>12</sup>, Hideki Inoue<sup>13</sup>, Naoto Watanabe<sup>14,15</sup>, Tatsuya Nagano <sup>16</sup>, Tetsuya Ueda<sup>17</sup>, Haruhiko Ogawa<sup>18</sup>, Shigeru Endo<sup>19</sup>, Takeshi Suzuki<sup>20</sup>, Toshiyuki Kita<sup>21</sup>, Katsuya Fujimori<sup>22</sup>, Yoshihisa Ishiura<sup>23</sup>, Masaki Fujimura<sup>24,25</sup> and Akio Niimi<sup>2</sup> on behalf of the Japan Cough Society

- 272 cases analysed
- Predominately middle-aged female patients (majority has asthma as a co-morbidity)
- 50% reported  $\geq 5$ -point improvement on a 0-10 cough severity scale; 25% reported  $\geq 8$ -point improvement
- Responders tended to have more severe cough at baseline and more triggers
- Improvement was typically seen in 2 weeks
- When discontinued treatment benefits were sustained in responders
- Taste disturbance was not associated with response to gefapixant

# Oral Nalbuphine in Idiopathic Pulmonary Fibrosis–Associated Cough

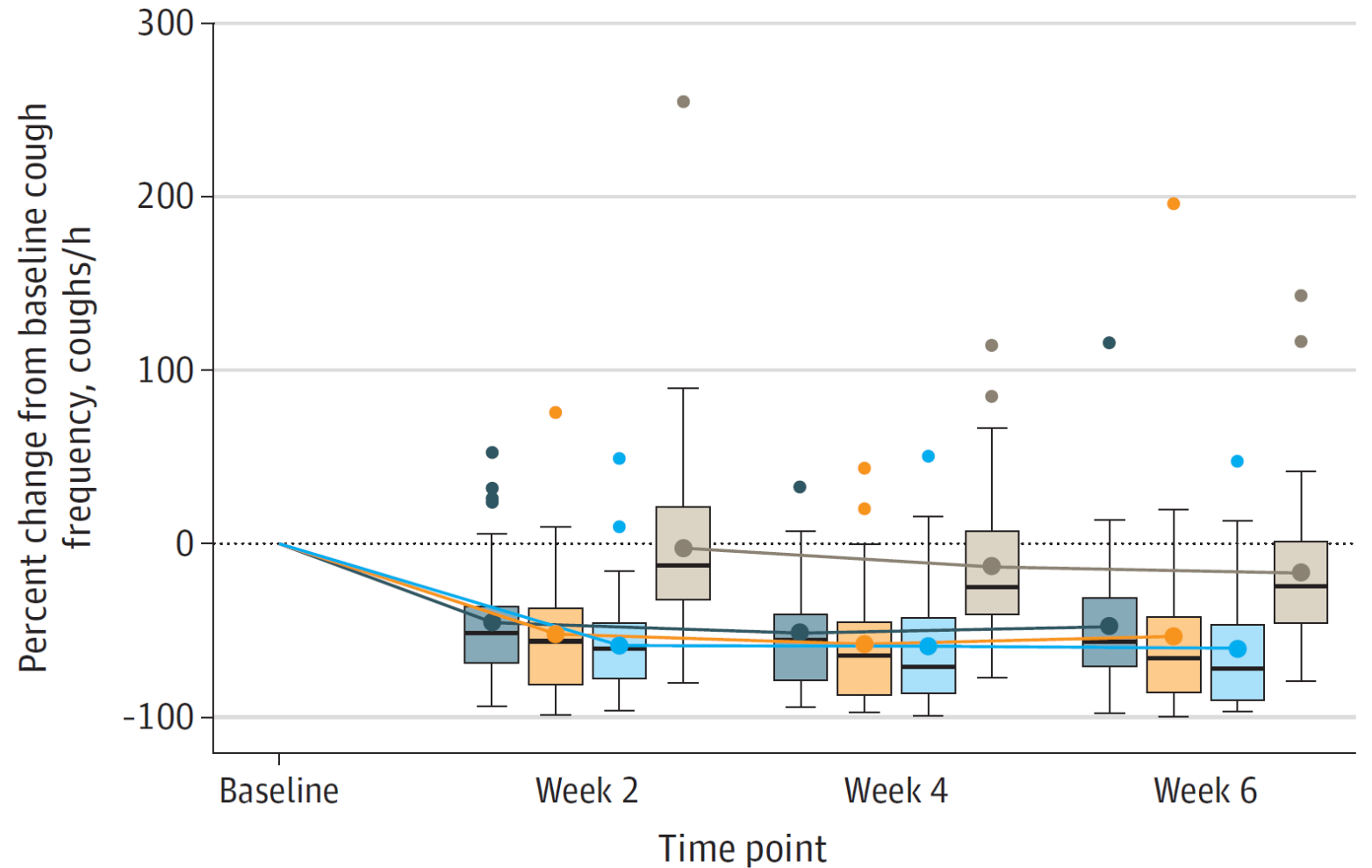
## The CORAL Randomized Clinical Trial

Philip L. Molyneaux, MD, PhD; Nesrin Mogulkoc, MD; Hakan Gunen, MD; Anna Doboszyńska, MD; Michael Kreuter, MD; Blue Neustifter, PhD; Vandana Mathur, MD; James Cassella, PhD; for the CORAL Study Group

JAMA. 2026;335(12):1050-1059. doi:10.1001/jama.2025.26179  
Published online January 22, 2026.

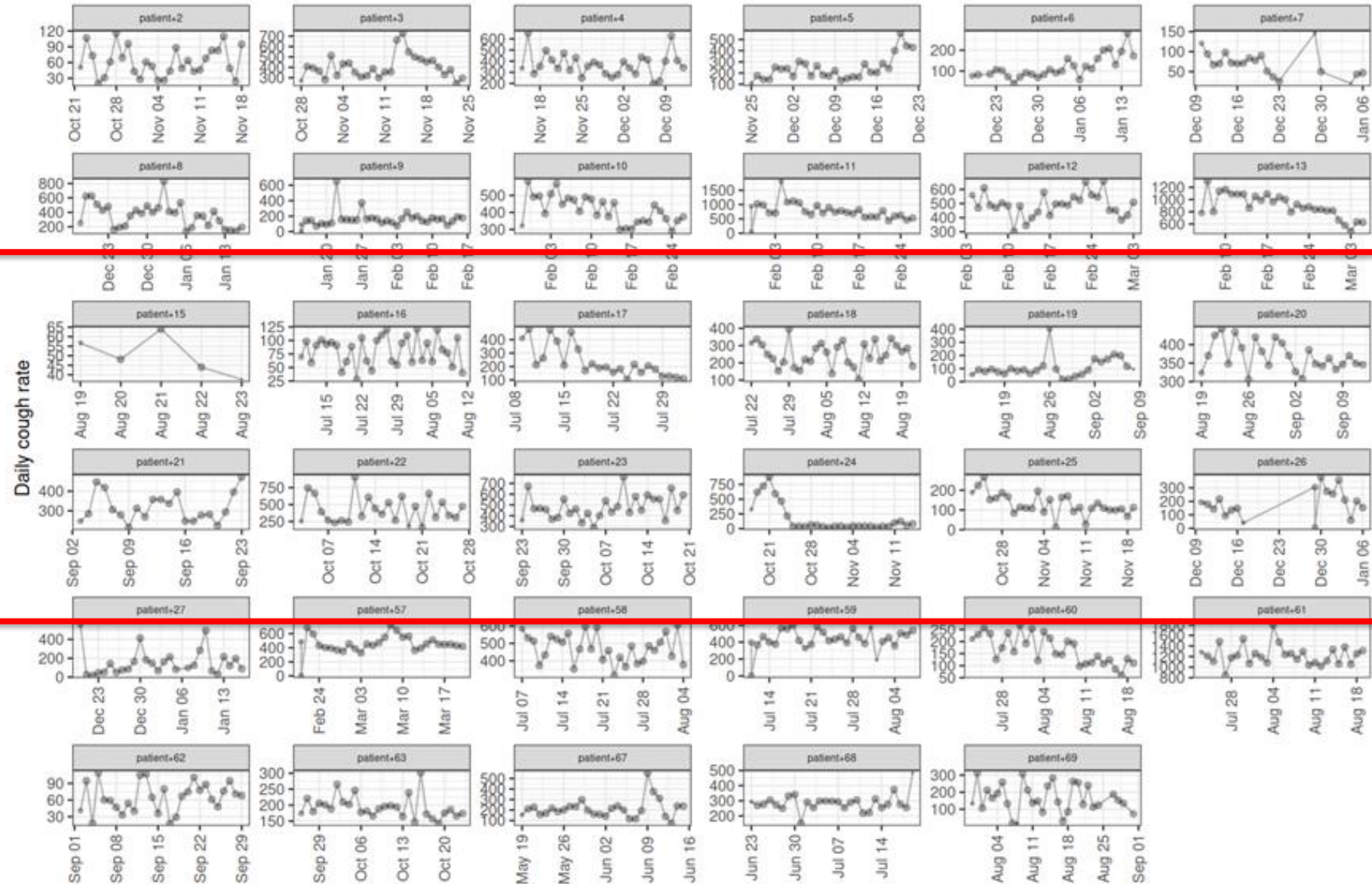
Table 1. Baseline Patient Characteristics

Characteristic	No. (%)			
	Nalbuphine ER twice daily		108 mg Twice daily (n = 40)	Placebo twice daily (n = 40)
	27 mg Twice daily (n = 42)	54 mg Twice daily (n = 43)		
<b>Demographics</b>				
Age, mean (SD), y	69.1 (7.0)	68.5 (7.3)	71.9 (7.0)	71.2 (7.7)
<b>Sex</b>				
Male	29 (69.0)	31 (72.1)	29 (72.5)	29 (72.5)
Female	13 (31.0)	12 (27.9)	11 (27.5)	11 (27.5)
<b>Race and ethnicity<sup>a</sup></b>				
American Indian or Alaska Native	0	0	0	0
Asian	1 (2.4)	2 (4.7)	0	0
Black or African American	0	1 (2.3)	1 (2.5)	0
Native Hawaiian or Other Pacific Islander	0	0	0	0
White	40 (95.2)	38 (88.4)	39 (97.5)	40 (100)
Not reported	1 (2.4)	2 (4.7)	0	0
<b>Medical history</b>				
Cough duration, mean (SD), y	3.0 (2.8)	4.1 (5.2)	5.4 (10.8)	4.4 (4.8)
<b>Smoking history</b>				
Past	24 (57.1)	20 (46.5)	22 (55.0)	21 (52.5)
Current	1 (2.4)	2 (4.7)	0	0
Gastroesophageal reflux disease <sup>b</sup>	13 (31.0)	19 (44.2)	17 (42.5)	17 (42.5)
Received supplemental oxygen at any time	6 (14.3)	5 (11.6)	5 (12.5)	6 (15.0)
<b>Concomitant medications</b>				
<b>Antifibrotics</b>				
Nintedanib	17 (40.5)	22 (51.2)	21 (52.5)	24 (60.0)
Pirfenidone	14 (33.3)	12 (27.9)	11 (27.5)	7 (17.5)
Proton pump inhibitors	21 (50.0)	26 (60.5)	19 (47.5)	22 (55.0)
<b>Physical findings</b>				
BMI, mean (SD)	27.7 (3.3)	26.9 (3.8)	27.6 (3.9)	27.8 (4.6)
<b>Pulmonary function tests</b>				
Forced vital capacity, mean (SD), L	2.6 (0.9)	2.5 (0.7)	2.7 (0.9)	2.4 (0.9)
Forced vital capacity, mean (SD), % predicted of normal	77.2 (19.7)	73.4 (16.1)	79.1 (20.2)	76.8 (19.3)
Diffusing capacity of the lungs for carbon monoxide, mean (SD), % predicted	52.6 (14.8)	49.0 (12.3)	56.6 (21.4)	49.6 (16.2)
Oxygen saturation by pulse oximetry, mean (SD), %	96.0 (2.0)	95.5 (2.1)	96.0 (2.0)	95.4 (1.7)
PGI-S, mean (SD) <sup>c</sup>	2.3 (0.6)	2.4 (0.5)	2.1 (0.6)	2.1 (0.6)



***Patients with chronic cough don't cough  
ALL THE TIME!!***

# Daily cough count variability in 35 patients with chronic cough



unpublished

# *Incredible progress on the field of cough recording*



**Vitalograph**<sup>®</sup>



 **strados**<sup>™</sup>

  
**Hyfe**



# Take Home Messages

- Developing a novel antitussive therapy is challenging
- Selection of the optimal primary end point (s) is of considerable importance in clinical trial design
- Needs to be feasible and clinically meaningful
- Single, co-primary and composite endpoints may all be considered
- Anchoring endpoints to patients' impression of severity and change is important
- Engagement with regulatory agencies is crucial
- New technologies and cough metrics offer promise

# The benefits and importance of collaborative working

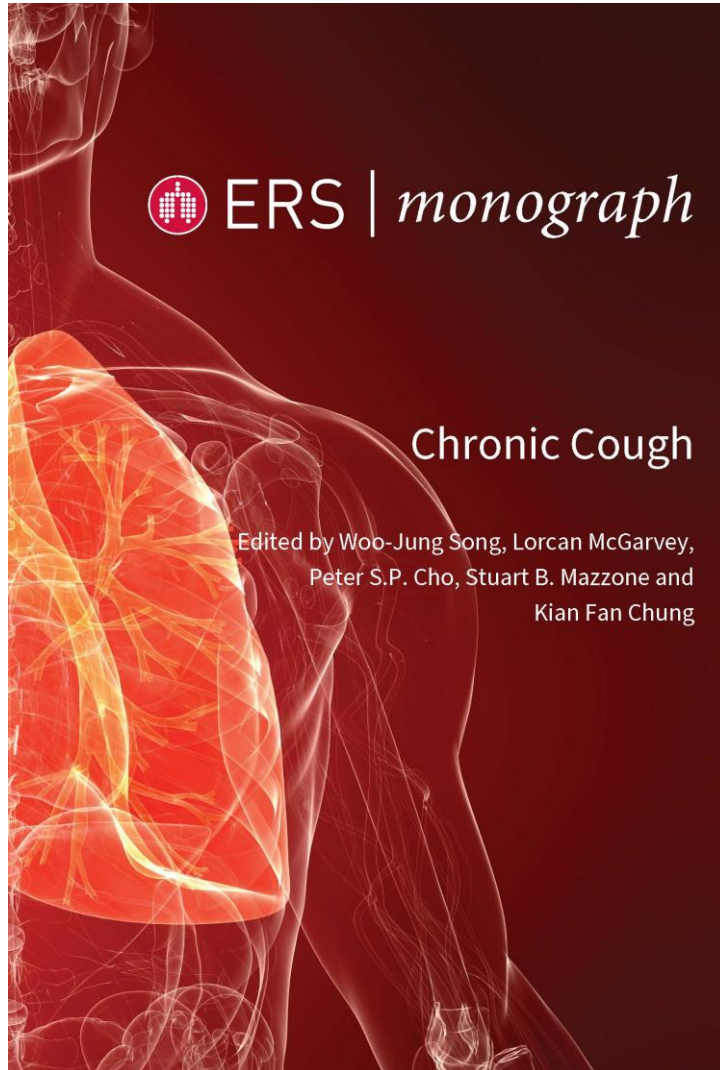


# N-Euro ough

NEuroCOUGH – NEw Understanding in the  
treatment Of COUGH Clinical Research  
Collaboration

A pan-European multi-centre network to improve the  
management of Cough.

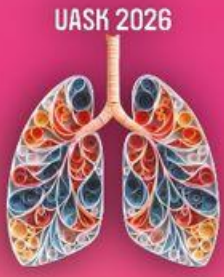
# ERS Monograph



- Chronic Cough, edited by Woo-Jung Song, Lorcan McGarvey, Peter S.P. Cho, Stuart B. Mazzone and Kian Fan Chung

This *ERS Monograph* is the first to focus entirely on chronic cough. It covers:

- Challenges in disease recognition
- Classification and management
- Strategies for improving patient care
- We are extremely grateful to our authors and reviewers for their valued contribution



Uluslararası Katılımlı

# AKCİĞER SAĞLIĞI KONGRESİ

25-28 MART 2026

Sueno Deluxe Hotel, Belek/Antalya

*Sizin Sesiniz, Sizin Kongreniz...*



*Thank you!*