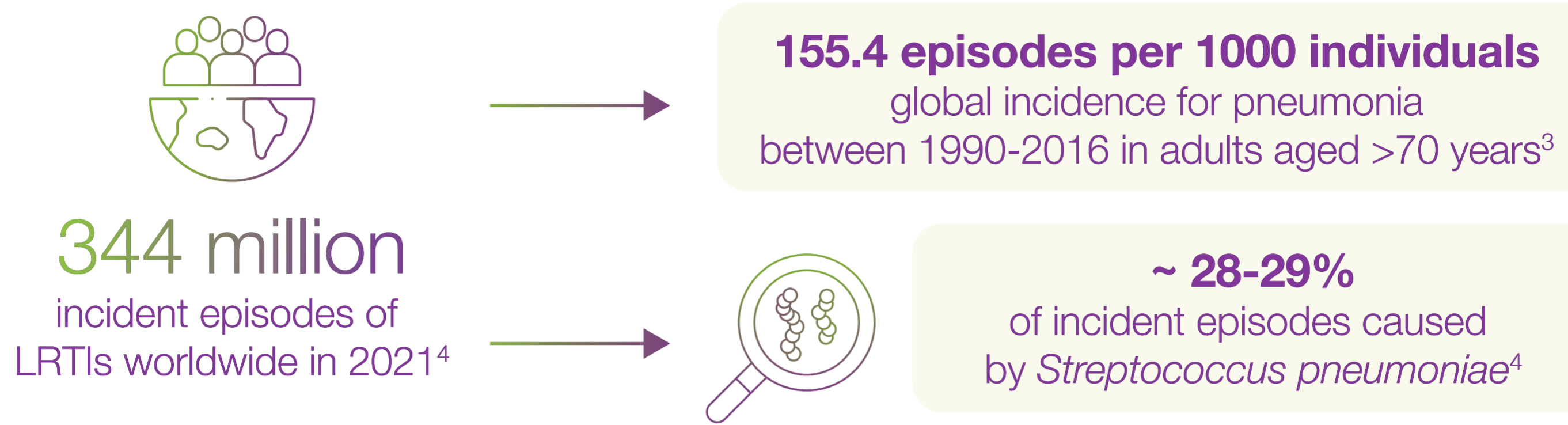
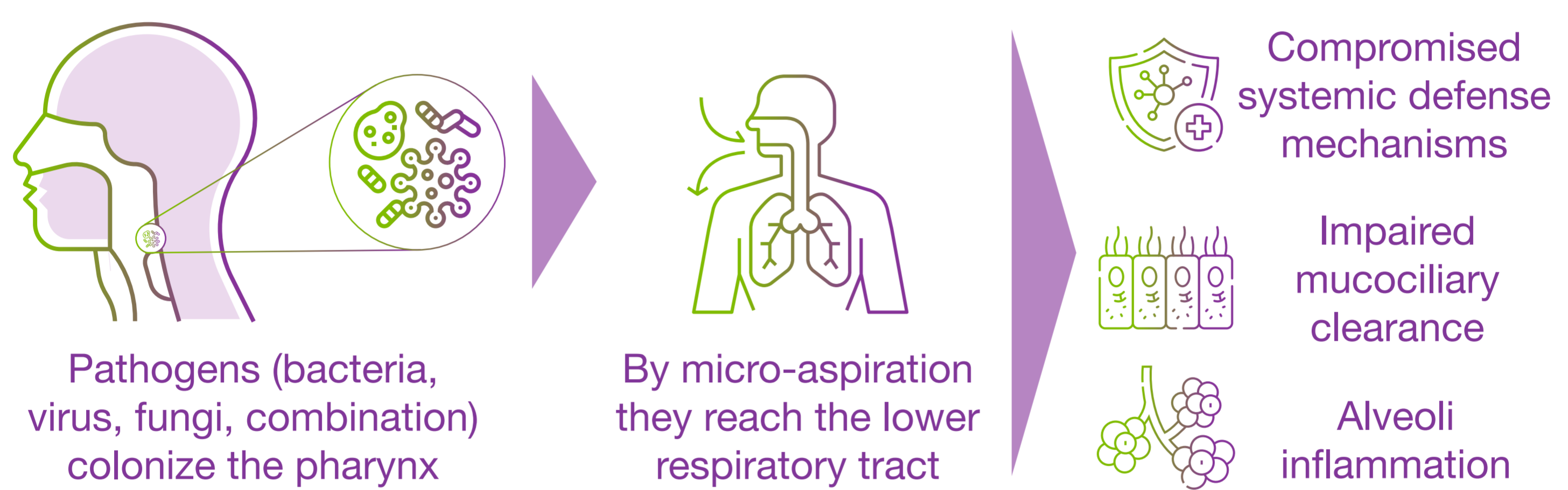


When cough isn't just a cold: understanding the signs of pneumonia

Lower respiratory tract infections (LRTIs) affect the trachea, the bronchi, the bronchioles and the lungs, with bronchitis, bronchiolitis, and pneumonia being their most common manifestations.^{1,2} Pneumonia is especially dangerous in vulnerable individuals, such as paediatric and elderly populations.³



Pathophysiology of pneumonia^{1,5,6}



Diagnosis^{1,5,6}

Common signs and symptoms		Confirmation with chest imaging	Optional: sputum culture, blood biomarker analysis (C-reactive protein (CRP), procalcitonin (PCT))
<ul style="list-style-type: none"> Cough, which can be accompanied by sputum production Fever with or without chills Dyspnoea Tachypnoea 	<ul style="list-style-type: none"> Tachycardia Crackles on auscultation Chest pain when coughing or breathing Fatigue, altered mental status, gastrointestinal symptoms 		

Much of them shared with upper respiratory tract infections (URTIs)

Microbiologic confirmation not required. Useful for treatment management

A meta-analysis including 11,144 participants showed:⁷

- Respiratory rate (RR ≥ 20 /min)
- Fever (≥ 38 °C)
- Pulse rate (> 100 /min)
- Crackles on lung exam

Best clinical manifestations for pneumonia diagnosis in primary care settings

Cough is common but not decisive due to its low specificity

Clinical manifestations alone are not accurate enough, combination with blood test biomarkers increase diagnostic confidence

- PCT > 0.25 ng/ml
- CRP > 20 mg/l

Treatment management

Antibiotics are recommended for pneumonia treatment. Microbiologic tests can be inconclusive and empirical antibacterial therapy can be started to avoid dual viral-bacterial coinfection risks.⁵

Recent American guideline notes the only possible exception to this recommendation. Empirical antibiotic treatment is not suggested in outpatients without comorbidities, community acquired pneumonia (CAP) confirmed and virus positive testing unless the clinical context requires it.⁵



Reducing the impact of pneumonia relies on early detection and risk assessment to improve outcomes, and appropriate guideline-based antimicrobial use to prevent complications and antibiotic resistance.³

ARIs, acute respiratory infections; CAP, community-acquired pneumonia; CRP, C-reactive protein; LRTI, low respiratory tract infection; PCT, procalcitonin; URTI, upper respiratory tract infection.

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