

*Could their COPD  
be genetic?*

**GRIFOLS**

# Alpha<sub>1</sub>-Antitrypsin Deficiency (Alpha<sub>1</sub> or AAT Deficiency) is a genetic risk factor for COPD<sup>1</sup>



And is estimated to be present in 1-5% of diagnosed COPD patients<sup>2</sup>

**1 in 2,400**



1 in 2,400 Canadians have severe AAT Deficiency<sup>3-6,\*†</sup>

**15,000** Canadians



15,000 Canadians have severe AAT Deficiency<sup>3-6,\*†</sup>

**>90% undiagnosed**



More than 90% of individuals have not been identified<sup>7,8,\*</sup>

**8.3 years**

8.3 years is the average delay between the onset of symptoms and diagnosis of AAT Deficiency<sup>7,\*</sup>

\*Based on estimates as cited in the relevant references.

†PiSZ and PiZZ, less than 11µM, not all patients will have emphysema.<sup>6</sup>

1. World Health Organization.  $\alpha$ 1-antitrypsin deficiency: memorandum from a WHO meeting. Bull World Health Organ. 1997;75(5):397-415. 2. Marciniuk DD, Hernandez P, Balter M, et al. Canadian Thoracic Society COPD Clinical Assembly Alpha-1 Antitrypsin Deficiency Expert Working Group. Alpha-1 antitrypsin deficiency targeted testing and augmentation therapy: a Canadian Thoracic Society clinical practice guideline. Can Respir J. 2012;19(2):109-16. 3. Blanco I, Bueno P, Diego I, et al. Alpha-1 antitrypsin Pi\*SZ genotype: estimated prevalence and number of SZ subjects worldwide. Int J Chron Obstruct Pulmon Dis. 2017;12:1683-169. 4. Turino GM, Barker AF, Brantly ML, et al. Clinical features of individuals with Pi\*SZ phenotype of  $\alpha$ 1-antitrypsin deficiency. Am J Respir Crit Care Med. 1996 Dec;154(6 Pt 1):1718-2. 5. Blanco I, Bueno P, Diego I, et al. Alpha-1 antitrypsin Pi\*Z gene frequency and Pi\*ZZ genotype numbers worldwide: an update. Int J Chron Obstruct Pulmon Dis. 2017;12:561-9. 6. Data on File, Grifols. PiZZ and PiSZ calculations. (Updated). 7. Campos MA, Wanner A, Zhang G, et al. Trends in the diagnosis of symptomatic patients with  $\alpha$ 1-antitrypsin deficiency between 1968 and 2003. Chest. 2005;128(3):1179-86. 8. Silverman EK, Sandhaus RA. Alpha1-Antitrypsin Deficiency. N Engl J Med. 2009;360(26):2749-2757.

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**Free and fast saliva collection kit for confirmatory testing of genetic COPD.  
Confirmatory testing is recommended when AAT serum level is below 1.13g/L<sup>1</sup>.**



**Alpha1 -antitrypsin (AAT) deficiency is a common, but under recognized  
genetic contributor to COPD<sup>2</sup>**

The Canadian Thoracic Society recommends targeted screening for AAT deficiency in<sup>1</sup>:

- Patients diagnosed with COPD before the age of 65 **or**
- Patients diagnosed with COPD with a smoking history of less than 20 pack-years

To order free test kits, call 1-877-3-ALPHA1 (1-877-325-7421) or  
talk to your GRIFOLS Canada representative.

**SWAB, SEAL AND SEND**