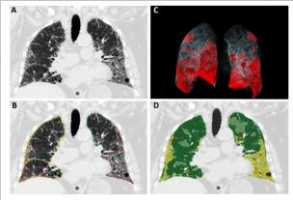


# Scarred Lungs, Stolen Breath:



Opacity based quantification of fibrosis [3]

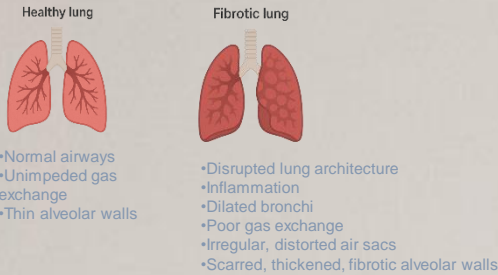
- Green area indicates healthier tissues
- Gray area shows healthy tissues
- Shows the baseline images for comparison



## Understanding Pulmonary Fibrosis

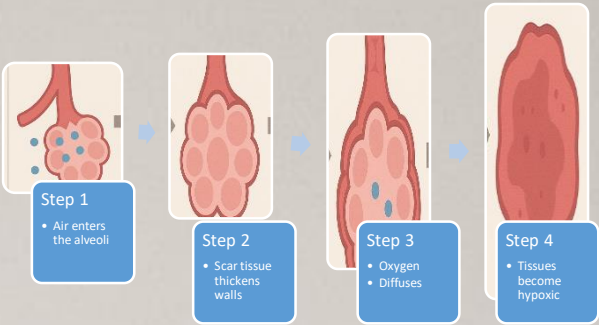
### 1.What is Pulmonary Fibrosis?

Idiopathic pulmonary fibrosis (IPF) is an interstitial lung disease (ILD), characterized by disease progression and functional decline. [1]



Comparing a healthy lung to an infected lung

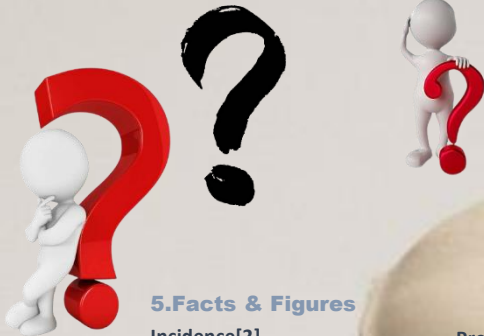
### 2.How It Disrupts Oxygen Delivery



how pulmonary fibrosis disrupts oxygen delivery

### 3.Causes

The causes of IPF remain unknown [1]



### 5.Facts & Figures Incidence[2]

- There are high incidences in North America
- Incidences are moderate in Europe
- Japan also has a notable value.



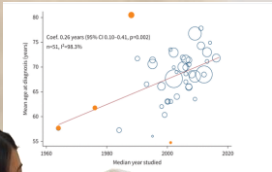
### Prevalence [2]

- South Korea has the highest prevalence
- Its moderate in Europe
- Its also high in north America



### Mean age at diagnosis[5]

- Study covers years 1960- 2020
- Diagnosis age increases over time



### 4.Symptoms[1]



### 6.Management & Solutions

#### Oral antifibrotic drugs



### Antifibrotic effect on mortality [4]

- Early treatment shows low mortality
- There is a stronger effect in older patients

### 7.References

1. Glass, D. S., Grossfeld, D., Renna, H. A., Agarwala, P., Spiegel, P., DeLeon, J., & Reiss, A. B. (2022). Idiopathic pulmonary fibrosis: Current and future treatment. *The Clinical Respiratory Journal*, 16(2), 84–96. <https://doi.org/10.1111/crj.12466>
2. Maher, T. M., Bendstrup, E., Dron, L., Langley, J., Smith, G., Khalid, J. M., Patel, H., & Kreuter, M. (2021). Global incidence and prevalence of idiopathic pulmonary fibrosis. *Respiratory Research*, 22(1), 197. <https://doi.org/10.1186/s12931-021-01791-z>
3. Nowak, S., Creuzberg, D., Theis, M., Pizarro, C., Isaak, A., Pieper, C. C., Luetkens, J. A., Skowasch, D., Sprinkart, A. M., & Kütting, D. (2025). Comparing multi-texture fibrosis analysis versus binary opacity-based abnormality detection for quantitative assessment of idiopathic pulmonary fibrosis. *Scientific Reports*, 15(1), 1479. <https://doi.org/10.1038/s41598-025-85135-7>
4. Xu, H., Hui, S. L., Lee, J. S., Zhang, Z., & Boente, R. D. (2024). Effect of Antifibrotic Use on Mortality in Patients with Idiopathic Pulmonary Fibrosis. *Annals of the American Thoracic Society*, 21(10), 1407–1415. <https://doi.org/10.1513/AnnalsATS.202312-1054OC>
5. Zheng, Q., Cox, J. A., Campbell, J. A., Xia, Q., Otahal, P., De Graaff, B., Corte, T. J., Teoh, A. K. Y., Walters, E. H., & Palmer, A. J. (2022). Mortality and survival in idiopathic pulmonary fibrosis: A systematic review and meta-analysis. *ERJ Open Research*, 8(1), 00591–02021. <https://doi.org/10.1183/23120411.00591-2021>