Effect of interferon gamma-1b on survival in patients with idiopathic pulmonary fibrosis (INSPIRE): a multicentre, randomised, placebo-controlled trial

Authors: King TE et al. for The INSPIRE Study Group


URL: [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(09)60551-1/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(09)60551-1/fulltext)

Comment: Idiopathic pulmonary fibrosis (IPF) is a fatal disease for which no effective treatment exists. This study was designed to test whether treatment with interferon gamma-1b improved survival in patients with IPF, as compared with placebo. Patients with IPF (n = 826) were enrolled at 81 international centres. The primary endpoint was overall survival from the time of randomization, and was measured at the second interim analysis, when the proportion of deaths had reached 75% of those expected by the conclusion of the study. At the second interim analysis, the hazard ratio for mortality in patients receiving interferon gamma-1b indicated no minimum benefit compared with placebo, suggesting that the study should be stopped. Interferon gamma-1b did not improve survival in patients with IPF, but the trial provided important information about IPF.
**Pirfenidone in idiopathic pulmonary fibrosis: A phase III clinical trial in Japan**

**Authors:** Taniguchi H et al. for the Pirfenidone Clinical Study Group in Japan


**URL:** [http://erj.ersjournals.com/cgi/rapidpdf/09031936.00005209v1.pdf](http://erj.ersjournals.com/cgi/rapidpdf/09031936.00005209v1.pdf)

**Comment:** Idiopathic pulmonary fibrosis (IPF) is a fatal disorder without an effective therapy. In 2005, Azuma et al. reported that treatment with pirfenidone improved the decline in vital capacity and prevented acute exacerbations of IPF during 9 months of follow-up (Am J Respir Crit Care Med 2005; 171: 1040-7). The aim of the present study was to confirm these results again at 52 weeks, and to facilitate the approval of pirfenidone in Japan. The study was a multi-centre, double-blind, placebo-controlled, randomized phase III clinical trial, conducted over 52 weeks, in 275 Japanese patients with IPF. Significant differences were observed in the decline of vital capacity and progression-free survival in the pirfenidone group compared with the placebo group. However, an effect of pirfenidone in the prevention of acute exacerbations of IPF could not be reconfirmed.

**Survival after bilateral versus single-lung transplantation for idiopathic pulmonary fibrosis**

**Authors:** Thabut G et al.


**URL:** [http://www.annals.org/content/151/11/767.full](http://www.annals.org/content/151/11/767.full)

**Comment:** This study basically provided important information extracted from the large amount of data on lung transplantation in idiopathic pulmonary fibrosis (IPF). Patients with end-stage IPF are increasingly likely to have bilateral rather than single-lung transplantation. The study analyzed data from the United Network of Organ Sharing registry, in order to compare survival after single and bilateral lung transplantation in patients with IPF. Survival did not differ between patients who had single ($n = 2146$) or bilateral ($n = 1181$) lung transplantation. Single-lung transplantation conferred a short-term survival benefit but long-term harm, whereas bilateral transplantation conferred short-term harm but long-term survival benefit.
Significance of bronchoalveolar lavage for the diagnosis of idiopathic pulmonary fibrosis

Authors: Ohshimo S et al.
URL: http://ajrccm.atsjournals.org/cgi/content/full/179/11/1043
Comment: Bronchoalveolar lavage (BAL) was included in the 2000 ATS/ERS statement on IPF and in the 2002 ATS/ERS consensus criteria, but the role of BAL in the diagnosis of IPF (without surgical biopsy) has been controversial. This study provided, for the first time, evidence indicating that BAL findings may contribute to the current diagnostic algorithm for IPF, although more work may be required. The authors found that a cut-off level of 30% for lymphocytes in BAL demonstrated favourable discriminative power for the diagnosis of IPF. Six of the 74 patients (8%) showed a BAL lymphocytosis (30% or greater), and the final diagnoses for these patients were idiopathic non-specific interstitial pneumonia and extrinsic allergic alveolitis. The authors suggest that if BAL with differential cell count is routinely performed for patients who meet the current ATS/ERS consensus criteria for IPF, a few patients may demonstrate findings that ultimately lead to a different diagnosis.

Circulating fibrocytes are an indicator of poor prognosis in idiopathic pulmonary fibrosis

Author: Moeller A et al.
URL: http://ajrccm.atsjournals.org/cgi/content/full/179/7/588
Comment: Fibrocytes are circulating mesenchymal cell progenitors that are involved in tissue repair and fibrosis. This study provided insights into a new biomarker and target for the treatment of idiopathic pulmonary fibrosis (IPF). The study was designed to test the hypothesis that assaying for fibrocytes may provide a biomarker for progression of IPF. The numbers of circulating fibrocytes in blood were significantly elevated in patients with stable IPF (n = 51) compared with control subjects, with a further increase during acute exacerbations of the disease (n = 7). Fibrocyte numbers were an independent predictor of early mortality. The authors concluded that fibrocytes are an indicator for disease activity in IPF, and may be useful as a clinical marker for disease progression. Quantification of circulating fibrocytes could provide a biomarker for predicting early mortality in patients with IPF.

Clinical course and lung function change of idiopathic nonspecific interstitial pneumonia

Author: Park IN et al.
URL: http://erj.ersjournals.com/cgi/content/full/33/1/68
Comment: In 2006, Travis et al. published a report on the American Thoracic Society Project on idiopathic nonspecific interstitial pneumonia (NSIP) (Am J Respir Crit Care Med 2008; 177: 1338–47); however the concept of idiopathic NSIP remains controversial. The present study provides detailed outcome and prognostic factors for Korean patients (n = 83) with idiopathic NSIP. Twenty-two percent of patients with fibrotic NSIP died. Reduced forced vital capacity at 12 months, the presence of honeycombing etc. were predictors of poor prognosis. During follow-up, 10% of patients developed collagen vascular disease.
Usual interstitial pneumonia in rheumatoid arthritis-associated interstitial lung disease

Authors: Kim EJ et al.
URL: http://erj.ersjournals.com/cgi/rapidpdf/09031936.00092309v1.pdf

Comment: This study investigated prognostic factors in rheumatoid arthritis-associated interstitial lung disease (RA-ILD), which are poorly understood. The aim of the study was to determine whether a usual interstitial pneumonia (UIP) pattern on high-resolution computed tomography (HRCT) was prognostic in RA-ILD. A definite UIP pattern was seen in 24% of patients with RA-ILD (n = 82). These patients had a worse survival compared to those without a UIP pattern, and their survival was similar to that of patients with idiopathic pulmonary fibrosis (n = 51). Multivariate analysis confirmed that a definite UIP pattern on HRCT was associated with worse survival. A definite UIP pattern on HRCT has important prognostic implications in RA-ILD.

Pathologic patterns and survival in chronic hypersensitivity pneumonitis

Authors: Churg A et al.
URL: http://journals.lww.com/ajsp/Abstract/2009/12000/Pathologic_Patterns_and_Survival_in_Chronic.3.aspx

Comment: This study showed that pathological fibrosis in chronic hypersensitivity pneumonitis (HP) is associated with a poor prognosis, suggesting that clinicians should consider new strategies for preventing fibrotic reactions in the treatment of chronic HP. The study examined the relationship of pathologic pattern with prognosis in HP. Cases of subacute (cellular, non-fibrotic) (n = 24) and chronic (fibrotic) HP (n = 25) were analyzed. The presence of fibrosis was associated with a generally poor prognosis in patients with HP, suggesting that pure peribronchiolar fibrosis may portend better survival than a usual interstitial pneumonia (UIP)-like or fibrotic nonspecific interstitial pneumonia-like pattern of fibrosis. A small percentage of cases of chronic HP could not be distinguished pathologically from UIP.
**Pneumothorax after air travel in lymphangioleiomyomatosis, idiopathic pulmonary fibrosis, and sarcoidosis**

Authors: Taveira-DaSilva AM et al.


URL: [http://chestjournal.chestpubs.org/content/136/3/665.abstract](http://chestjournal.chestpubs.org/content/136/3/665.abstract)

Comment: This study presents important information on the management of patients with lymphangioleiomyomatosis (LAM), idiopathic pulmonary fibrosis (IPF), and sarcoidosis. The prevalence of pneumothorax associated with air travel in patients with interstitial lung diseases is poorly understood. Pneumothorax is common in patients with LAM, and LAM patients are often concerned about the occurrence of a life-threatening event during air travel. In order to determine the prevalence of pneumothorax associated with air travel in patients with LAM, IPF or sarcoidosis, data from 449 patients travelling to the National Institutes of Health were reviewed. In interstitial lung diseases with a high prevalence of spontaneous pneumothorax, there was a relatively low risk of pneumothorax following air travel. The occurrence of pneumothorax associated with air travel in patients with LAM may be related to the high incidence of pneumothorax in this disease, rather than to the air travel itself.

**Comparative study of high-resolution CT findings between autoimmune and secondary pulmonary alveolar proteinosis**

Authors: Ishii H et al. for the Japanese Center of the Rare Lung Disease Consortium


URL: [http://chestjournal.chestpubs.org/content/136/5/1348.abstract](http://chestjournal.chestpubs.org/content/136/5/1348.abstract)

Comment: Anti-granulocyte macrophage-colony stimulating factor (GM-CSF) antibody is a causative and diagnostic factor for autoimmune pulmonary alveolar proteinosis (PAP). The author’s group has established a diagnostic paradigm for alveolar proteinosis based on serum anti-GM-CSF antibody levels (Am J Respir Crit Care Med 2000; 162: 658-62; Am J Respir Crit Care Med 2008; 177: 752–62). The present study provides information on high resolution CT in secondary PAP, as diagnosed by our method, as compared with autoimmune PAP. HRCT scans on 42 patients (21 each with autoimmune PAP or secondary PAP) were evaluated in a blinded manner. Typical HRCT findings for autoimmune PAP included ground glass opacity with a patchy geographic pattern, sub-pleural sparing, crazy-paving appearance, and predominance in the lower lung field. These findings were rather infrequent in patients with secondary PAP.