# British Thoracic Society Interstitial Lung Disease Registry Project Management Protocol

**Introduction**

The principal objective of the British Thoracic Society is to improve the care of people with respiratory and associated disorders and the Society works to achieve this through a programme of clinical guideline development, quality improvement activities including clinical audit, development of educational resources, the promotion of respiratory research and public awareness activities.

# Purpose of the project

The BTS Interstitial Lung Disease Registry launched in February 2013 and it initially involved two elements: the UK Idiopathic Pulmonary Fibrosis Registry and the UK Sarcoidosis Registry

In contrast to asthma and chronic obstructive pulmonary disease (COPD), which primarily affect the airways, diffuse (or interstitial) lung diseases (ILD) primarily involve the lung tissue (parenchyma). They thereby compromise a major function of the lungs, which is to permit oxygenation of the blood and other organs, and may lead to severe breathlessness and incapacity, respiratory failure and death.

Idiopathic pulmonary fibrosis (IPF) is a progressive lung disease of unknown cause characterised by variable degrees of inflammation and scarring. The aetiology of IPF is not known but it is not caused by smoking. The true incidence of IPF is unknown, but it is estimated that annually there are 5000 new cases of IPF, 5000 deaths due to IPF and approximately 15000 people in the UK have a diagnosis of IPF at present. Importantly it is now clear that the incidence of IPF is rapidly climbing with a 35% increase in diagnosed cases between 2000 and 2008. The average age at diagnosis is 70yrs, but the rising incidence has been shown to not be a consequence of an ageing population.

Sarcoidosis is a multisystem disease which may affect many organs, but involves the lungs in around 90% of patients. Sarcoidosis is the most common interstitial lung disease, typically accounting for around one third of the interstitial lung disease seen in a specialist respiratory clinic. The cause remains unknown; both genetic and environmental factors have been implicated. Further details about IPF and sarcoidosis are included at Annex 1.

Approval for the ILD Registry Programme was first given in 2012. In 2021/2 a review was undertaken within BTS of the impact and reach of the Registry. The wider environment of ILD care in the UK was considered, including NHSE expanding the use of antifibrotic drugs (specifically nintedanib) to patients with any fibrosing ILD, not just IPF.

As a result of these discussions the Registry will be expanded to include adult patients with any ILD where evidence of fibrosis is present, as well as for all adult cases of sarcoidosis (with or without fibrosis). ILD covers a broad spectrum of diseases, and there are over 150,000 people living with ILD in the UK. This expansion will allow BTS to continue and expand on the work of the ILD Registry Programme, improving the understanding of fibrosing ILDs in the UK and the use of antifibrotic therapies.

The expanded registry – the UK ILD Registry – will include those data previously submitted through the UK IPF and UK Sarcoidosis Registries.

# Characteristics of the project

This project provides a means of national data collection for all fibrosing ILDs (including all IPF) and all sarcoidosis (including non-fibrosing sarcoidosis). Data collection will occur through the proven BTS ILD Registry online data collection system, based on the successful BTS online system for national clinical audit programme (launched in 2010). The intention is to provide an easily accessed system for prospective data collection in a large number of patients, so that the public health and epidemiological status of these conditions in the UK can be established.

Data on demographics, method of diagnosis, markers of disease severity, and details of treatment and outcome are collected. The intended outcomes of the project include:

* Refinement of the clinical characteristics, burden of disease (including its impact on health status and quality of life), and the course of the disease in the British population.
* Provision of information which will allow clinicians to reduce delays in diagnosis and to make more informed decisions on the best management strategies.

In the longer term, it is intended that the quality of information provided to clinicians and patients with these conditions will be greatly improved, that guidelines for the diagnosis and management of these diseases will be refined, and robust audit tools developed for ongoing quality improvement activities in individual hospitals.

In due course it is envisaged that Registry data would provide a valuable resource that would enhance recruitment to multi-centre trials.

The development of the Registry within the British Thoracic Society ensures that there will be widespread participation in data collection from those working in respiratory medicine. The Society operates an effective system for communication and dissemination of findings to those who participate in its data collection initiatives, as well as to the wider BTS membership and the respiratory community as a whole, as part of ongoing education programmes (including e-learning), short courses, and BTS Summer and Winter Meetings.

# ILD Registry Governance

The ILD Registry project is overseen by a small Steering Group, reporting to the Society’s Quality Improvement Committee. The Steering Group comprises consultant respiratory physicians, specialty trainees, a respiratory nurse, a patient representative, and representatives of appropriate patient charities. The latter group would ensure patient involvement is fully embedded throughout the Registry.

The Society ensures that the ILD Registry Project adheres to the principles of the Data Protection Act 2018, and to the Government’s transparency agenda (as outlined in published guidance), and will ensure that the security of the online data collection system is maintained at all times.

The Steering Group membership and terms of references are enclosed at Annex 2.

The Society’s processes and procedures for handling sensitive information including patient identifiable data, are set out in the BTS Information Governance Policy document.

Patient data may only be entered into the ILD Registry with the informed consent of the patient. Electronic means may be used for seeking, confirming and recording informed consent, in accordance with the HRA and MHRA joint statement on seeking consent by electronic methods (September 2018).

The Registry database is held and administered at the British Thoracic Society (Head Office: 17 Doughty St, London WC1N 2PL).

The data controllers for the management of the Registry project are:

Professor Andrew Wilson (clinical)

Miss Sally Welham (administrative), Chief Executive, British Thoracic Society

Professor Wilson is the applicant named on behalf of the Society in relation to the application for ethics approval for this project.

Miss Sally Welham, Chief Executive, British Thoracic Society is the Data Custodian for the BTS ILD Registry Project.

The British Thoracic Society is registered with the ICO: registration number Z7560263.

British Thoracic Society

ILD Registry Management information: August 2022

Annex 1

# Idiopathic Pulmonary Fibrosis (IPF)

The reported median survival in IPF is 3 years from diagnosis and IPF has a poorer prognosis than cancer of the colon, breast or ovary. There is no proven effective drug therapy for IPF, but combinations of corticosteroids, immunosuppressants and anti-oxidants are used to variable extents by clinicians. Lung transplantation is only feasible in a minority and even if listed, patients with IPF have the highest mortality of any group awaiting lung transplantation. The disease poses significant challenges for clinicians in that the diagnosis requires expert integration of clinical, radiological and, when available, pathological data. Diagnostic precision is critical to distinguish IPF from other interstitial lung diseases that my respond for example to corticosteroid therapy. Given the limited therapeutic options in IPF, best supportive care is recommended for all patients with IPF. This includes tailored oxygen therapy (short-burst, long-term domiciliary and ambulatory), pulmonary rehabilitation, and expert palliative care input. It is highly likely that novel, potentially expensive drugs will imminently be available for IPF [NICE pirfenidone health technology appraisal], in which case the precise patient groups that would benefit from these drugs will need to be defined.

The recent BTS survey confirmed that IPF represent a significant burden of disease. On average, clinicians estimate they are seeing over 40 patients with ILD a month (both new and follow up) of whom around 50% have IPF. However 60% of respondents had low confidence in estimating the true number of cases of IPF seen in clinics. With regard to the ability to accurately diagnose IPF, less than half of respondents (44%) had access to a multi-disciplinary meeting and only 35% had expert pulmonary radiology input to interpret HRCT scans. This variation in the diagnostic pathway directly impacts on the confidence with which clinicians are able to diagnose and therefore manage IPF. Recruitment to clinical trials is cited in the BTS guidelines as a key recommendation in the management of IPF, but only 35% of respondents had recruited patients to a trial in the last 5 years.

Based on the BTS survey and workshop, the following areas have been identified as areas of clinical need that would benefit from a national registry.

1. The diagnosis of IPF requires expert integration of clinical, radiological and when pathological data. The consistency and accuracy of this diagnostic process between clinical centres is not known, creates uncertainty in diagnosis and management and probably leads to variation in clinical practice. Clinicians would value the ability to compare diagnostic accuracy between their centre and nationally, with the aim of refining and changing practice if needed.
2. Best supportive care (BSC) for IPF is defined in the BTS ILD guideline and includes tailored oxygen therapy, pulmonary rehabilitation and palliative care. Capturing data on national delivery of BSC would help clinicians identify local shortfalls and improve patient care.
3. Lung transplantation is suitable for a small but important sub group of patients with IPF. There are no data to determine the number of patients that are eligible for transplant assessment or that are assessed but not listed. A registry would highlight variations in transplant referral.
4. Clinicians and patients recognise the value of recruitment to clinical trials in a disease of high mortality for which there is no effective therapy. A national registry of accurately phenotyped patients with ILD, would greatly enhance the UK recruitment rate to multi- centre trials.
5. Novel drugs for IPF will become available in the near future. Pirfenidone has very recently become the first drug to be licensed for use in IPF. The drug is likely to be expensive and therefore its use potentially restricted. A national registry will help identify the potential number of patients eligible for novel expensive drugs and the uptake and use these drugs.

# Sarcoidosis

Prevalence ranges from 3 (in white populations) to 47 (in African Americans) per 100,000 population in North America, and 64 per 100,000 population in Scandinavia. Average incidence from radiographic population screening programmes in continental Europe is 10 per 100,000 population. UK general practice data suggest an incidence of around 3 per 100,000 person-years, similar to figures derived from New Mexico and Japan but lower than North American or European estimates. The disease is not only more prevalent in ethnic minorities such as Blacks and Afro-Caribbeans, but these groups also suffer more severe disease and a higher mortality.

Sarcoidosis is commoner in females; incidence peaks between the ages of 20 and 50 years with a smaller peak after the age of 60. There are no exact data European data on working days lost due to sarcoidosis, but many patients with active disease are unable to work because of exertional dyspnoea or other symptoms such as fatigue and joint pains. The course of sarcoidosis varies greatly; there is a high rate of spontaneous remission but chronic disease may occur in up to 30% of patients. To date it remains difficult to predict which patients will develop chronic, progressive severe disease.

Complications of sarcoidosis include pulmonary hypertension, which is associated with increased mortality, fungal infections and aspergillomas, opportunistic infections resulting from immunosppressive therapy, and chronic fatigue which may be persistent and incapacitating. Overall mortality from sarcoidosis in large series is around 5%, the most common causes being severe parenchymal disease causing pulmonary fibrosis, and cardiac and neurological involvement. When required, treatment for active disease usually includes systemic corticosteroids with or without other immunosuppressive therapy such as methotrexate. Long term oxygen may be required; lung transplantation is reserved for those who have failed to respond to maximal therapy and is limited by organ availability.

Quality of life (QoL) and health status are important measures of disease impact and therapeutic outcome. While health status may indicate the presence of limitations, QoL also reflects the extent to which patients view these limitations as a problem in their daily life. Only one QoL measure has been employed in sarcoidosis patients, the WHOQOL-100, and studies have shown that it is reliable and valid in this group.

At least five measures of health status have been used in sarcoidosis studies. Four have shown to be of value for sarcoidosis (but in some cases require validation) include: the 36-item Short-Form Health Survey (SF-36); the Sarcoidosis Health Questionnaire (SHQ); the Symptom Impact Profile (SIP)and the St George’s Respiratory Questionnaire (SGRQ).

Over a decade ago in 1999 the American Thoracic and European Respiratory Societies identified key clinical questions which remain to be answered, including: determining the cause of sarcoidosis; identifying specific tests which doctors can use to predict progression; the optimal length of treatment; the role of current treatments; the discovery of new, less toxic treatments. The 2008 BTS ILD guidelines also identified the need to explore: the long-term effect of corticosteroid treatment on the natural history of the disease; whether steroid treatment is actually associated with a poorer outcome.

While the US ACCESS (A Case-Control Etiologic Study of Sarcoidosis) database serves to address some of these questions in relation to Northern American patients, to date there is no comparable database in the UK. It is likely that the variation in presentation of sarcoidosis between various countries, means that results from the North American ACCESS patients may not be applicable to the British population.

BTS – Background research from July 2012