

## Original Article

### **Fighting lung cancer in the developed world - a model of care in a UK hospital**

Inam Mohammad Baig, Penny Downer, Robert Milroy  
Department of Respiratory Medicine, Stobhill Hospital, Glasgow, UK.

#### **Abstract**

**Objectives:** To highlight the initial management approach for Lung Cancer in a UK Hospital with the aim of translating the principles of such methodology to a developing country, such as Pakistan.

**Methods:** A descriptive observational study was carried out at Stobhill Hospital, Glasgow, UK. The investigator (IMB) observed the Lung Cancer Service, attending the weekly 'New patients Clinic', 'Results Clinic', and 'Multi-disciplinary team (MDT) meetings'. The process observations and the factual data describing the details of the service were recorded on a pre-designed pro-forma. Observations relating to two aspects of this service (Results Clinic and MDT) are included in this report.

**Results:** The methodology of communicating results of lung cancer investigations to patients in a pre-planned and staged manner at a dedicated 'Results Clinic' was identified as a useful approach. A format of communication was consistently followed.

**Conclusion:** The MDT consisted of a Respiratory Physician, Clinical Oncologist, Thoracic Surgeon, Radiologist, Pathologist and Palliative Care Specialist. Each patient's case was discussed on an individual basis and the team developed a consensus regarding diagnosis, staging of the disease, further need for diagnostic procedures and treatment options, bearing in mind the patient's performance status, co-morbidity and their wishes. This approach has improved the initial part of the lung cancer patient journey and components of this approach could easily be transferred to a developing country (JPMA 60:93; 2010).

#### **Introduction**

Lung cancer is the commonest cause of death from cancer in the Western World with Scotland (UK) having one of the highest incidences and mortality rates. Scotland has a population of 5 million. Over 4,600 people are diagnosed with lung cancer every year, and approximately 4000 die from the disease.<sup>1</sup> The median survival for all patients is approximately six months, 1 year survival is at best 25-30% and no more than 7-8% of patients are alive at 5 years.<sup>2-4</sup> However, lung cancer no longer remains a problem of the developed world alone, its incidence is increasing rapidly throughout developing countries.<sup>5</sup>

Currently, in most general hospitals in the UK, lung cancer patients are initially assessed by a Respiratory Physician and then by a multi-disciplinary team (MDT) comprising all the relevant sub-specialties (Respiratory

Medicine, Oncology, Thoracic Surgery and Palliative Care as well as Radiology and Pathology).<sup>6-8</sup> Many management pathways have been devised with the main emphasis on minimising the time from first symptoms to the start of treatment. One study in the U.K. showed over 70 different care pathways.<sup>9</sup>

For optimal management of lung cancer a well organized specialist assessment and diagnostic service is therefore essential.<sup>10</sup> This ensures that patients get the opportunity to have some understanding of the disease process and the individual choice of treatment available to them, as recommended by the MDT considering their disease stage, performance status and co-morbidity.<sup>11</sup>

In Pakistan, developing such a methodology in major general hospitals where all these relevant sub-specialties already exist could have a major impact on the outcomes of

patients in terms of patient satisfaction, quality of life and possibly survival.<sup>12</sup>

This manuscript describes the initial management approach for Lung Cancer patients in a UK Hospital with a view to establishing this methodology in a developing country.

## Methods

This was a prospective observational study carried out at Stobhill Hospital, Glasgow, UK. The investigator (IMB) remained present throughout all components of the initial patient pathway, including the weekly Respiratory Medicine 'New Patient Assessment Clinic', 'Results Clinic' and 'MDT meeting' followed by the Lung Cancer Clinic. Observations regarding service delivery were recorded prospectively. These observations were then summarized into themes and analyzed to identify the most frequent and consistent features. These are presented as qualitative results.

Prospective audit data were collected specifically in relation to the Results Clinic and the MDT meeting over a defined 8 week period and were entered onto separate proformas.

## Results

The qualitative results regarding the 'Results Clinic' and the MDT meetings are first described, followed by the results of the eight week audit in each case.

### 1. Results Clinic:

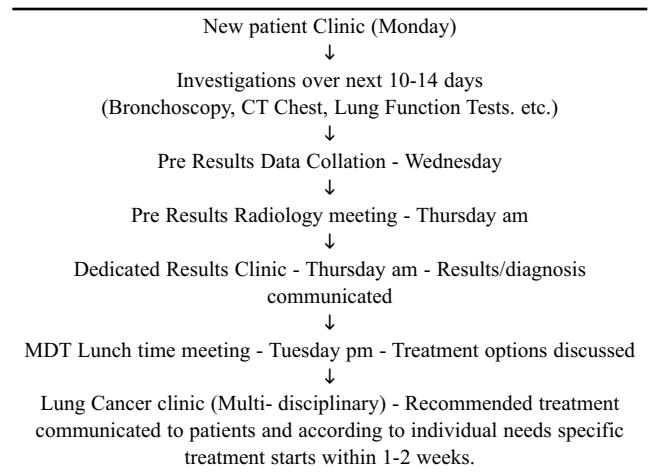
This weekly clinic communicates the results of investigations, in patients with suspected lung cancer. The diagnostic journey reaches a climax on this day. The patient gets an appointment for this clinic, usually one to two weeks after first being seen by the Respiratory Consultant.

The preparation for the Results Clinic includes collecting results of all relevant investigations, and discussing and collating all these results the day before the Results Clinic, so that a tentative management plan can be formulated. Each patient's imaging is discussed in a radiology meeting immediately before the Results Clinic so as to acquire a better understanding of the lung lesion in terms of further investigation (if necessary) or treatment options.

Despite all these efforts, diagnostic difficulties can remain, thus not making it possible for the Team to inform the anxiously waiting patient of a definite diagnosis. In such situations, the occasion instead becomes a time to explain to the patient the need for further investigations. Most patients seen appeared satisfied with the concern showed by the team and they generally agreed to proceed with further diagnostic investigations if necessary.

At that stage the lung cancer clinical nurse specialist (CNS) is also involved in going over facts with patients and

**Table-1: Lung Cancer Patient Journey — From being seen by the Respiratory Physician first time to the final recommendation of treatment.**



family. This appeared to enhance patient satisfaction. The Specialist Nurse thus acts as a bridge for any left over communication gaps or questions after the patient has seen the doctor.

In those whose diagnosis was histologically confirmed as lung cancer, it was possible to convey a definite diagnosis to the patient and their relatives. The content of this breaking of bad news varied depending on the individual's understanding of the disease. However, in almost all patients, the Consultation was started in the following plain words, after first asking and obtaining the patient's consent for conveying their results to them:

"The results are serious, unfortunately. The tests show that you have lung cancer".

The important aspect of conveying bad news was that it was done privately, in a dignified way in an environment which was calm and where patients and their relatives could be left for some time if they wished to reflect after the consultation.

A total of 59 patients were seen during eight weeks at the Results Clinic, on average 7-8 patients in a single clinic lasting 2-3 hours. Sixteen cases (27.1%) were confirmed histologically by the end of 8 weeks (12 cases of non- small cell lung cancer and 4 of small cell lung cancer). The overall positive histology rate for the Respiratory Unit at Stobhill is 70%. Among the 43 in whom diagnostic confirmation was awaited, 12 were felt unlikely to have lung cancer, while in the remaining 31 the clinical diagnosis remained as likely lung cancer. Follow up was continued with review planned when the results of further investigations such as CT guided biopsy would be available. In those unlikely to have lung cancer but investigated initially for lung cancer only one was declared to have a normal respiratory system. Three were discharged with

a diagnosis of lower respiratory infections. In 2 patients an alternative diagnosis was found: 1 pulmonary tuberculosis and 1 sarcoidosis.

## 2. MDT meetings:

The MDT meetings took place weekly. Each case was formally presented, then the radiologist projected the patient's CT imaging including CT of chest and abdomen (axial, coronal and sagittal), and summarized the relevant features. The further management of each patient (either further investigations or treatment) was discussed in detail

The Respiratory Physician acted as the gate-keeping physician for the patient and as coordinator for the MDT.

In 8 MDT meetings evaluated over a 2 month period, 60 patients with lung cancer were discussed. Twenty three (38.5%) of these had a histological diagnosis, with 19 NSCLC and 4 SCLC. Thirty seven (61.5%) were clinically/radiologically suspected of having lung cancer at the time of their first discussion and many underwent further investigation to obtain a histological diagnosis. Among recommendations for further investigations to arrive at a histological diagnosis, 2 were referred for mediastinoscopy and 3 were referred for Video Assisted Thoracoscopic Surgery (VATS). One was referred directly for Positron Emission Tomography scanning (PET). Twenty-eight patients (46.7%) were referred for one or more forms of anti-cancer treatment (surgery, chemotherapy and/or radiotherapy). This excluded palliative care and active symptom control. Eight patients (13.3%) were referred for chemotherapy. Radiotherapy was recommended for 15 patients (25%) which included 12 palliative cases, 2 high dose palliative cases and one emergency treatment. Two patients were referred for lung resection (lobectomy) and 3 for VATS biopsy and pleurodesis. Five patients were referred for palliative care (active symptom control) only.

## Discussion

Some features of this service are common to other lung cancer services in the UK, such as the MDT meeting. The concept of Multi-disciplinary team (MDT) meetings was introduced officially in the United Kingdom in 1997 as a National Health Service Policy<sup>13</sup> but had been developed at Stobhill in 1991. However the dedicated Results Clinic is a unique model which is slowly being adopted nationally as an example of good clinical practice.

In a developing country such as Pakistan, lung cancer statistics are not available. In general terms, other respiratory diseases such as tuberculosis are common and require much attention. However a study carried out at a large cancer centre in Pakistan has shown an increasing incidence of lung cancer<sup>14</sup> and as such it will be necessary to develop some

guiding principles for the care of lung cancer patients, even if it is not possible to provide more resources in this regard. The most essential principle in the initial management of lung cancer is the requirement to have a time table for the diagnostic and treatment pathway aimed at minimizing the time from first symptom to the start of treatment. According to national lung cancer guidelines in the UK, this time should not be more than 62 days<sup>15</sup> and it is proposed to reduce this to 31 days by late 2009.

Could the principles of this management approach be followed in Pakistan? Currently in Pakistan, the majority of patients present with advanced stage disease. In the absence of any national guidelines recommending a uniform approach, diagnostic journeys do vary among individual patients. However a CT scan of chest and Bronchoscopy are the usual initial investigations in those with suspected lung cancer. The most important aspect in the management of lung cancer is to determine the TNM stage of disease<sup>16,17</sup> and the NICE (National Institute for Health and Clinical Excellence) guidelines recommend that in patients suspected of lung cancer, CT scan of chest should be the first investigation.<sup>15</sup>

It will be essential to attempt to standardize the time of the diagnostic journey by defining a maximum time period to reach a confirmed diagnosis and initiate a specific treatment where possible. This is to safeguard the rights of a patient whose disease may progress from a potentially resectable and curable stage to an incurable disease if inappropriate delay occurs in the diagnostic pathway or whilst waiting to receive potentially curative treatment.<sup>18</sup> The radiology departments should have a clear policy of giving appointments for imaging, including CT examinations, to suspected lung cancer patients on a priority basis.

This study demonstrated that the staged process of communicating a diagnosis of lung cancer is essential for the patient journey. This needs time, privacy and a calm place for the patient and relatives to listen, understand and discuss the issues raised by the diagnosis. Currently in most Public Sector hospitals in Pakistan, it would appear a difficult task to follow the U.K. communication model. Unlike the UK, there is no state sponsored general practice (GP) system in Pakistan. Moreover clinical case notes of outpatients remain with them or their relatives. Usually they themselves make appointments for investigations and also collect results including those of CT scans and Histopathology reports of biopsies. This practice enables patients and their relatives to become aware of a possible serious diagnosis without relevant additional information and support. In the UK, although enormous efforts are made at various levels to make the public aware of different aspects of lung cancer,<sup>19</sup> patients' investigation reports are not routinely accessible to the patients themselves or their relatives. In Pakistan, due to a different cultural background, the actual diagnosis is often not communicated to

patients. As a result, those who are not educated and are dependant on their relatives and doctors for knowing the facts, remain ignorant of their disease. Those who can read their results can get confused messages and sometimes may suffer from serious psychological effects, even before any confirmation of the suspected radiological diagnosis. Instead of the respiratory physician being in a position to explain the results to their patients, as is the case in the U.K., sometimes in Pakistan, patients receive vague explanations from different sources and continuation of this practice is unsatisfactory, particularly as many physicians in Pakistan have excellent communication skills.

Currently, in the developed world, lung cancer management is considered a multi-disciplinary task<sup>20,21</sup> and in the UK most of the hospitals have adopted this working model as routine. In the National Lung Cancer Audit, first annual report of 2005<sup>22</sup> it was reported that in England 78% of patients had been reviewed by an MDT, whereas at Stobhill in excess of 90 percent of lung cancer patients were reviewed by the MDT. The National guidance<sup>15</sup> recommends that this proportion should be 100 per cent, but it remains difficult to identify all patients. Forty three percent of lung cancer patients had received specific anti-cancer treatment, whereas at Stobhill 46.7% percent were referred for specific anti-cancer treatment.

In Pakistan, the MDT concept could be introduced through a national policy, in those hospitals where all relevant specialists including respiratory physicians, oncologists, thoracic surgeons, expert radiologists and pathologists are available. The only additional new requirement would be co-ordination among all the specialists, who at present are performing the difficult task of treating lung cancer patients individually. However, these varying, non-unified activities by various experts prevent optimal investigation and treatment for patients.

The specialty of palliative care requires a special mention because almost every patient will need palliation of symptoms arising from their lung cancer. Lung cancer is often associated with more troublesome symptoms than other cancers and requires the early inclusion of palliative measures including medications.<sup>23</sup> In Pakistan the presence of joint family systems and the cultural and traditional attitudes of people does mean that family members often come forward voluntarily to provide emotional and material support to the sufferer. However, the specialty of palliative care is almost absent in Pakistan and the treating physicians, oncologists and surgeons have to take on responsibility for aspects of palliative care of their patients.

### Conclusion

The initial management approach of Lung Cancer practiced at Stobhill Hospital, Glasgow, described here represents an organised methodology which reduces the

initial lung cancer journey time. The main feature distinguishing it from most other lung cancer services in the UK is the unique "Results Clinic". The time and effort taken to obtain all the investigative results before the consultation with the patient acts as a base for breaking bad news. This represents a model of good clinical communication. The outcome of the weekly MDT meetings in this general hospital demonstrate the benefits of multi-disciplinary participation in patient care, in terms of patient satisfaction, quality of life and potentially survival. The Stobhill Lung Cancer Service can act as a model for establishing a lung cancer service in any general hospital in Pakistan. However, due to different funding and service arrangements, the introduction of such a service might require staging.

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