Lung Cancer Management Guidance in Response to COVID-19

The following guidance has been produced by the COVID-19 South East Cancer Cell, 30th March 2020

1 Key Points

- For use to determine access to services when capacity is limited
- Higher priority chemotherapy will have protected access to available capacity
- Priority is determined by the absolute benefit a therapy provides to patients receiving that therapy

2 Purpose of document

The following is guidance for the provisioning of Lung cancer services during the period of the COVID-19 pandemic and its emergency management. It is intended to guide and support decisions made locally/regionally within Lung MDTs and should be used in conjunction with any guidance from expert bodies such as the NHS England and the British Thoracic Society www.brit-thoracic.org.uk/about-us/covid-19-information-for-the-respiratory-community/ .These should not be viewed as being prescriptive, and cannot cover every possible scenario and therefore will require individual MDTs and clinicians to make decisions based upon their best clinical judgement.

3 GP referral to clinic

The emphasis is on the triage of the referral once received rather than putting off the referral. This is so that patients are logged in the system even if the decision is to defer treatment for now. Cancer cell are working on deferral codes and there will be central guidance on this to follow:
https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/03/cancer-alliance-information-on-managing-cancer-referrals-19-march-2020.pdf

Letter to go out with lung clinic appointment stating new model of appointment and guidance regarding actions should they have symptoms of COVID-19 or live with someone who is self-isolating.

3.1 Triage of Referrals

- Services should focus on prioritising referrals where there is a CT confirming cancer, providing that there are staff to run clinics. Ideally all clinics should be 'virtual' using either virtual software e.g. 'Attend anywhere' or by telephone using available national guidance
- Write to or phone referrals who have had a CT confirming 'no cancer'

- Very frail elderly patients, especially if in nursing homes, referred with suspected lung cancer should not be seen in clinic until the situation has changed, given the risks to their health. As the Government has introduced guidance regarding self-isolation for vulnerable groups of people including those with certain co-morbidities and those over the age of 70 then consideration should be given as to whether these patients should be seen in the clinic and virtual or telephone consultations conducted wherever possible. There may be some situations, for example, where there is significant frailty or comorbid health that impacts on patients' appropriateness for investigation where further tests could be deferred following communication with those patients.

4 Diagnostics

1. For trusts still requesting CT based on 2 WW referral – a high index of suspicion, based on previous CXR findings and clinical information should be used prior to requesting CT. Those with a lower index of suspicion should have imaging delayed for a period of 12 weeks.
2. Consider repeat imaging for indeterminate findings on CT scans until demand upon clinicians from the COVID-19 pandemic declines (3 months)
3. For trusts using a 'straight to CT' pathway – CT to be performed where management will be changed by investigating further (e.g. likely to require SACT/radiotherapy/surgery).
4. For those where treatment would be symptomatic care or specialist palliative care due to other health problems, investigations should be deferred until such time as they pose less risk to the patients. This would require direct communication and explanation with relevant patients and their families/carers.
5. Prioritise patients with aggressive disease where delays may affect the staging and ultimately treatment
6. Implement virtual management of lung nodules where possible and delay follow up CTs to beyond the pandemic peak in low risk patients on annual surveillance
7. Follow BTS guidance for bronchoscopic (including EBUS) procedures during COVID pandemic
8. Consider assessments of fitness using alternatives to attendance at hospital

5 New Cancer Patients

5.1 Surgical

5.1.1 Categorisation of Patients

Priority level 1a

- Emergency: operation needed within 24 hours to save life

Priority level 1b

- Urgent: operation needed with 72 hours

E.g.: urgent/emergency surgery for life threatening conditions such as massive haemoptysis

Priority level 2

Elective surgery with the expectation of cure, prioritised according to:

- within 4 weeks to save life/progression of disease beyond operability based on:
  – urgency of symptoms
  – complications such as local compressive symptoms
  – biological priority (expected growth rate) of individual cancers

Local complications may be temporarily controlled, for example with stents if surgery is deferred and /or interventional radiology.

E.g. Stage 1A – 3A Lung tumours

Priority level 3

Elective surgery can be delayed for 10 -12weeks if they have no negative predicted outcome.

E.g. Neuroendocrine tumours except where the primary is obstructing.

Availability of anaesthetists and theatre staff must be considered.

5.1.2 Surgical Recommendations

1. If theatre space is limited, surgical priority given to stage 2/3a patients first
2. If patients likely to require post operative HDU – consider alternative treatments in the first instance
3. Advise patients of significantly increased risks of surgery during the viral pandemic
4. Consider risk-benefit analysis carefully for patients with a high burden of co-morbidity in whom the increased risks of surgery under current circumstances may outweigh benefit
5. Consider if tumour could be treated effectively with SABR or radical radiotherapy as an alternative
6. Advise high level social isolation for patients 14 days pre surgery and for a month post discharge
7. Carefully consider the feasibility of surgical recovery for elderly and frail patients with limited local social support after discharge
8. Change practice from separate surgical hub pre-admission clinics to pre-admission testing on admission the day before surgery, to minimise public transport and hospital exposure.
9. Telephone or VC based pre and post- operative clinic consultation, backed up by local medical teams as needed, again to minimise public transport and hospital exposure

All decisions should be clearly documented and based on a consensus view from the MDT.

5.1.3 Benign Disease

- No surgery for benign disease or risk reduction to be performed

All decisions should be clearly documented and based on a consensus view from the MDT.

5.2 Systemic Anti-Cancer Treatments

Treatment decisions will need to be made on a case-by-case basis with input from both patients and the MDT. The prioritisation details should be overseen by the nominated trust haemato-oncology leads at provider level.

General approach to prioritising patients on systemic anti-cancer therapy:

- Categorise patients by treatment intent and risk-benefit ratio associated with treatment.
- Consider alternative and less resource-intensive treatment regimes.
- Seek alternative methods to monitor and review patients receiving systemic therapies. Consider using virtual appointments (such as Attend Anywhere) and telephone clinics in almost all circumstances.

Clinicians will also need to consider the level of immunosuppression associated with an individual therapy and the condition itself, and patients' other risk factors.

5.2.1 Patients undergoing curative treatment

Initiating treatment

Consider deferring adjuvant chemotherapy for Stage II disease for 3 months

Consider risk/benefit of commencing versus deferring adjuvant chemotherapy for Stage III disease on a case by case basis.

Consider using primary GCSF as a standard of care in all patients receiving doublet chemotherapy, particularly those who are receiving chemotherapy regimens with a febrile neutropenia (FN) rate of > 20%, or those receiving regimens with a FN rate of 10 – 20%, and who also have patient related risk factors* which may increase the FN risk to > 20%. (* Risk factors which may elevate the risk of FN are: age > 65 years, a previous episode of FN whilst receiving earlier chemotherapy, poor performance status, pre-existing neutropenia or bone marrow involvement, poor nutritional status, extensive prior chemotherapy, previous irradiation to large volume of bone marrow, open wounds or active infections, multiple comorbid conditions, HIV infection)

Consider deferring start of durvalumab in patients receiving multi-modality treatment with following chemo-radiation

It may become necessary to consider neo-adjuvant strategies including multi-modality neo-adjuvant strategies as an initial treatment instead of surgery as an initial treatment, allowing deferral of surgery, depending on loco-regional access to intensive care beds, and ventilator support. Such decisions should be made in the context of an MDT discussion.

Continuing treatment

Discuss benefit of continuing with treatment that has already been initiated on a case by case basis

5.2.2 Patients undergoing palliative treatment

Initiating treatment
Consider deferring chemotherapy in almost all situations for patients with malignant mesothelioma

Consider not initiating treatment in those not able to receive standard of care therapy, as the risk/benefit ratio is likely to be against SACT

Consider risk/benefit ratio of deferring versus commencing chemotherapy or chemo-immunotherapy in non-oncogene driven disease

Use a maximum of 4 cycles of cytotoxic chemotherapy per course

Consider not initiating maintenance pemetrexed

For patients suitable for first line immunotherapy, monotherapy is preferred over combination chemo-immunotherapy

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Continuing treatment
Consider ongoing risk/benefit for continuing maintenance chemotherapy (e.g. pemetrexed), also for nintedanib.

Consider stopping chemotherapy early for those undergoing second line chemotherapy, when benefits are modest (e.g. single agent docetaxel).

Tyrosine kinase inhibitors for oncogene-driven NSCLC should almost always continue, but consider prescribing a longer length of treatment e.g. 2 or 3 cycles between reviews.

Consider administering pembrolizumab 6 weekly rather than 3 weekly when given as a single agent, and consider deferring immunotherapy for a longer period on a case by case basis (NB: as per NICE guidance, the treatment break policy does *not* apply during the COVID-19 pandemic, including CDF funded treatment; treatment can be restarted after confirmed disease progression provided there is a reasonable chance disease control can be regained).

Considerations with regard to lung cancer investigations on treatment
Consider extending the interval between routine on-treatment CT scans.

Consider delaying the interval to initial response assessment CT, particularly when there is evidence of clinical benefit.
There is no absolute indication for an EDTA for carboplatin-containing chemotherapy regimens; consider the need for baseline or subsequent EDTA on a case by case basis

Consider deferral of supportive care including zolendronic acid unless hypercalcaemia or problematic cancer pain

5.2.3 Prioritising patients for intravenous systemic anticancer treatment

(Table taken from NICE COVID-19 rapid guideline for the delivery of systemic anticancer treatment; see also NHS England's clinical guide for the management of cancer patients during the coronavirus pandemic)

Priority level	Categorisation based on treatment intent and risk:benefit ratio of treatment
1	Curative treatment with a high (more than 50%) chance of success
2	Curative treatment with an intermediate (15% to 50%) chance of success
3	Non-curative treatment with a high (more than 50%) chance of more than 1 year extension to life
4	Curative therapy with a low (0% to 15%) chance of success or non-curative therapy with an intermediate (15% to 50%) chance of more than 1 year extension to life
5	Non-curative therapy with a high (more than 50%) chance of palliation or temporary tumour control and less than 1 year expected extension to life
6	Non-curative therapy with an intermediate (15% to 50%) chance of palliation or temporary tumour control and less than 1 year expected extension to life

Non-small cell lung cancer
Neoadjuvant chemotherapy – 2
Adjuvant chemotherapy – 4
Locally advanced concurrent chemo-radiation – 2
First line advanced: pembrolizumab – 3, pembrolizumab + chemotherapy – 3, doublet chemotherapy - 4, vinolrebine monotherapy (if given) – 6
Second line advanced: anti-PD(L)1 – 4/5 (depending on PD-L1 level), docetaxel – 6
Third line and subsequent: 6
TKI therapy for oncogene-driven lung cancer – 3

Small cell lung cancer
Locally advanced chemo-radiation – 2
First line advanced – 4
Second and subsequent line advanced – 6

5.2.4 Patient management

- Patients to have blood tests locally or via district nurse
- Use of telephone/virtual clinics
- Ensure patients have information leaflets/hotline numbers
- The following SACT regimens are very unlikely to cause significant myelosuppression. These patients should be advised to remain at home and not attend A&E if they develop a temperature (unless there is any prior evidence of myelosuppression for *any* reason): all TKIs, all single agent immunotherapy, maintenance nintedanib, and maintenance pemetrexed.

5.3 Radiotherapy

5.3.1 SABR

Consider SABR for all suitable Stage I and IIA patients
Consider 3 or 4 fractions (not 5 or 8) 54Gy in 3# or 50Gy in 4# where possible
Consider interval scan for really slow growing tumours at MDT

5.3.2 Locally advanced disease: Stage III

Consider RT alone or RT followed by chemotherapy
Consider Concurrent chemoRT with 2 cycles of chemotherapy only for patients with PD-L1>1% who will be eligible for consolidation immunotherapy
Consider 55Gy in 20# rather than 64Gy in 32# for all patients receiving radical radiotherapy.
Consider 3-4 weekly durvalumab for consolidation after chemo-radiotherapy

5.3.3 Adjuvant

Consider omitting adjuvant radiotherapy for N2 disease
Adjuvant RT could be considered for involved margin only if this is confirmed at MDT

5.3.4 Palliative

Consider single 8Gy fraction or 16Gy in 2# for palliation.
Consider 39Gy in 13# for the group of patients who may benefit from high dose palliative radiotherapy.

5.3.5 Small Cell

Consider concurrent chemo-radiotherapy delivering 40.05Gy in 15#
Omit PCI and substitute MRI surveillance at 3 monthly intervals for both limited and extensive stage
No consolidation thoracic radiotherapy in extensive stage disease

5.3.6 Thymoma

No adjuvant radiotherapy.
Surveillance for R1 resection and consider radiotherapy at a later date

5.3.7 Priority levels

Concurrent chemo-radiotherapy for NSCLC and small cell lung cancer- 1
SABR/Radical radiotherapy only for NSCLC – 1
Adjuvant radiotherapy for involved margin - 3
Palliative radiotherapy - 4

5.3.8 Patient management

- Telephone clinics for new patient interviews (Planning and Pre-Treatment)
- Skin assessments conducted whilst patient attending for treatment and managed according to local protocol. All other reviews should be managed via telephone clinic.
- Patients should be provided with agreed emollient prior to treatment commencing with clear instructions for use.

6 Follow-Up of Cancer Patients

- Where possible, minimise the number of follow up scheduled appointments per patient, allowing community teams to support patients post treatment
- Ensure that a high quality treatment record summary is available to GPs and community services as well as to the patient to enable best possible communication between teams where appointments with secondary care are reduced.
- Implement virtual or telephone clinics for the majority of patients unless unavoidable and follow national guidance for the use of such non-face to face clinics.
- Postpone any radiological surveillance of known disease unless it will impact on care (eg if eligible for second line treatment).

7 MDT Meetings

- Implement weekly virtual MDTs wherever possible to minimise the number of clinicians meeting in one room. Use available technology to support this, ensuring compliance with NHS information governance standards.
- Aim to minimise the number of staff present at the MDT e.g. 1 respiratory physician, 1 oncologist, 1 pathologist, 1 radiologist, 1 surgeon and one lung cancer clinical nurse specialist.
- Enhance administrative support to the MDTs to ensure rigorous data capture and records are maintained, if needed drafting in additional non-clinical staff to support from elective services.
- Maintain a list of patients with delay to treatment or further investigation.

8 Research Activity

It is recommended that all recruitment and screening to all clinical trials be suspended with immediate effect. No new trials should be opened.
The exceptions to this are:

- Research into COVID-19

9 Workforce reduction plan

Now and assuming up to - 25% Staffing loss	A - 50% Staffing loss	B - 75% Staffing loss
Weekly Covid-19 Status Meeting <Insert date/time> Team leaders Update Huddles for all staff <Insert date/time> **To Increase 2WW urgent capacity:** •Keep clear records of all cancelled pts •Postpone all 3, 6 & 12 month F/U **To increase surgical cover:** •Cancel and defer routine thoracic surgical work. **Triage referrals: High index of suspicion to defer investigations on low suspicion** **Keep clear records of decision making** **Ensure patients not 'lost'**	**As per 'Now' and to also to include:** Review, reflect and amend as indicated **Surgery** Cancel all benign surgery **To increase surgeon/capacity**: Post-op clinics to be covered by CNS/ANP **To increase clinic capacity:** Postpone routine follow up patients for at least 12 weeks To Increase Oncology capacity: Follow up clinics to be postponed/cancelled or consider CNS cover	**As per 'Now' and 'A' and to also to include:** Review, reflect and amend as indicated

10 Other Considerations

There may come a time when we need to cease all lung cancer clinic activity if unable to offer any active treatment. An accurate record will need to be kept of all patients affected so they can be reappointed at such time the situation changes. Decision making will need to be accurately recorded at all times.

10.1 General measures across all services to reduce patient contact and maximise workforce capacity

- Minimise face-to-face appointments – Offer consultations via telephone or video consultation wherever possible.
- Cut non-essential follow-up visits.
- Accelerate adoption of stratified follow-up models.
- Home delivery of oral systemic agents where suitable/available.

10.2 Reduce dwell time in services

- For those who do still need to attend, particularly for treatment, schedule appointments to reduce waiting times.
- Encourage patients not to arrive early – consider measures such as texting them when ready to see them so they can wait in their car.
- Follow broader trust actions and protocols including testing and isolation of patients with coronavirus symptoms.

If staff are required to self-isolate due to contact with a confirmed case of coronavirus, consider ways they can continue to provide care and/or support MDTs. For example:

- Virtual attendance at MDT meetings
- Telephone or video consultations, especially follow-ups
- Identifying vulnerable patients and making contact to discuss changes to care and treatment
- Identifying patients suitable for remote monitoring/follow-up
- Data entry (where remote access enabled).

10.3 Overall considerations

We should avoid unproductive attendances at hospital.

- Senior decision-making at the first point of contact should reduce or even prevent the need for further attendances.
- A decrease in elective work will allow for a greater senior presence at the front door.
- Clinicians may need to work in unfamiliar environments or outside of their sub-specialist areas. They will need to be supported.
- The possibility of a seven-day service may need to be considered.
- Consider postponing long-term follow-up patients until the crisis has passed.
- Can a follow-up virtual clinic be developed with your facility?
- CT scanning may be limited as it is the investigation of choice for coronavirus pneumonitis.

10.4 Recovery post COVID-19

- Considerations will need to be made to review the impact of necessary changes implemented during the acute pandemic and to ensure that the MDT recovers rapidly when safe to provide best standard of care
- Additional support will likely be required to lung cancer services in particular given the impact on core teams and services involved with lung cancer care (respiratory medicine, cardiothoracic intensive care units, thoracic surgery and acute oncology services who may share lung cancer workload)