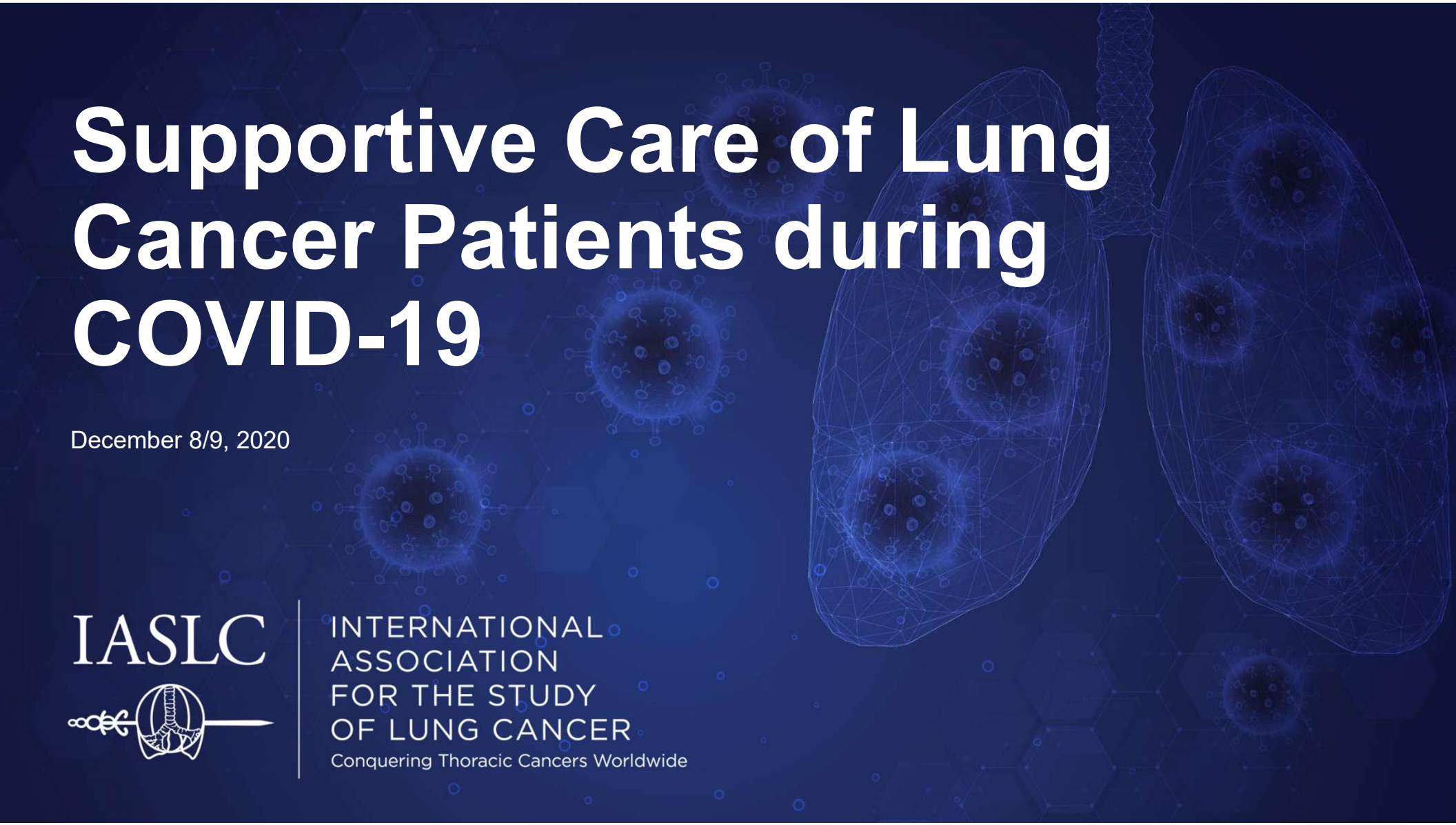
Supportive Care of Lung Cancer Patients during COVID-19

December 8/9, 2020



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INTERNATIONAL ASSOCIATION FOR THE STUDY OF LUNG CANCER

Conquering Thoracic Cancers Worldwide

Supportive Care of Lung Cancer Patients during COVID-19

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CME ACCREDITED

December 8/9, 2020

Faculty Disclosures

- Maria Ftanou, DPsych has no financial relationships to disclose.
- Michelle M. Turner, MS, CRNP has no financial relationships to disclose.
- Stephanie Wynne, BSc has no financial relationships to disclose.
- Sara McLaughlin-Barrett, NP has no financial relationships to disclose.

COVID-19

- First reported outbreak COVID-19 was in Wuhan, China- December 2019.
- WHO declared a public health emergency of international concern January 30, 2020. [1]
- Rapidly spreading, more than 56 million reported cases globally. [2]
- Greater than 1.35 million deaths. [2]
- Catastrophic effects on the world economy, healthcare systems and healthcare workers

1. World Health Organization *(2020)*
2. https://www.worldometers.info/coronavirus/

HEALTHCARE WORKERS

- Hospital beds at full capacity
- Limited ICU beds
- Burn out rate at ≥ 50% [3, 4]
- Mental and physical exhaustion
- Ever evolving policy and procedure changes
- Additional emotional and psychological support for lung cancer patients

Image 1: · Cars lining up for COVID-19 testing at Dodger Stadium, LA

3. Chen S, Lai Y, Tsay S (2020)
4. Morgantini L, Naha U, Wang H, et al. (2020)

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IMAGE 1: https://cdn.newsapi.com.au/image/v1/f659703511d98962d66756f513cdab3e?width=650

New emotional challenges faced by Lung Cancer Patients during COVID-19

Maria Ftanou (AU)

Dr Maria Ftanou
Clinical Psychologist
Peter MacCallum Cancer Centre &
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Doctorate of Psychology

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Overview

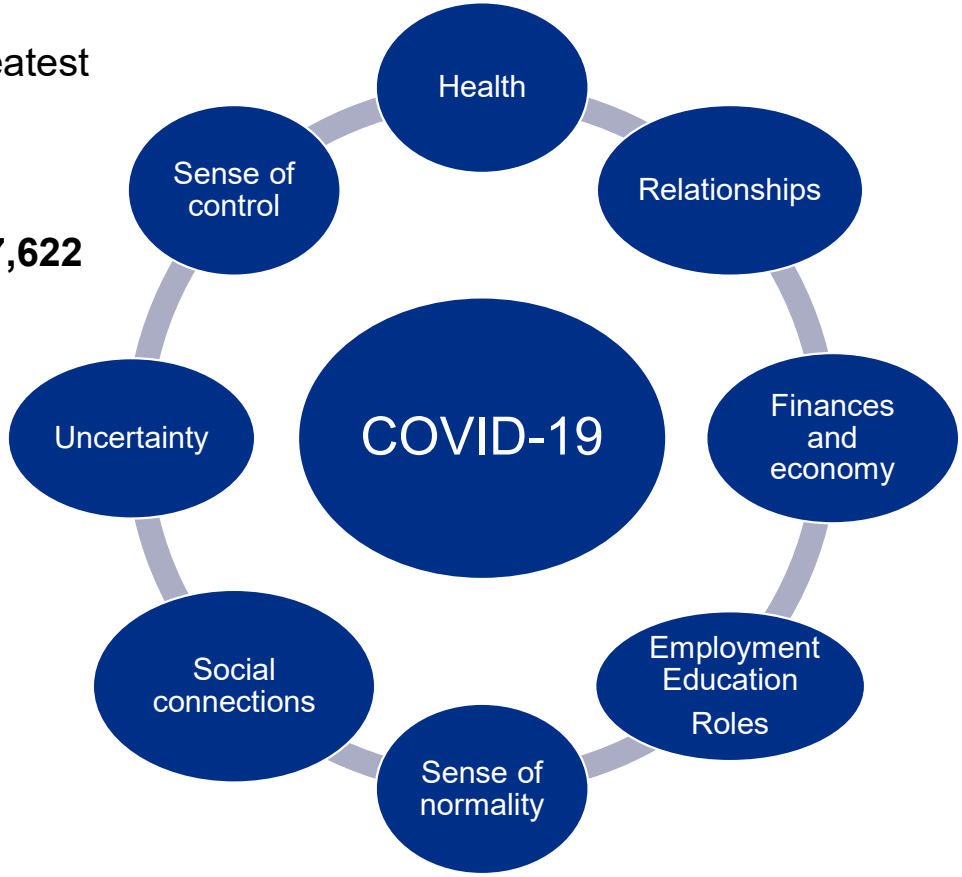
1) Emotional impacts of COVID-19 on lung cancer patients

1) Strategies to support lung cancer patients through the pandemic

COVID-19 emotional impacts

COVID-19 is one of the greatest global public health crisis

Coronavirus Cases: **59,097,622**
Deaths:**1,395,595**
Recovered: **40,883,295**



Lung cancer & challenges to wellbeing

- Prognosis remains poor with approximately 15% of patients surviving five years post diagnosis
- Lung cancer is associated with more distress than other cancers
- Prevalence rates of depression and anxiety range 11% to 40%
- Greater symptom burden across the disease trajectory (e.g: fatigue, loss of appetite, shortness of breath, cough, pain)
- 95% of people with lung cancer experience stigma

Emotional impacts of COVID-19 on lung cancer patients

- Heightened perceived risk for poor outcomes and mortality
  - Frequent visits to hospital and receiving anticancer treatments with immunosuppressive properties might considerably increase the risk of being infected
- Fear of whether the healthcare-capacity issues will interfere with optimal treatment
  - fear of shortage of drugs, reduced treatments and minimized face-to-face contact with treating teams
- Social isolation, disconnection from others, loneliness
  - limited visits from friends and family, formal /informal caregivers

Emotional impacts of COVID-19 on lung cancer patients

- Very high prevalence of fear of disease progression, anxiety, and depression in cancer patients under the outbreak of COVID-19
- Increased feelings of guilt and being a burden on family and friends
- Patients are affected by unemployment, loss of income. Financial strain has been associated with decreased quality of life maladaptive coping and treatment nonadherence.
- Carers experience isolation due to reduced supports and increasing carer demands
- “Silver lining” experiencing appreciation for everyday things

Self-care strategies

Self-care is the **intentional** time taken on a **daily basis** to look after one's self:

- Access to reliable sources of information
- Reduce COVID-19 media
- Exercise, Sleep, Nutrition
- Control the things you can control
- Relaxation techniques
- Pleasant activity scheduling

Social connections

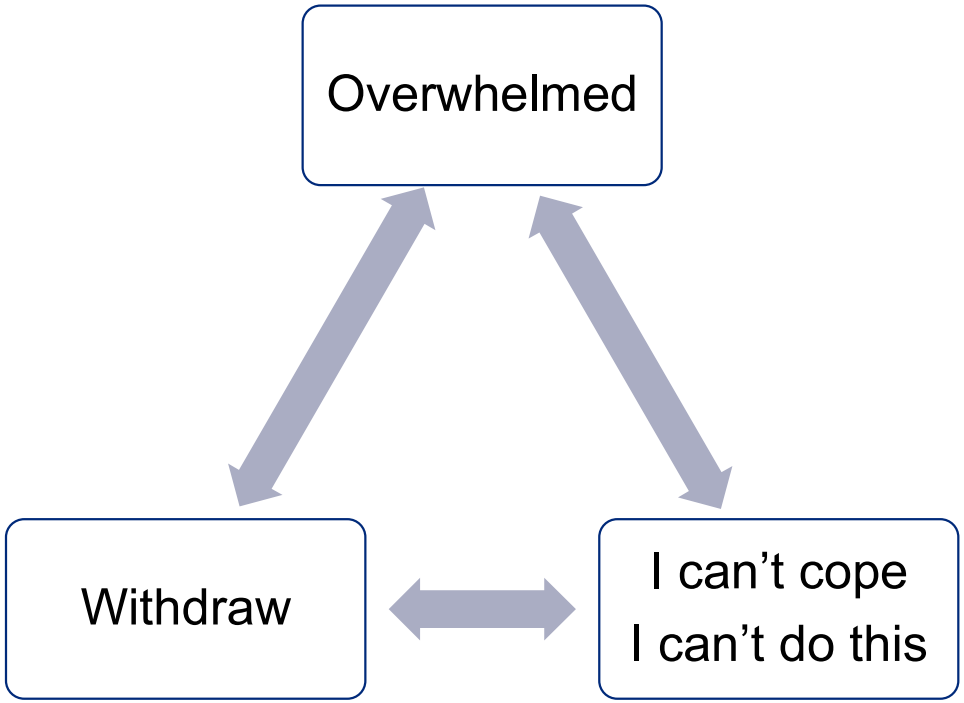
Encourage patients to:

- Make contact friends and loved ones
- Connection through internet, by phone or by other online means
- Contact with community, online and spiritual and other interest groups
- Contact to professional supports and helplines

Communication with healthcare providers

- Encourage connection with treating teams
- Provide accurate information about care and changes in care
- Provide information on treatment side-effects and how and when to access additional supports
- TeleHealth provides a flexible and reliable option for care

Cognitive Behaviour Therapy



Mindfulness

Mindfulness means paying attention (*being aware*) in a particular way: on purpose, in the present moment, and non-judgmentally

Jon Kabat-Zinn

Group based educational intervention

- Awareness of thoughts, emotions and body sensations
- Mindful body scan, mindful stretches, mindful sitting practice
- Understanding stress
- Awareness of habitual thought patterns and emotional reactions
- Mindfulness in everyday life

Physically Supporting Lung Cancer Patients:
Assessment and home-based rehabilitation via a virtual platform

Stephanie Wynne (UK)

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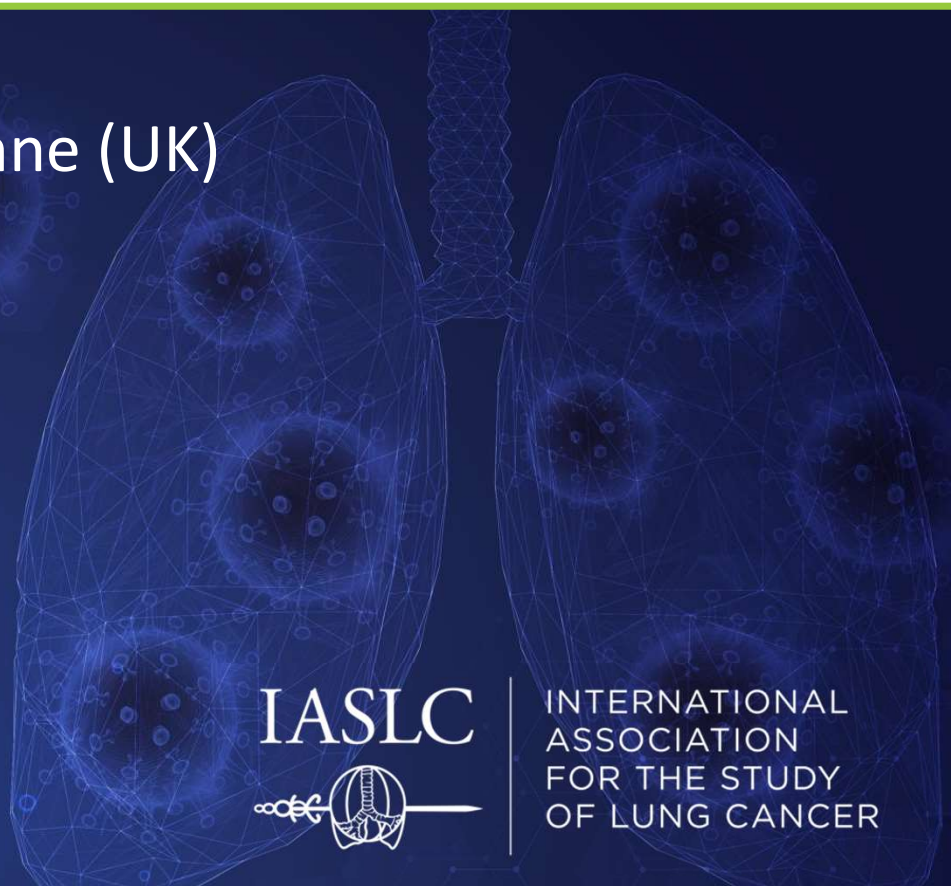

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Background

Guy's Hospital (May 2020): new pilot prehabilitation service for patients undergoing surgery for lung cancer

Prehabilitation = 'the practice of enhancing a patient's functional capacity before surgery, with the aim of improving postoperative outcomes'[1]

Strong evidence for prehabilitation before thoracic surgery

- ✓ Improved functional capacity[2] and HR-QoL[5]
- ✓ Shorter hospital stay[3,4] with fewer complications[2-4]
- ✓ Reduced hospital readmission[2]

March 2020 – UK wide lockdown for COVID-19

Government shielding for cancer patients

Hospital policy: 2 weeks strict isolation prior to surgery

Aim: to provide safe and effective assessments, exercise programmes and symptom management via a virtual platform to patients within their homes

Access to technology

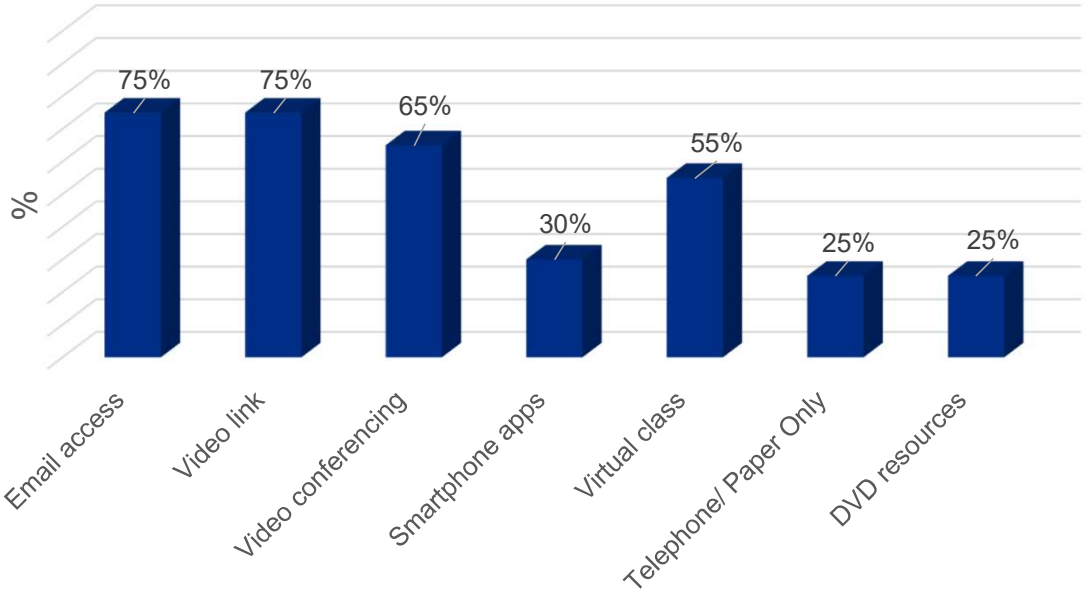
Considerations

- **Age**: highest incidence of lung cancer in 80-84 and 85-89 age group for females and males (UK data 2015-2017)[6]

- **Socioeconomic factors**: lung cancer incidences are 174% and 168% higher in the most deprived quintile compared with the least for females and males (England 2013-2017)[7]

n=20 patients surveyed during our pilot

- % female: 65
- average age: 68
- average PS: 1
- FEV1%: 88
- % >5 comorbidities: 45



Aims of our service

Macmillan Cancer Support Prehabilitation Guidance[8]:

Patients should have access to physical activity, dietary and psychological support

To provide video or telephone-based assessment and management of these three key areas

Detect and mitigate the risk of physical deterioration during COVID-19[9]

- Deconditioning
- Increased frailty
- Increased smoking/ alcohol

Support the management of wider lung cancer related symptoms e.g.

- Pain
- Dyspnoea
- Cough
- Fatigue

Principles and guidance for prehabilitation within the management and support of people with cancer

In partnership with NIHR | Cancer and Nutrition Collaboration, RCoA Royal College of Anaesthetists, MACMILLAN CANCER SUPPORT RIGHT THERE WITH YOU

Home-based assessments

Establish baseline function and symptoms

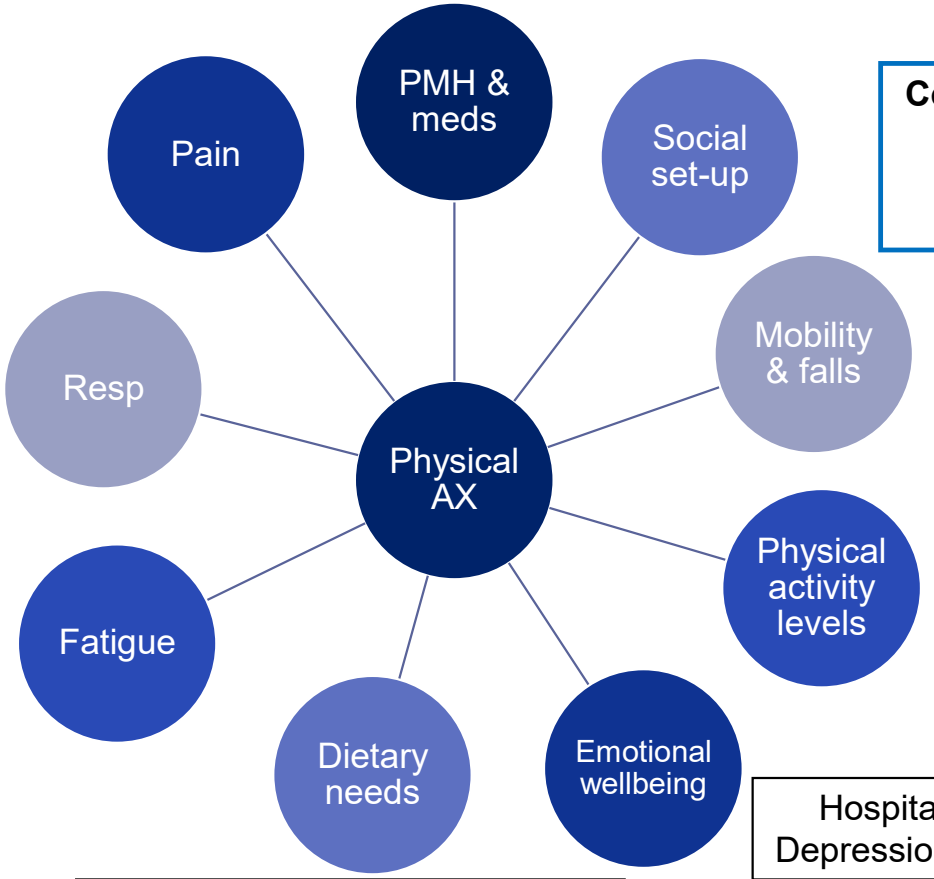
- Personalise intervention
- Monitor progress
- Establish onward referral needs

Identify precautions for unsupervised intervention

- Falls
- Pain or bone disease
- Past medical & drug history
- Exercise environment

Patient reported outcomes

- Postal Vs email link



Comprehensive medical and physical assessment

Godin Leisure-Time Exercise Questionnaire (GLTEQ)

Hospital Anxiety and Depression Scale (HADS)

The Royal Marsden Nutrition Screening Tool

Measuring physical function at home

Peak oxygen consumption (VO2peak)

- Gold standard for evaluating cardiorespiratory fitness and predictive of postoperative complications[3]

Six minute walk test (6MWT)

- Measures functional capacity, no CPET equipment
- Predictive of postoperative complications and cancer survival in lung surgery[10]

Unable to perform these tests within the home

- 6MWT – traditionally 20m track
- Lack of available space & supervision
- 30% have access to an app

Sit-to-stand (STS) and stepping tests have shown to be feasible, reliable, valid and responsive to exercise training[11]

STS	5 repetition	10 repetition	30 second	60 second	✓ Easy to visualise on camera ✓ Not all patients have stairs ✓ Quick
Stepping	3 minute	6 minute	Incremental		

Chosen Assessments

1 minute STS test

- Patient completes as many STS as possible in one minute
- Assesses functional capacity and lower limb strength
- Responsive to exercise training (COPD) - MCID of +3[12]
- Modified BORG scale and leg fatigue pre and post-test

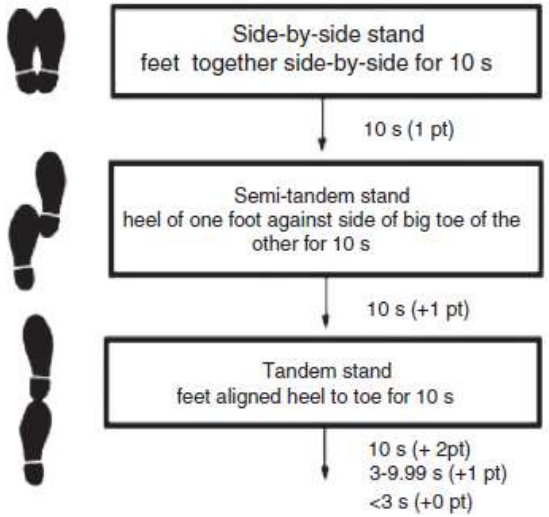
Score	Level of exertion
0	No exertion at all
0.5	Very, very slight (just noticeable)
1	Very slight
2	Slight
3	Moderate
4	Somewhat severe
5	Severe
6	
7	Very severe
8	
9	Very, very severe (almost maximal)
10	Maximal

Williams, 2017[13]

Global range of movement – upper and lower limbs

Balance component of short physical performance battery (SPPB)

- Assesses balance in 3 different postures for 10 seconds
- Inform modifications to exercise programme where needed
- Able to complete with small static support and view over video



Nogueira et al, 2019[14]

Home-based exercise prescription

Liu et al (2020)[15] - unsupervised, home-based exercise training using minimal equipment led to improved functional capacity of patients with lung cancer before surgery

American College of Sports Medicine (ACSM) recommendations for cancer survivors[16]		
	Cardiovascular exercise	**Strengthening**
Frequency	150 minutes of moderate intensity physical activity per week	Strength training x 2 per week
Intensity	60-85% HR reserve Modified BORG scale 4/10 'walk and talk' level	60% of one repetition maximum Fatigue during last 2 repetitions of set
Time	Gradually aim for 20-30 mins continuous aerobic exercise. Pacing for dyspnoea and fatigue	Build up to 2 sets of 8-15 repetitions
Type	• Garden walking, stair climbing, static bike, STS, marching/jogging on the spot • Signposting to online video resources	• Major upper and lower limb muscle groups • Resistance bands or use of home equipment • Balance exercises near to supportive surface

Home-based intervention

Increasing exercise motivation during isolation
- Online exercise resources
- Weekly goal setting and follow-up
- Pedometers/ fitness tracking technology
- Diaries to record progress (paper Vs. online)

Dietary needs
- Screening for risk of malnutrition
- Dietitian referral & supplementation
- Weight monitoring at home

Psychological support
- Screening with HADS
- Onward referral to remote talking therapies
- Relaxation strategies & use of mindfulness apps

Management of the holistic symptom burden of lung cancer
- Written content (postal and email)
- Breathlessness management video in development

Key reflection: uptake

Data from n=20 patients with lung cancer consecutively referred for surgery

Aim to evaluate and refine our future practice

- n=7 assessed remotely (video n=4 or phone n=3)
- n=13 permitted face-to-face initial assessment then remote follow-up (pre-surgical isolation, location)

Uptake rates to new prehab service: remote assessment = 64% Vs face-to-face = 100%

Reflection:
More difficult to establish rapport remotely
'Surprise call' Vs expecting exercise assessment at hospital

Key learning: Collaborative multidisciplinary team approach required

Key reflection: feasibility

Delivering in-home physical assessment and rehabilitation appears to be feasible during COVID-19

Increased time requirement remotely - technology set-up and troubleshooting

Difficult to prescribe and teach exercise over the phone - 'cautious approach' may lead to suboptimal intervention

One patient (14%) was unable to complete assessment/intervention over the phone

- Frequent falls, living alone, no video access

Patients with high risk therapy needs tend to have less access to technology: with email = 13% Vs without email = 87%

Key learning:

With ongoing COVID-19 restrictions we are developing a joint medical/AHP screening tool

High risk: assess and optimise via a face-to-face clinic then weekly remote follow-up (during pre-surgical isolation)

Low risk: access to remote support via a video educational seminar and exercise class

Key reflection: effects of remote intervention

3 core areas of prehabilitation

- Physical activity: GLTEQ and 1 min STS test
- Dietary needs: Royal Marsden Nutrition Screen
- Psychological wellbeing: HADS

GLTEQ, HADS and 1 min STS repeated via virtual 'end of prehab' assessment

- 1-2 days before thoracic surgery
- Average length of home-based intervention period = 26 days
- 18% and 15% of patients referred to dietitian and psychological support service

Outcome Measure	Baseline	Change since baseline
Physical activity: GLTEQ	16	+46
Anxiety: HADS-A	5	-1
Depression: HADS-D	3	-1
Exercise capacity: 1 min-STS	24	+5

Home-based intervention during COVID-19 led to:

- ✓ Small reduction in anxiety and depression
- ✓ 100% of patients meeting recommended levels of physical activity
- ✓ Improvement in exercise capacity which exceeds the 1min STS test MCID (+3)

Take home messages

- Patients with lung cancer are at risk of physical and psychological deterioration during COVID-19
- **Home-based rehabilitation may play an essential role in mitigating and improving this risk**
- **A comprehensive assessment is required for safety and effective delivery of remote intervention**
- **Physical assessments and intervention delivered over telephone or video appear to be feasible and effective**
  - However, caution should be exercised in higher risk patients
  - No ‘one size fits all’ approach
- **Remote rehabilitation is unfamiliar to patients:** a collaborative multidisciplinary and family/carer approach may improve uptake and engagement
- Further consideration of how best to optimise vulnerable patients with limited access to technology is required

With special thanks to…

Special Thanks to….

- Miss Stephanie Fraser – Associate Specialist in Thoracic Surgery
- Eleanor Hawley – Thoracic Nurse Practitioner
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- Rujina Ali – Thoracic Admin Coordinator
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- Faye Dickinson – Specialist Physiotherapist
- Pip Labuc – Specialist Occupational Therapist
- Rachel Bracegirdle – Specialist Dietitian
- Dr Cheng Ong – Consultant Anaesthetist
- Samantha Tordesillas - Programme Manager for Personalised Cancer Care

Thanks to….

- South East London Cancer Alliance
- Guy's Hospital Cancer Physiotherapy Team
- Guy's Hospital Cancer Occupational Therapy Team
- Guy's Hospital Nutrition & Dietetics Team
- Dimbleby Cancer Care

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Palliative Care for Lung Cancer Patients during COVID-19

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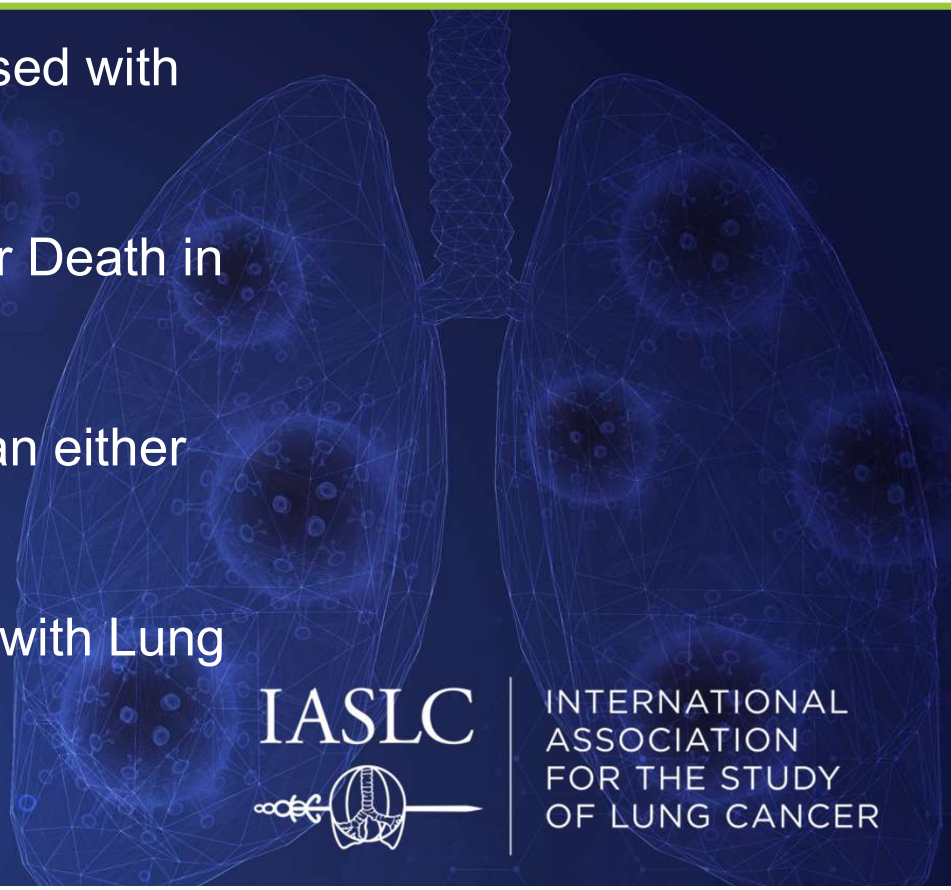
What has stayed the same in lung cancer?

- This Year 228,820 Americans will be Diagnosed with Lung Cancer.
- Lung Cancer is the Leading Cause of Cancer Death in the U.S.
- Lung Cancer Claims More Lives Annually than either Colorectal, Pancreatic, Breast, or Prostate.
- Nearly 20 % of Men and Women Diagnosed with Lung Cancer Are Never Smokers



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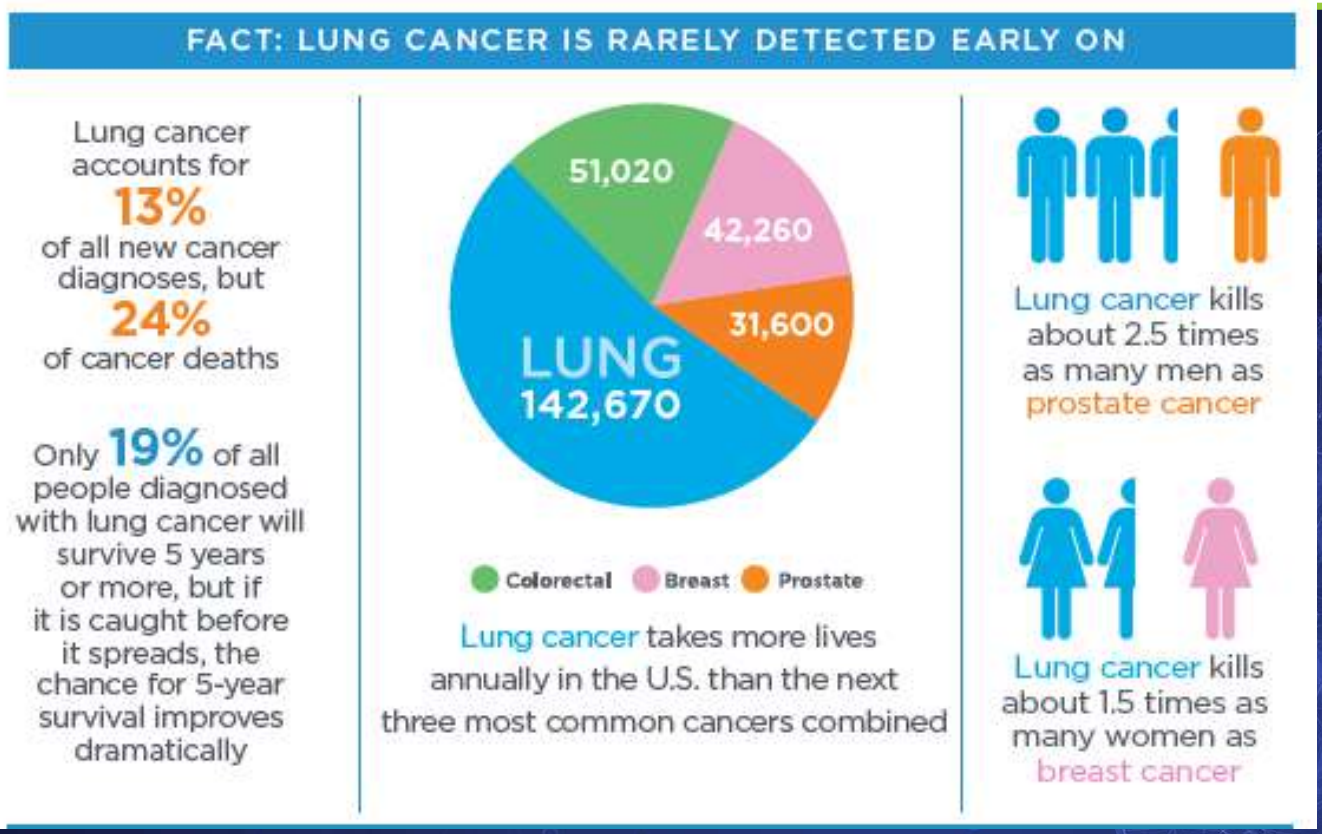
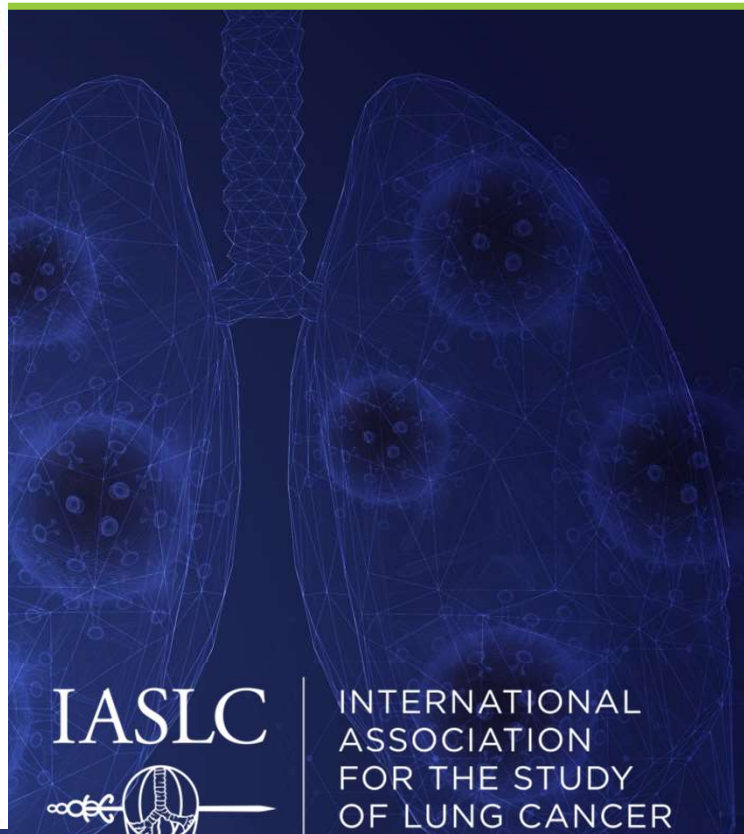
American Cancer Society Facts and Figures 2020, Atlanta
Centers for Disease Control & Prevention Morbidity and Mortality Weekly Report

What has stayed the same in lung cancer continued…





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March 15, 2019 – the day that changed medicine….

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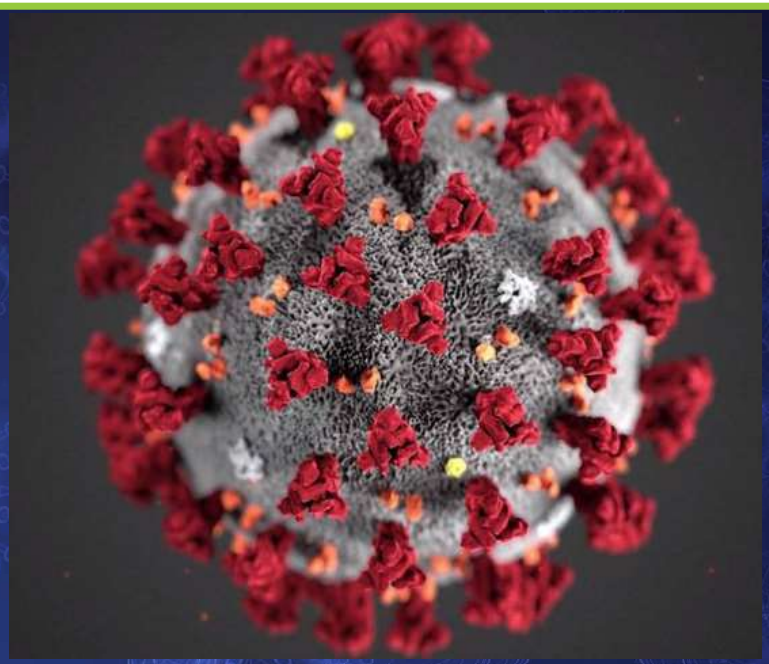
What has changed due to COVID-19?

- Clinical operations
- Personal protective equipment (PPE)
- Enhanced cleaning
- Staff distancing
- Provider distancing
- Visitor Policies
- De-coupling visits



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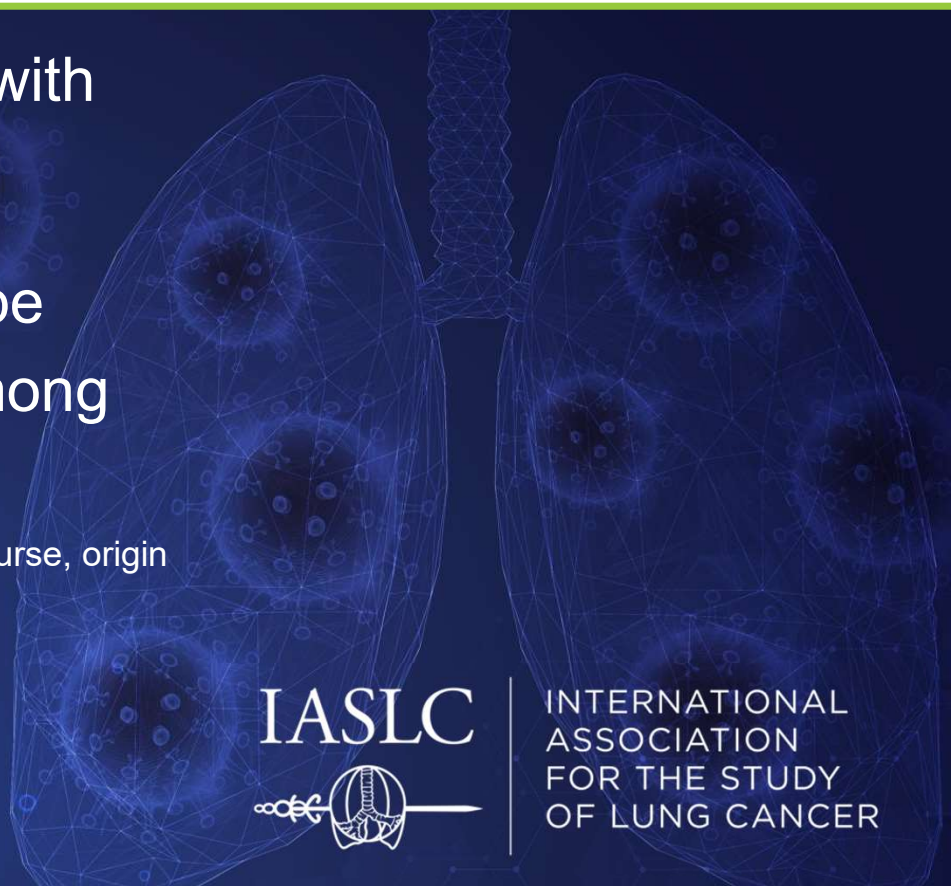
Epidemiology of cancer patients and Coronavirus Infection

- 18 patients (1%) of total 1590 cases with COVID had hx of cancer vs general population (0.29%)
- Lung cancer (28%) most common type
- Higher incidence of complications among cancer patients (39% vs 8%)

* Small sample size and heterogeneity regarding disease duration course, origin and tx hx.



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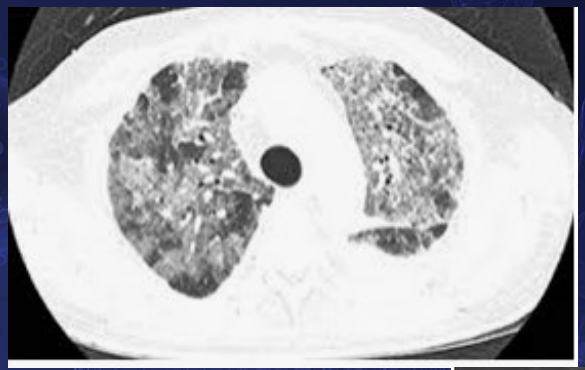
Liang et al. Lancet Oncology 2020:21:335-7

Challenges of Lung Cancer and COVID….

- Both present with similar symptoms
  - cough
  - shortness of breath
  - fatigue
  - chest discomfort
- These symptoms can also be seen post radiation treatment and as side effects from our oncology therapies



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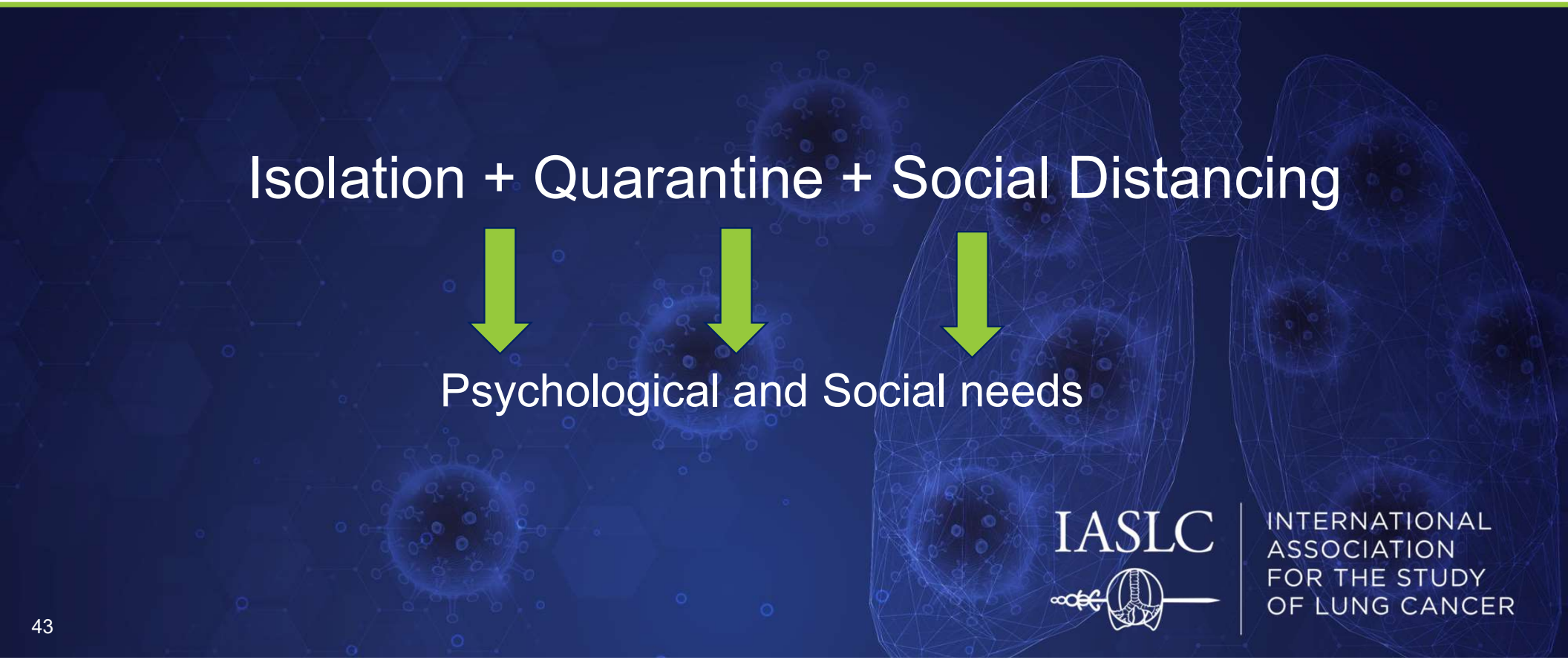
Liang et al. Lancet Oncology 2020:21:335-7

Palliative Care During a Pandemic



Barriers of providing palliative care occur at 3 levels….

- Patient – infection prevention and decreasing need of social isolation
- Caregiver – social distancing, lack of social support, job loss
- Health System – telemedicine services, health care worker exposure = isolation, allocating resources, provider burn out

Liang et al. Lancet Oncology 2020:21:335-7

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Pandemic Plan for Palliative Care Preparedness – developed after the 2010 influenza pandemic

1. Stuff – build up reserve of medication, equipment, PPE
2. Staff – Anticipate decrease in manpower due to reallocation of staff
3. Space – Creation of space for EOLC – isolation wards with access to palliative care services
4. System – triaging system (palliative care services, home visits, telemedicine visits)
5. Skills of Communication – EOLC discussions challenging but more so during pandemic – smartphones for video calling
6. Self – physical and mental stress of healthcare providers - separation from family, seeing patients dying daily, fear of infection

Liang et al. Lancet Oncology 2020:21:335-7

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