

	Radiation Oncology 1	Radiation Oncology 2	Respiratory 1	Respiratory 2	ICU 1	ICU 2
Harms						
	<ul style="list-style-type: none"> <li>- Low dose may still harm.</li> <li>-Disagreement with targeting lungs.</li> <li>- Radiation oncologists deliver treatment, therefore responsible for any harm caused.</li> </ul>	<ul style="list-style-type: none"> <li>- Idiosyncratic lung damage from LDRT likely.</li> <li>- Low dose unlikely to cause harm in majority of patients.</li> </ul>	<ul style="list-style-type: none"> <li>- Concern: pneumonitis.</li> <li>- Lungs a reasonable target.</li> <li>- Not doing harm bigger priority than knowing the treatment works.</li> <li>-Harm may be caused by patient transfer.</li> </ul>	<ul style="list-style-type: none"> <li>-Imaging of lungs prior to treatment advised.</li> <li>-Potential harms around transfer.</li> </ul>	<ul style="list-style-type: none"> <li>-Potential harm from worsening hypoxia if LDRT used.</li> <li>-Logically there may not be a cause for concern issue but that colleagues may have immediate concerns about lung damage.</li> </ul>	<ul style="list-style-type: none"> <li>- Open to the concept that LDRT will reduce inflammation.</li> <li>-Agrees with lungs as target.</li> <li>- Concerns regarding transfer.</li> <li>-Some reassurance from low dose.</li> </ul>
	<ul style="list-style-type: none"> <li>- Not reassured by contemporary data due to low patient numbers.</li> </ul>	<ul style="list-style-type: none"> <li>-Changing landscape regarding COVID-19 treatments.</li> <li>-Even if small trials done, not sufficient patient numbers to reassure regarding harm.</li> </ul>	<ul style="list-style-type: none"> <li>- Trial data would important to provide reassurance around harms.</li> <li>- Current lack of evidence around the longer term effects of COVID on the lungs.</li> </ul>	<ul style="list-style-type: none"> <li>-Aware recent trial evidence.</li> <li>-Lack of personal experience with radiotherapy for non-malignant condition.</li> <li>-Lack of information around the longer term effects of COVID-19.</li> </ul>	<ul style="list-style-type: none"> <li>-Lack of personal experience with radiotherapy treatments.</li> </ul>	<ul style="list-style-type: none"> <li>-Some reassurance regarding the low dose used after reviewing previous literature on using LDRT for pneumonia.</li> </ul>
Trialability						
	<ul style="list-style-type: none"> <li>-Difficult to measure benefit/harm when LDRT trialed in few patients.</li> <li>-Patient numbers may not be sufficient for recruitment going forward.</li> </ul>	<ul style="list-style-type: none"> <li>-Benefit to change practice not be picked up in small cohort.</li> <li>-A proportion of patients will get better with no intervention</li> <li>-A primary endpoint of if patients get better or not would need large patient numbers to see a difference.</li> </ul>	<ul style="list-style-type: none"> <li>-Distinguishing clinical signs and symptoms from COVID-19 versus treatment challenging because of rapid deterioration in patients with COVID-19.</li> </ul>	<ul style="list-style-type: none"> <li>-Reduction in oxygen requirement reasonable endpoint.</li> <li>-Not clear at what time-point that would be measured.</li> <li>-Patients very interested in participating in COVID-19 trials.</li> </ul>	<ul style="list-style-type: none"> <li>-Uncertainty regarding COVID-19 patient numbers going forward.</li> <li>-Treatment effect would have to be large if numbers small.</li> <li>-Mortality based end-point reasonable, mirroring RECOVERY.</li> <li>-Patients/families very willing to participate in COVID-19 research.</li> </ul>	<ul style="list-style-type: none"> <li>-Uncertainty regarding numbers.</li> <li>-Recruiting large number to investigate clinically relevant treatment effect vs ability to deliver trial needing high numbers.</li> <li>-Patients may not like concept of LDRT but generally engaged in COVID-19 research.</li> </ul>
	<ul style="list-style-type: none"> <li>-COVID-19 trials easier to open due to clinical demand.</li> <li>-Lack of buy-in from lung radiation oncologists.</li> <li>-Physicians will recruit but oncologists will treat.</li> <li>-Multi-disciplinary approach.</li> </ul>	<ul style="list-style-type: none"> <li>-Clinician buy-in reduced due to the potential harm caused by LDRT.</li> </ul>	<ul style="list-style-type: none"> <li>-Competition with other novel treatments for COVID-19.</li> <li>-Understanding how radiotherapy works in non-malignant condition.</li> </ul>	<ul style="list-style-type: none"> <li>-Competition with other clinical trials testing novel treatments for COVID-19.</li> <li>-Most clinicians see value in researching new treatments due to the lack of proven therapies.</li> </ul>	<ul style="list-style-type: none"> <li>- Reduced clinician buy-in due to extra workload/fear of the unknown when it comes to radiotherapy.</li> </ul>	<ul style="list-style-type: none"> <li>-Open to the idea of trialling LDRT and agreement with the potential biological plausibility.</li> </ul>
	<ul style="list-style-type: none"> <li>-Patient selection: not doing harm vs risk in patients with no other options/ those who may recover spontaneously.</li> <li>-Avoid patients with unhealthy lungs who are very unwell.</li> <li>-Obesity as a risk factor.</li> </ul>	<ul style="list-style-type: none"> <li>-Avoid LDRT in young, fit patients who may recover spontaneously and those with lung fibrosis.</li> </ul>	<ul style="list-style-type: none"> <li>-Obesity risk factor for poor outcomes for COVID-19.</li> <li>-Avoid LDRT in early phase of the disease when patients well as may recover spontaneously.</li> </ul>	<ul style="list-style-type: none"> <li>-Exclude underlying lung disease/acute conditions that worsen hypoxia (PE).</li> <li>-Target those starting to deteriorate/ oxygen requirement/requiring level 2 care/day 10-14.</li> </ul>	<ul style="list-style-type: none"> <li>-Avoid in patients on CPAP/very high levels of oxygen: logistics of transfer and treatment delivery difficult.</li> </ul>	<ul style="list-style-type: none"> <li>-Avoid intubated patients/level 3 care.</li> <li>-Those requiring level 2/HDU care reasonable.</li> <li>- Many will recover spontaneously.</li> </ul>
Logistics						
	<ul style="list-style-type: none"> <li>-Staffing required for safe transfer to radiotherapy department.</li> </ul>	<ul style="list-style-type: none"> <li>-Time spent in the radiotherapy department and potential for deterioration during transfer.</li> </ul>	<ul style="list-style-type: none"> <li>- Logistics of treatment delivery.</li> </ul>	<ul style="list-style-type: none"> <li>- Difficulty transporting unwell patients on oxygen.</li> <li>- Staff required for transfer/ potential waiting time in the radiotherapy department.</li> </ul>	<ul style="list-style-type: none"> <li>-Staffing required for transfer</li> <li>-Effect on other departments.</li> </ul>	<ul style="list-style-type: none"> <li>-Transferring unwell patients and the effects on staffing.</li> <li>-Compared to other COVID-19 trials, transfer an extra issue.</li> </ul>
	<ul style="list-style-type: none"> <li>-Putting staff/patients at risk of transmission.</li> <li>-Related to time spent by patients in radiotherapy department.</li> </ul>	<ul style="list-style-type: none"> <li>-Logistics of separate rooms for COVID-19 positive patients/risk of transmission to others in transit.</li> </ul>	<ul style="list-style-type: none"> <li>-Staff/patient transmission.</li> <li>-Cancer patients particularly vulnerable.</li> </ul>	<ul style="list-style-type: none"> <li>-Logistics of separating COVID-19 positive patients from non-COVID patients.</li> </ul>		<ul style="list-style-type: none"> <li>-Transmission risk during patient transfer from previous experience.</li> </ul>
	<ul style="list-style-type: none"> <li>-Resources for implementation</li> </ul>			<ul style="list-style-type: none"> <li>-Implementation of LDRT would siphon resources away from other departments and patients.</li> </ul>	<ul style="list-style-type: none"> <li>-Versus steroids, LDRT more difficult to scale up to population level.</li> <li>-Potentially large pool of patients who eligible if shown to be effective.</li> </ul>	<ul style="list-style-type: none"> <li>-Resource implications for implementation of this treatment would be important.</li> </ul>

Table 1: Clinician attitudes on using LDRT for COVID-19 lung disease.