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Title: Cumulative exposure to ionising radiation in adults with interstitial lung disease (ILD)

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Body: Background: The cumulative exposure to potentially carcinogenic ionising radiation is important in patients with ILD as they are exposed to multiple radiological investigations. We looked at the amount of ionising radiation given to adults with ILD (n=41) attending our Respiratory clinic over a 12-month period. Method: All ionising radiation studies were reviewed for their impact on management. Radiation was calculated using standard reference doses and expressed as milliSievert [mSv]. Results: See Table. The average radiation dose was 12.33 mSv with 56% of investigations impacting care. Those with UIP pattern of fibrosis had a greater cumulative dose of radiation. Conclusion: Patients with ILD receive significant medical radiation each year, but most impacts on their management. Those with NSIP had a greater number of investigations impacting care as compared to those with UIP, in keeping with the wider spectrum of disease and more treatment options being available in this sub-group of patients. Care should be taken when ordering investigations associated with ionising radiation, to reduce the long term effects of potentially harmful investigations.

Radiation doses and % impacting care

	Mean Radiation Dose (mSv)	% impacting care
All patients (n=41)	12.33	56
UIP (n=24)	12.98	62
NSIP (n=8)	11.29	71
Other fibrosis (n=9)	11.9	68