

# The National COVID-19 Chest Imaging Database (NCCID): what is it and how you can participate

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<sup>3</sup> [https://nhsx.github.io/covid-chest-imaging-database/NCCID\\_Collaborative.html](https://nhsx.github.io/covid-chest-imaging-database/NCCID_Collaborative.html)



NCCID Collaborative

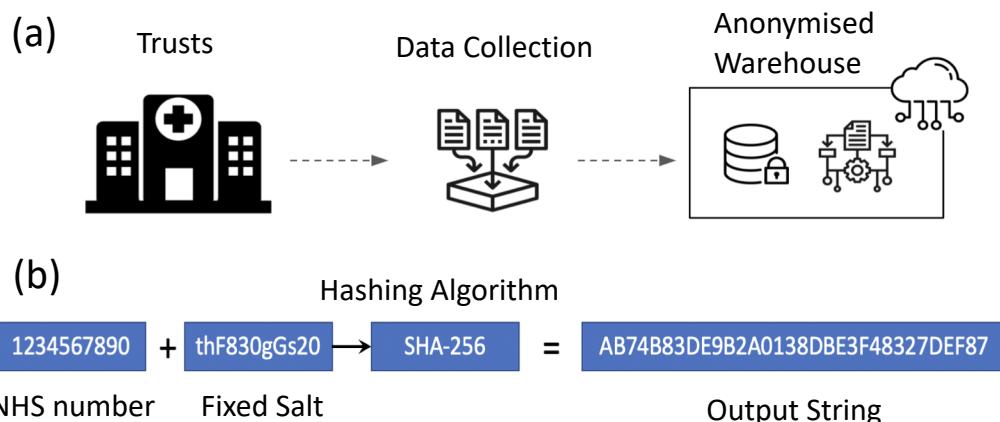
## Introduction

The National COVID-19 Chest Imaging Database (NCCID) was created in response to the COVID-19 crisis in early 2020. It aims to validate and aid in the development of automated analysis technologies, and to promote research projects in response to the COVID-19 pandemic. The NCCID is a centralised UK database containing X-Ray, CT and MRI images from hospital patients across the country. It is a joint initiative established by NHSX, the British Society of Thoracic Imaging (BSTI), Royal Surrey NHS Foundation Trust (RSNFT) and London-based AI specialist Faculty. The RSNFT set up and manage many existing research databases and has utilised some of the existing infrastructure for NCCID. One such example is the OPTIMAM database.

## Methods

All data transferred from the clinical sites to the central image database is fully de-identified and at no point do researchers have access to patient identifiable information. The NHS/CHI number is encrypted using an AES encryption algorithm and a complex salt to allow linking with national datasets via NCCID Pseudonyms. Encrypted NHS numbers are stored at the RSNFT and access is maintained by named data managers only. The final location for the de-identified image and data is a centralised cloud-based warehouse managed and maintained by NHSX and owned by NHSE (see [figure 1](#)).

Sites are asked to collect a small number of clinical data points per patient in a spreadsheet which is uploaded to the NCCID web portal on a regular basis. In addition, they are asked for the imaging to be sent to a dedicated NCCID Node on the Image Exchange Portal (IEP). Clinical data is collected from both PCR-positive and negative patients. The data collection pipeline is simple.



**Figure 1:** (a) data collection overview (b) NCCID pseudonym generation

## NCCID Data Summary thus far

Attribute	Summary Value
Number Of Centres With Data	18
Patients With Images	10116
Total Patients (Studies + Excel Data)	18885
Studies Received (X-Rays)	30613
Studies Received (MRI)	24
Studies Received (CT)	4719

## Potential Applications of the NCCID

1. Develop image processing software
2. Mathematical Modelling
3. Validation of AI products
4. Teaching resource for radiologists

Without a working vaccine or cure the risk of further outbreaks caused by COVID-19 remains. We therefore encourage any centres not yet uploading data to the NCCID to participate.

Email [imaging@nhsx.nhs.uk](mailto:imaging@nhsx.nhs.uk) or scan the QR code above to participate

**NHS** | [Guidance And Documentation](#) | [FAQ](#) | [Summary](#) | [Upload Covid \(Positive\) Data](#) | [Upload Covid Status \(Negative\) Data](#) | [Upload Covid ISARIC Data](#) | [Change Password](#) | [Logout](#)

### National COVID-19 Chest Imaging Database – Upload Covid (Positive) Data

The NCCID Covid data upload requires the use of the Covid-19 Data (Positive) Template which is available for download [here](#) (v1.5)

Please ensure you are using the correct template and upload section. The upload section is for the large Covid +ve data upload only (screenshot below). If you are looking for the Covid Status upload area, [please click here](#)

	A	B	C	D	E	F	G
1	NHS/CHI Number	Hospital (Internal) Number	Hospital	Age	Sex (Male = 1, Female = 0)	Smoking status (Never = 0, Ex-smoker = 1, Current = 2, Unknown = 3)	Pack year history
2							PMH
3							
4							
5							