



Intelligent ecosystem to improve  
the Governance, the sharing, and the re-use  
of health data for rare cancers

# NLP Annotator

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MAY 21<sup>st</sup>, 2025



## Component

NLP Annotator

## Partner

CLN - CliniNote

## Brief description

CliniNote Annotator is a tool for augmenting and streamlining chart review processes. It is designed for efficient annotation of retrospective medical notes, enabling creation of curated and high-quality structured databases that contain direct links of any data item to the source documentation for efficient data query processes. It aims at solving existing bottlenecks in extracting data from medical records, i.e. 1) lack of connection between the source of the information and resulting database, 2) lack of full audit trail of chart review processes, and 3) lack of efficient interfaces for medical personnel for reviewing the charts.

It is designed for retrospective studies and Real-World Evidence (RWE) generation by structuring and contextualizing legacy notes.

The annotated data is integrated into the CliniNote database without altering original records, enhancing research and patient history completeness.

Researchers can efficiently extract relevant information from free-text notes using pre-defined dictionaries.

It supports AI model training by generating high-quality annotated datasets that have the extracted data information linked with free text that was used by the clinician when reviewing the medical notes.

The tool works with the DataCollector and CliniNote Assistant modules for complete data flow (retro- and prospective).

Smart filters and intuitive annotation tools help focus on the most relevant clinical content.

Use cases include oncology, pediatrics, and other fields requiring historical data review. It offers minimal IT overhead, thanks to browser-based access and non-invasive integration.

Overall, it helps healthcare institutions maximize the value of past documentation for data-driven insights.

## Intended users

1. Medical personnel - to conduct efficient and high-quality chart review for retrospective studies and Real-World Evidence projects
2. Data Managers - to streamline high-quality data collection and enhance data query processes
3. Hospital Management - to enrich patient databases and support data-driven quality improvement initiatives
4. Data Scientists - to generate datasets for fine-tuning AI models

## Functionality

1. Project creation and rule definition (criteria, dictionaries, sentence requirements)
2. Multi-user access and permission management
3. Using inclusion/exclusion criteria to streamline annotation process
4. Upload and structuring of historical notes
5. User-specific filtering and search of notes
6. Annotation using predefined CliniNote End-Sentences
7. Saving structured data to the CliniNote database & exporting
8. Hyperlinked navigation between data items and medical notes
9. “New info” tracking and audit trail for annotated entries
10. Optional highlighting of notes fragments that are directly related to the extracted data element

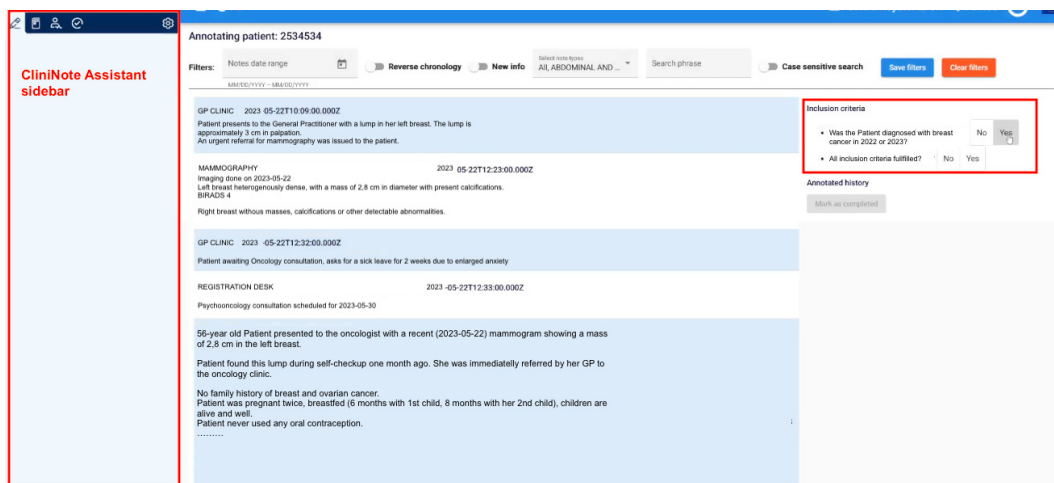
## Comparison with competing approaches (business value)

1. One place to perform chart review and data collection
2. Medical personnel-oriented set of auxiliary tools to improve speed of searching through medical charts
3. Direct link of gathered data to source documentation
4. Possibility for extended audit trail for chart review process –all links between the specific places in the note and gathered data element
5. AI-training data collection during chart review process –high-quality datasets for AI models finetuning
6. Easy switch from retrospective to prospective data collection –easy integration with hospital information system by browser extension, the same dataset
7. Easy & secure outsourcing of chart review - full support for external professionals to perform chart review

## Development status

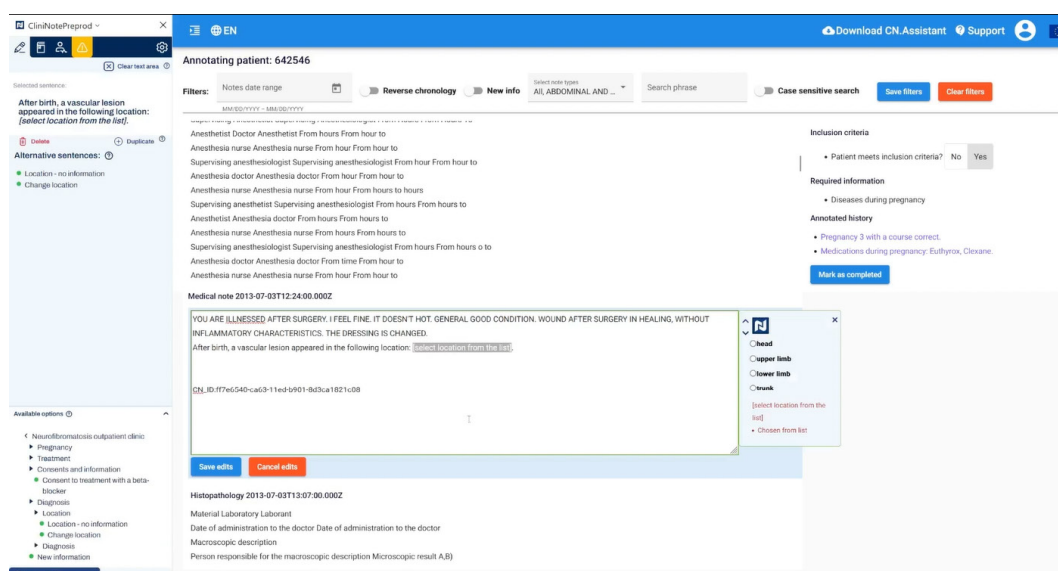
Deployed and working in real life settings.

## Imagery



The screenshot shows the CliniNote Annotator interface for patient 2534534. The main area displays a list of medical notes, including a GP clinic visit on 2023-05-22T10:09:00.000Z and a mammography on 2023-05-22T12:32:00.000Z. A sidebar on the left contains the CliniNote Assistant, which provides a list of alternative sentences for the selected text. The right sidebar shows inclusion criteria and a 'Mark as completed' button.

**Figure 1** CliniNote Annotator together with CliniNote Assistant - uploaded notes ready to chart review.



The screenshot shows the CliniNote Annotator interface for patient 642546. The main area displays a list of medical notes, including a medical note on 2013-07-03T12:24:00.000Z. The selected text is 'After birth, a vascular lesion appeared in the following location: (select location from the list)'. The right sidebar shows inclusion criteria and a 'Mark as completed' button. A dropdown menu is open, showing options for 'head', 'upper limb', 'lower limb', and 'trunk'.

**Figure 2** Turning free text into data - annotation process CliniNote co-piloted



# IDEA4RC



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement no. 101057048