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Maximising efficiency and accuracy in the prospective medical study of the lung cancer-related risk factors and their Impact assessment through the development of a personalised eCRF.

In medical research, accuracy and efficiency are fundamental to the success of any medical study. These characteristics are essential in the LUCIA project, which focuses on understanding lung cancer-related risk factors and their impact assessment. Therefore, implementing an ad hoc development system eCRF (Electronic Case Report Form) can make a difference, highlighting how this approach can significantly improve the quality and outcomes of research in collecting clinical information from patients participating in the study.



One of the biggest challenges of any medical study is the accurate and complete collection of patients' data from clinical trials. With a customised eCRF for the LUCIA Project, we can optimise this process in several ways. First, we can tailor the data entry fields to capture specific information identified by clinicians and researchers for the study. This

process ensures that all relevant information is included in the data collection, thus ensuring data is both relevant to the study's objectives and captured in a standardised format for all participating hospitals.

In addition, it incorporates real-time data validation functions, helping to identify and



correct errors or inconsistencies in the data entries. This reduces the need for subsequent corrections and ensures data integrity from the outset. Ultimately, more efficient and accurate data collection leads to a more robust and reliable database for analysing and interpreting study results. Collaboration between multidisciplinary and multi-location teams is essential in medical research projects such as LUCIA. An ad hoc eCRF facilitates this collaboration by providing a centralised and accessible platform to securely collect, store, and share

data. Once data is collected, the next crucial step is to analyse it to extract meaningful information and make informed decisions. We have developed an ad hoc software

solution to speed up this process by offering integration with other data analysis tools. This enables researchers to conduct in-depth analysis and gain a more detailed understanding of the factors that influence the development and progression of lung cancer. Ultimately, more efficient and comprehensive data analysis can lead to significant discoveries and contribute to the advancement of knowledge in the domain of oncology.

Why is it important to use eCRF in the LUCIA project rather than a generic solution?

The effort of analysing, technically designing, developing with an emphasis on the user experience (UX), and putting this eCRF solution into production has allowed us to specifically address the needs and objectives of the LUCIA project to ensure that the data collected is relevant and useful for lung cancer research. It also increases flexibility and control over the data collection and analysis process, improving the overall efficiency and quality of the research.

What are the benefits of the eCRF we developed for the LUCIA research process?

It can improve the research process's efficiency in data collection, storage and analysis. It simplifies and automates many tasks. This reduces administrative costs. It also allows researchers to focus on more important activities. It also accelerates research progress and improves overall efficiency by facilitating team collaboration and coordination.

Offers advantages such as data encryption and role-based access control, the use of interoperability standards such as The Observational Medical Outcomes Partnership (OMOP) Common Data Model (CDM).



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