Clinical Knowledge Graphs & Decision Support — Hands-on

Learn how clinical knowledge graphs and decision support concepts can be applied to genomics, variants and patient records. This module focuses on entities, relationships, evidence linking and simple rule based reasoning so that teams can design decision support friendly data structures and summary views for tumour boards, rare disease workups and clinical genomics reporting. Content is for training and awareness, not medical or regulatory advice.

Clinical Knowledge Graphs & Decision Support

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Session Index

Session 1

Fee: Rs 8800 Apply Now

Knowledge Graph Concepts for Clinical Genomics

Why knowledge graphs are useful in clinical genomics

bringing variants, genes and phenotypes together **linking evidence and guidelines snapshot** **supporting decision support views**

Basic knowledge graph building blocks (high level)

entities, relationships and properties **nodes, edges and labels ideas** **graph, triple and property graph**

snapshots

Thinking in graphs for genomics and clinical data

patients, samples, variants as nodes relationships such as has variant or treated with evidence and provenance attachments snapshot

Session 2

Fee: Rs 11800 Apply Now

Building & Querying Clinical Knowledge Graphs

From tables to nodes and edges

identifying key entities and relationships mapping columns to node and edge properties simple modelling examples snapshot

Populating a small clinical genomics graph (conceptual)

patients and tumour samples variants, genes and diseases links to evidence and references

Query patterns for decision support views (high level)

find variants with associated therapies idea identify similar cases snapshot surface conflicting evidence concept

Session 3

Fee: Rs 14800 Apply Now

Decision Support & Rule Based Reasoning (High Level)

What decision support means in clinical genomics (high level)

surfacing relevant information for clinicians supporting but not replacing judgement transparency and explainability mindset

Simple rule based reasoning ideas on top of graphs

if variant present and guideline suggests action concept | conflicts and priority rules snapshot | logging rationale and evidence references

Designing outputs for tumour boards and reports

short lists of key variants and options | evidence and guideline links snapshot | caveats and uncertainty messages

Session 4

Fee: Rs 18800 Apply Now

Mini Capstone: Case to Knowledge Graph Snapshot

Start from a small anonymised case summary and variant list

Theory + Practical

Sketch a mini knowledge graph model for the case

identify key nodes and relationships | attach simple evidence attributes | note possible queries from the model

Create a simple decision support friendly summary

table or graph snapshot of key findings | short explanation of reasoning path | limitations and follow up data ideas