This symposia aims at contributing to the philosophical analysis of medical knowledge, on its reasoning patterns in the practice of the so called --clinical reasoning—as well as on the analysis of some key concepts in the Philosophy of Science, in this case, that of causality in its role in epidemiology. The main aim of this symposium is to discuss the type of epistemological knowledge involved implied when doctors perform develop clinical reasoning in order to diagnose an illness and further to find its appropriate a proper treatment for it.

Distinguishing causes from correlations is a key part of that process of reasoning, so it will give a different perspective to view classical philosophical problems about causation.

The symposium is divided into four parts: the first one Medicine as design science (Estany & Ballús) is a general discussion on medicine as a design science, a type of scientific inquiry oriented to understand the world as well as to change it. It is important to keep in mind this double role?, as an applied as well as a theoretical discipline? nature of medicine, in order to get a proper understanding of what clinical reasoning is about. This view of medicine as a design science is endorsed by each and every paper to follow and therefore serves as the basis for our discussion.

Next talk Clinical Reasoning: How to go about it? (Aliseda) will focus on the general traits and epistemological questions that clinical reasoning brings about. There will be an analysis of the main reasoning types one can find in clinical reasoning and of the philosophical and epistemological questions that arise in the medical profession. This view is supported by some field analysis —in so far the presence at clinical sessions at a Research Neurological Hospital can be considered as such—as well as a formal analysis of the argumentative process in clinical reasoning.

The last two talks will focus on the science of epidemiology to analyze the relationship between causal and clinical reasoning, and its relationships with e-science: how scientific method evolves when computers are used extensively in the research process. The third talk, Data visualization as a form of graphic medical reasoning to find causal correlations (Casacuberta) , will analyse a very specific type or clinical reasoning, the argumentative process based on graphic visualization -normally created by computers- as developed in epidemiology.

The last talk Statistics or Web of Statistical Procedures in Epidemiological Practices? An Integrative Approach to Epidemiological Causal Reasoning (Valverdú) analyzes how the type of statistical tool needed to make causal inferences in epidemiology greatly depend on the complexity of the situation to study, and how analyzing a web of different causes is changing our view of what is causality and what does it entail epistemologically.