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Instituto
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IBSAL
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Biomédica de Salamanca

ciber CENTRO DE
INVESTIGACIÓN
BIOMÉDICA EN RED

CLINICAL DECISION SUPPORT SYSTEM FOR LIPIDIC CONTROL

A research group from IBSAL and CIBER has designed a new system to better address the treatment of patients with dyslipidaemia.

The Need

Atherosclerosis is the fundamental pathophysiological process behind many cardiovascular conditions, being one of its major factors elevated levels of low-density lipoprotein cholesterol (LDL-C). Despite the availability of various therapies, a significant proportion of patients do not achieve recommended LDL-C targets, and nearly 50% of patients in secondary prevention fail to reach guideline-directed LDL-C levels. It is essential to enhance the efficacy of lipid-lowering strategies, reduce the incidence of cardiovascular events, and improve overall patient outcomes.

The Solution

The present invention relates to a clinical decision support system (CDS) designed to overcome the limitations of current approaches in in the treatment and monitoring of patients with dyslipidaemia, such as generic lipid-lowering therapies, inadequate patient adherence, and the absence of individualized treatment strategies. The proposed system is adequate for monitoring the patient's lipid profile through regular blood analyses, and, preferably, by comparing measured lipid levels with personalized target ranges derived from clinical guidelines stored in the memory

Innovative Aspects

- The system has a processing unit configured to receive clinical data associated with a patient, which includes medical records, physiological data, and/or data related to medication currently prescribed to the patient.
  - The unit can also compute personalized treatments according to pharmacogenetic information and lipid profiling values.
- The system minimizes the risk of adverse drug reactions and optimizes the efficacy of lipid-lowering therapies.
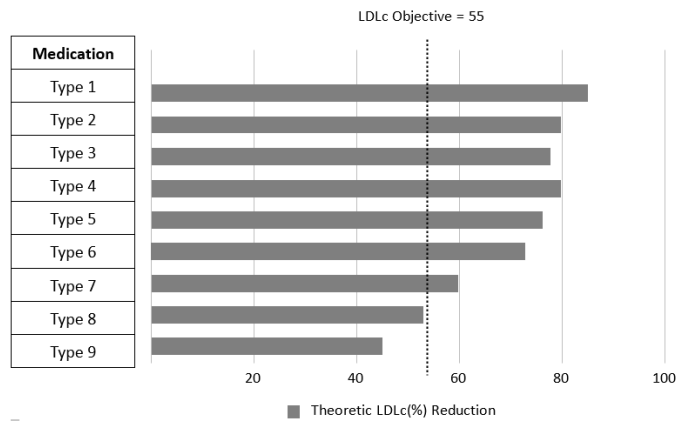- The proposed solution also considers specific parameters to measure adherence.

Fig. 1. Example of a personalised visualization of treatments for an specific patient

Stage of Development:
The team is currently finishing the preclinical validation of a prototype.

Intellectual Property:

- Priority patent application filed

Aims

Looking for a partner interested in a license and/or a collaboration agreement to develop and exploit this asset.

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