## **SUMMARY**

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In this study, the different presentations, of low back pain syndromes with its subdivisions, was described, including the knowledge and data base regards the history case taking, clinical examination, investigation, different imaging techniques, and management.

A special review for description of the artificial intelligence science, and expert system techniques, the use of PROLOG as a tool, and how to design such systems was discussed.

It was aimed to use the computer in the diagnosis and management of low back pain, then, the new, unsuperpassed, implementation of an expert system skeleton (shell) became the goal to achieve the domain.

This work, BACKEXPERT, was performed successfuly, as it is accurate and suitable. It covers the different aspects of low back pain syndrome, and provides the user efficient patient record and good knowledge acquisition.