

Kidneys are essential organs for human life. Imaging methods have very important role in diagnostic and follow-up of renal diseases.

In dissertation I deal with non-invasive imaging methods of kidneys, describe the importance of kidneys and the options of imaging methods in urologic diagnostics.

Firstly anatomy and physiology of kidneys are mention.

Each of non-invasive diagnostic imaging methods is described in separate chapter: abdominal plain film examination (PF), intravenous excretory urography (IU), ultrasonography (US), computed tomography (CT), and magnetic resonance imaging (MRI).

Chapters are divided in parts: performance of study, patient burden, indications, advantages, disadvantages, and influence of radiologic technician. I compare all methods in conclusion.

All methods have pros and contras. Radiation burden is serious in IU and CT. Contrast media administration could be harmful (alergoid reaction in CT and IU, nephrogenic systemic fibrosis in MRI). Radiologic technician has minor influence in US, but in other imaging methods has important role in all steps of performance of examinations.