Neuroimaging or brain imaging is the use of various techniques to either directly or indirectly image the structure, function, or pharmacology of the nervous system. It is a relatively new discipline within medicine, neuroscience, and psychology. Physicians who specialize in the performance and interpretation of neuroimaging in the clinical setting are neuroradiologists. Neuroimaging falls into two broad categories:

- Structural imaging, which deals with the structure of the nervous system and the diagnosis of gross (large scale) intracranial disease (such as a tumor) and injury.
- Functional imaging, which is used to diagnose metabolic diseases and lesions on a finer scale (such as Alzheimer's disease) and also for neurological and cognitive psychology research and building brain–computer interfaces.

Functional imaging enables, for example, the processing of information by centers in the brain to be visualized directly. Such processing causes the involved area of the brain to increase metabolism and "light up" on the scan. One of the more controversial uses of neuroimaging has been researching "thought identification" or mind-reading.

In the present book, fifteen typical literatures about Neuroimaging published on international authoritative journals were selected to introduce the worldwide newest progress, which contains reviews or original researches on Neuroimaging. We hope this book can demonstrate advances in Neuroimaging as well as give references to the researchers, students and other related people.[1]

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[1] https://en.wikipedia.org/wiki/Neuroimaging