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Example Applications from Epidemiological Image Analysis

Recently, large population-based studies have gained increasing focus in the research community. Many epidemiological studies collect imaging data, such as magnetic resonance imaging or ultrasonography from hundreds or thousands of participants. Automated analysis of epidemiological images is a wide field that uses machine learning algorithms and computer vision techniques to analyze large amounts of medical imaging data. With the help of automated analysis of epidemiological images, researchers and medical professionals can gain new insights into the relevant risk factors of specific diseases and health conditions in a general population and develop more effective treatments and prevention strategies. Several example applications, including analysis of obstructive sleep apnea syndrome, will be presented and discussed here.