Screening Techniques for Alzheimer's Disease

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Alzheimer's disease is defined as a chronic neurodegenerative disorder that is seen primarily in adults who are older than 65 years of age and is characterized by memory loss and cognitive decline. There is currently no cure for Alzheimer's disease, and current treatment options are primarily aimed at managing symptoms and slowing disease progression.

Cognitive screening tests, neuroimaging, and laboratory diagnostic testing are commonly used modalities for screening Alzheimer's disease. The Montreal Cognitive Assessment (MoCA) and the Mini-Mental State Examination (MMSE) are two of the most common cognitive screening tests used for Alzheimer's disease. Neuroimaging techniques such as positron emission tomography (PET) scanning can also be utilized to detect early changes in the brain associated with Alzheimer's disease.

Several studies have investigated the effectiveness of these screening techniques. Bollati et al. (2011) found that patients with higher levels of amyloid PIB-binding on PET scanning were more likely to have Alzheimer's disease. O'Bryant et al. (2011) designed a study to investigate the relationship between DNA methylation and Alzheimer's disease, and found that DNA methylation changes were associated with Alzheimer's disease.

The effectiveness of these screening techniques is dependent on a variety of factors, including the stage of the disease, the patient's genetic profile, and the availability of effective treatments. Therefore, it is important for clinicians and medical facilities to be well versed in the various screening techniques available and their potential strengths and limitations.