This volume examines the state-of-the-art in our understanding of the aging brain through the application of brain imaging techniques of neuroscience to the geriatric population. By exploring the neurobiological aspects of geriatric mental health, scientists can begin to understand why abnormal aging happens and what can be done to treat it.

Researchers in the fields of geriatric psychiatry, cognitive neuropsychology, neurology, neuroradiology, and physics have combined their expertise to present this accessible, compact review of the field. The chapter authors discuss the use of image modalities and what they can tell us about the aging brain; and present cutting-edge information on image processing and data analysis in the context of geriatric populations. With this book, both novice and seasoned investigators can gain fresh, new insight into geriatric mental health.

Key topics:
- The use of MRI (magnetic resonance imaging), MRS (magnetic resonance spectroscopy), and other modalities with geriatric populations
- The application of SPECT (single photon emission computed tomography) and PET (positron emission tomography) to geriatric mental health
- Structural brain changes associated with normal aging
- Functional neuroanatomy of aging and cognition
- Brain structural and functional correlates of Alzheimer’s dementia and mild cognitive impairment
- Neuroimaging in late-life schizophrenia

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