

# IS IT ALZHEIMER'S DISEASE?

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# DEMENTIA

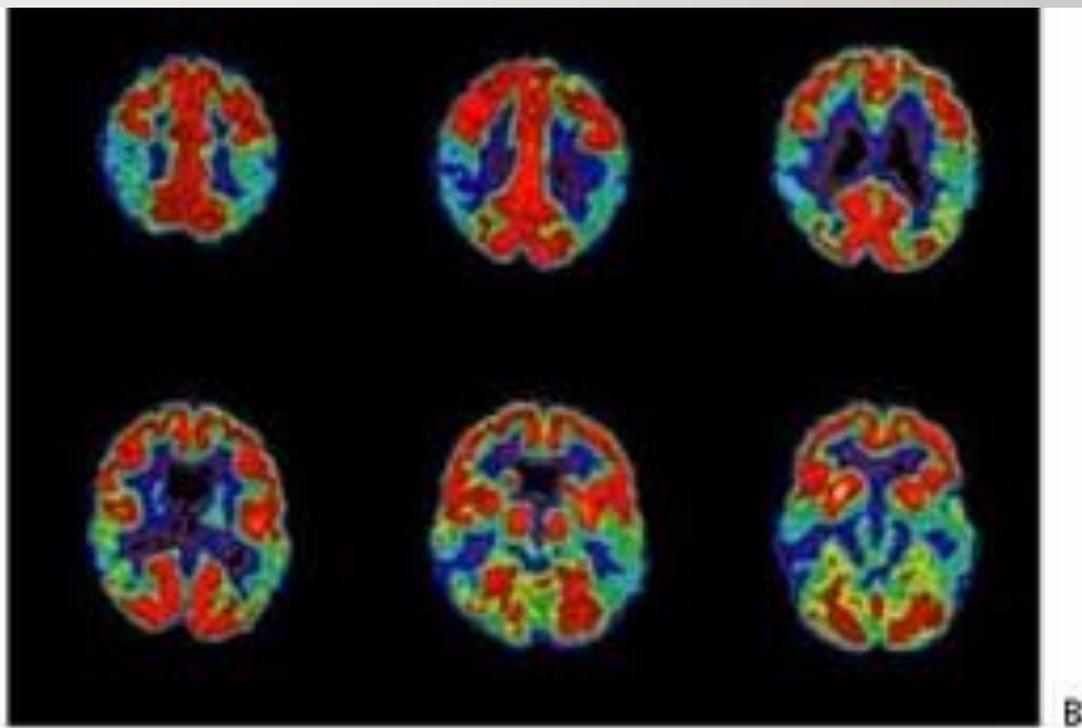
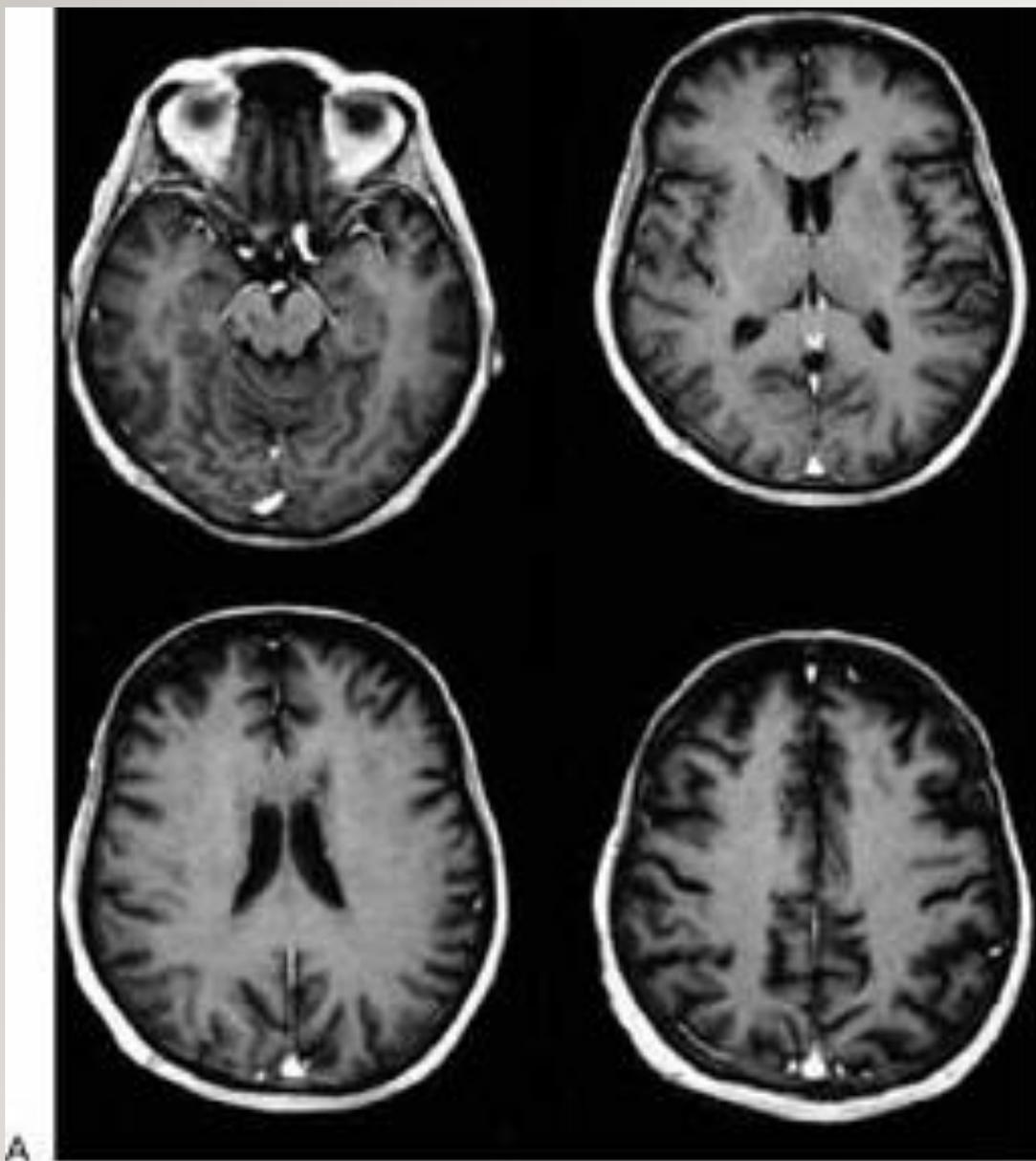
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- The term dementia is defined as a syndrome of deficiency in proper brain functioning.
- There are many different causes of dementia; however, the most common cause of dementia is Alzheimer's type.
- In order to have a diagnosis of dementia, one has to have deficiency in memory and other areas of mental functioning.
- If you are told that your loved one has dementia, it doesn't mean he/she has Alzheimer's dementia. However, if you are told it is Alzheimer's disease, it is Alzheimer's type dementia.

# ALZHEIMER'S TYPE DEMENTIA

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- The most common cause of dementia affecting more than 5.7 million Americans in the U.S. and by 2050, it is estimated to be as many as 16 million.
- Age remains to be the most common risk factor.
- It is the 4<sup>th</sup> leading cause of death among elderly and the 6<sup>th</sup> leading cause of death among all Americans.
- The annual cost of caring for patient's with Alzheimer's disease is approximately a quarter of a trillion dollars with \$186 billion in Medicare and Medicaid payments.



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# ALZHEIMER'S DEMENTIA

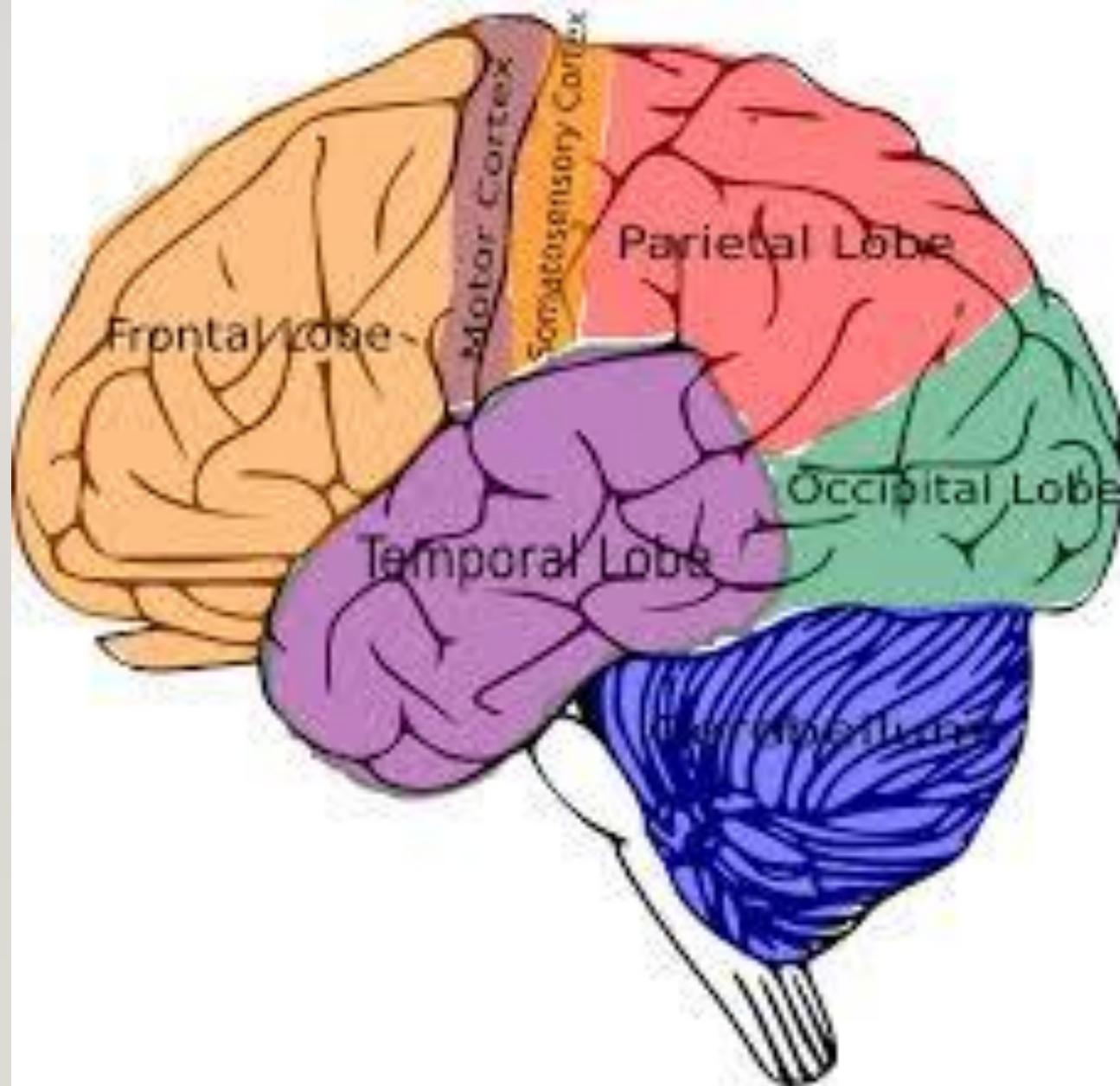
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- Although AD remains the most common cause of dementia, a thorough investigation is necessary for accurate diagnosis.
- Other forms of dementia have to be ruled out which is the subject of this presentation.
- As part of the work up for any dementia, a detailed history of the symptoms reported by the patients and their family and the signs noted by the treating physician combined with the work up will determine the type of dementia.

# CORTICAL DEMENTIAS

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- Alzheimer's type dementia
- Vascular dementia
- Lewy Body Dementia
- Frontotemporal dementia
- Mixed dementia



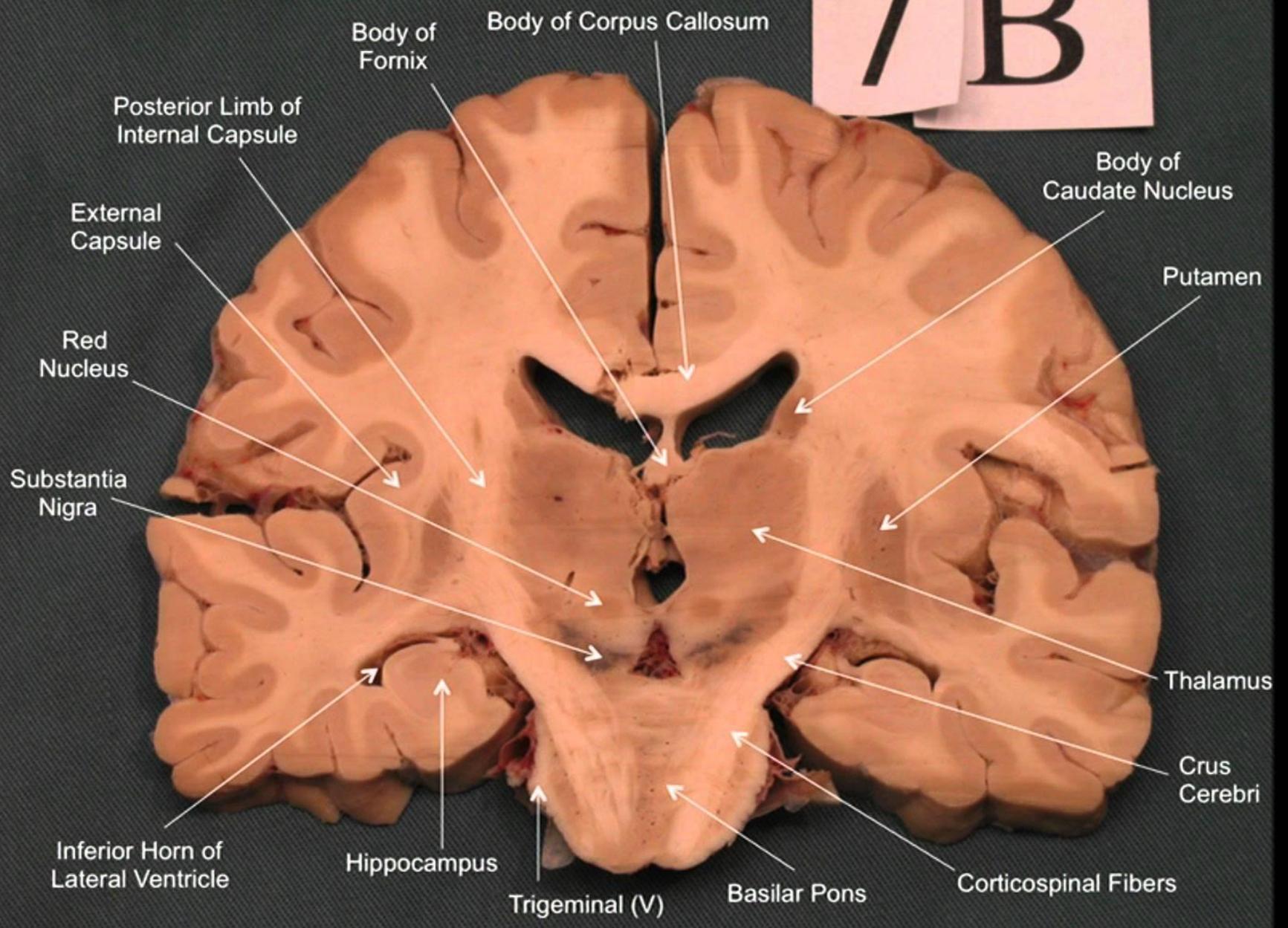
# SUB CORTICAL DEMENTIAS

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- Parkinson's disease
- Huntington's disease
- Progressive supranuclear palsy
- Spinocerebellar degeneration
- Idiopathic basal ganglionic calcification
- Striatonigral degeneration
- Wilson's disease
- Thalamic dementia

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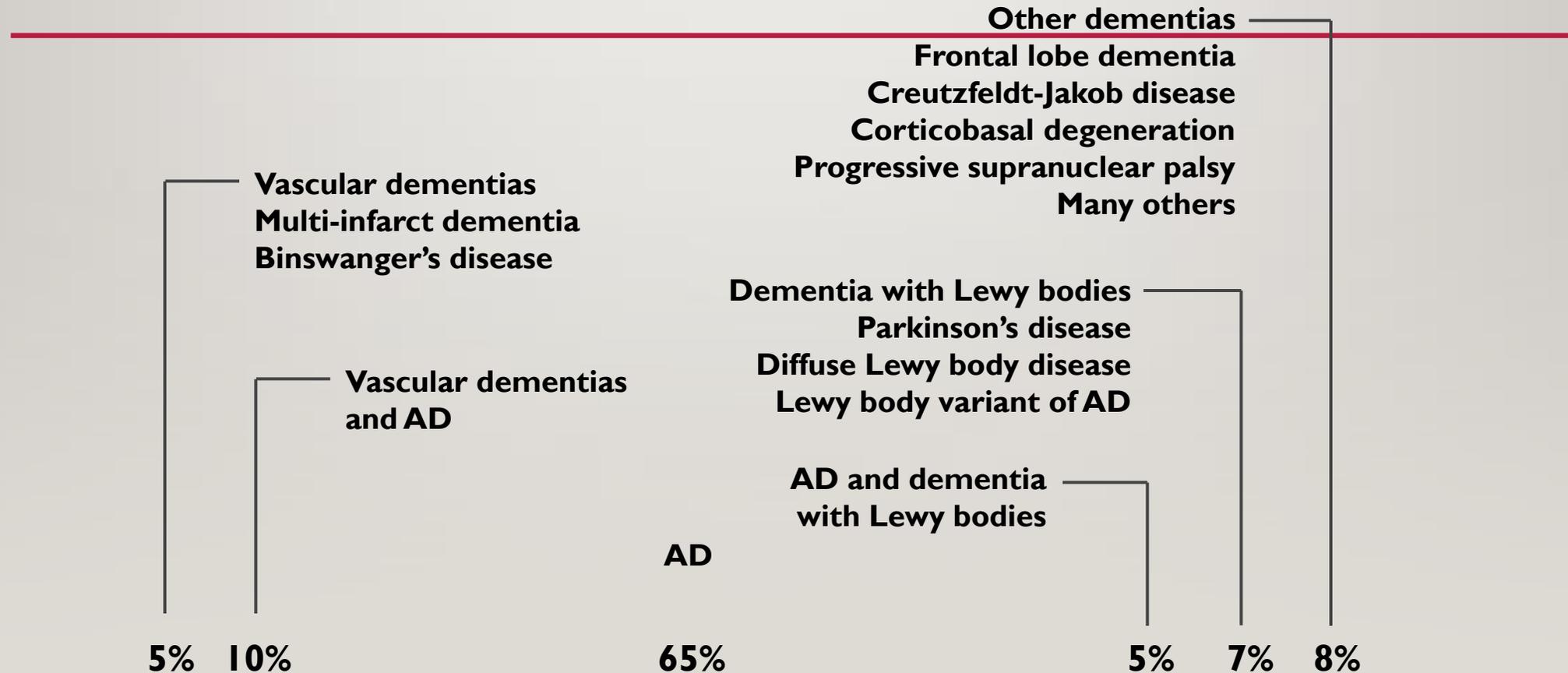


# OTHER TYPES OF DEMENTIA

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- Vascular
- Frontotemporal dementia
- Traumatic
- Normal pressure hydrocephalus
- Autoimmune dementia
- Infectious, e.g., syphilis, AIDS, meningitis
- Dementia associated with Down Syndrome

# DIFFERENTIAL DIAGNOSIS OF DEMENTIA



# LEWY BODY DEMENTIA (LBD)

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- Some believe it is the second most common form of dementia
- The important features of LBD are:
  - 1- Gait disturbance. Patients begin with walking problems and frequent falls.
  - 2- Visual hallucinations
  - 3- REM sleep behavior disorder described as nightmares, thrashing around during the sleep with yelling and screaming
  - 4- Some features of Parkinsonism
  - 5- Significant fluctuations sometimes weekly

# LBD

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- These patients have high sensitivity to drugs, especially psychotropics such as antipsychotics and tranquilizers.
- The visual hallucinations are not bothersome to the patient.
- Sleep disturbance is quite stressful and at times dangerous to the bed partner.
- Gait disorder causes multiple falls and at times injuries.
- There are no specific treatments for LBD.
- Treatment requires multimodality approach to the physical and psychiatric symptoms.

# LBD

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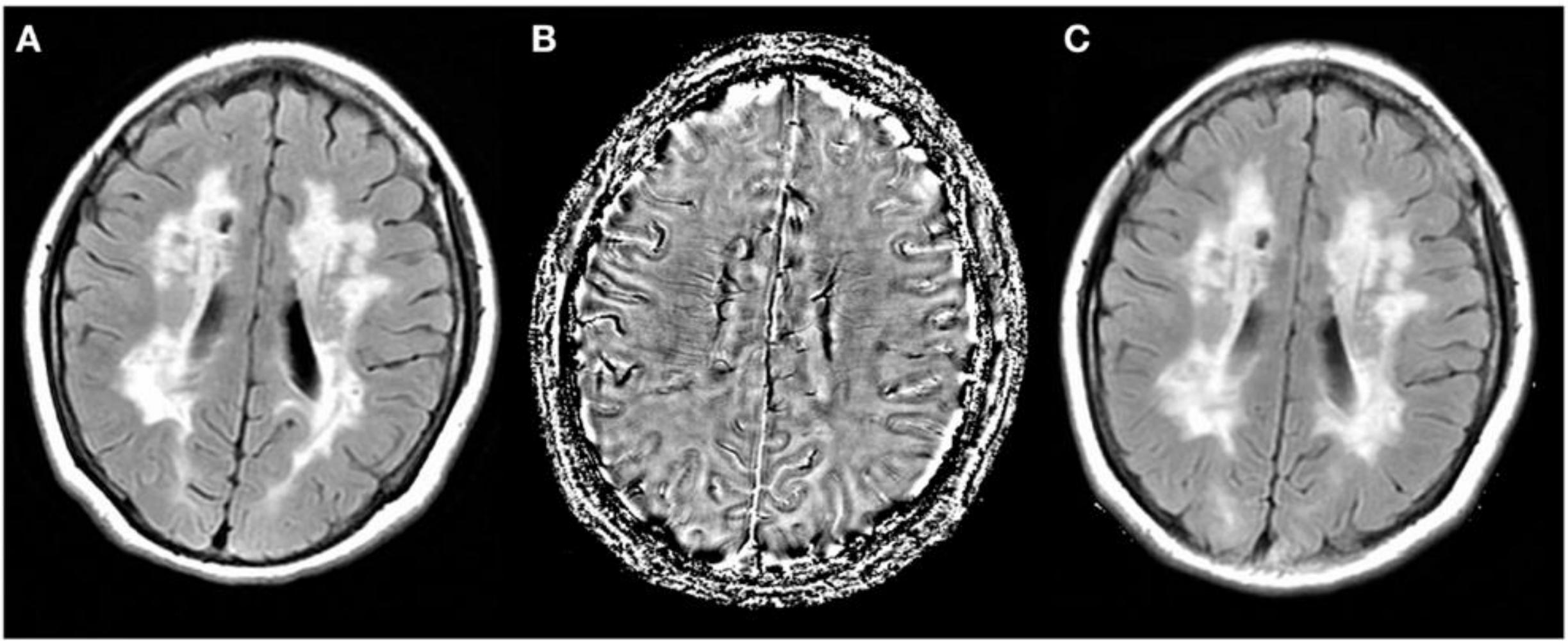
- The treatment of patients with LBD is quite challenging and requires multiple medicines to control the physical and behavioral symptoms.
- Antipsychotics are often used for the hallucinations. Parkinson medicines may be used for the parkinsonian symptoms and sometimes Cholinesterase inhibitors such as Rivastigmine may be used for memory decline.
- Sleep aides and antidepressants are also used for the depression and anxiety.

# VASCULAR DEMENTIA

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- This form of dementia has different presentation from mild to mixed type of symptoms.
- One type is clear and it occurs after a known stroke in the critical area of the brain. It is sudden and symptoms can be physical and non-physical such as language, visual disturbance or behavioral disturbances.
- The other type of vascular dementia is the slow and gradual and stepwise disturbance that occurs over years and it worsens after each small stroke. After each small stroke, there is a sudden change from the baseline.





# VASCULAR DEMENTIA

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- A brain MRI can differentiate different types of vascular dementias.
- Some patients with vascular dementia may also have an underlying or superimposed Alzheimer's dementia.
- Stepwise deterioration implies a period of stability after the first stroke and then a sudden decline in cognitive function after a second or subsequent strokes.
- These patients can have a period of stability that can last years.
- Treatment is the standard stroke work up and prevention treatments such as aspirin, and a trial of Cholinesterase inhibitor such as Donepezil.

# FRONTOTEMPORAL DEMENTIA (FTD)

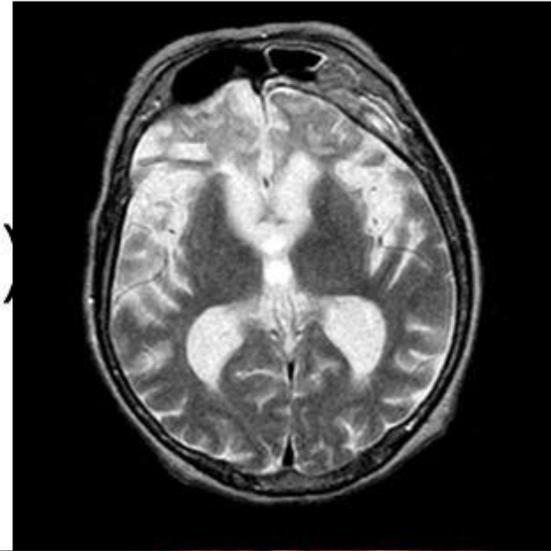
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- FTD presents a variety of disorders with different presentations such as behavioral variant or language and physical variants.
- In this type of dementia, the frontal and temporal lobes are affected.
- Frontal lobes control our ability to use words and formulate our speech. In addition it determines how we react to external stimuli, therefore the disorder of frontal lobes affects our language and our reaction to situations that at times be inappropriate and erratic.
- Temporal lobe is the memory center and the diseases of this lobe certainly affects our memory.

# FRONTOTEMPORAL DEMENTIA/ FTLD (PICK'S DISEASE)

“KNIFE-EDGE” GYRI due to  
marked frontotemporal atrophy

- Prominent frontal lobe dementia
- Personality changes  
(disinhibition/ inappropriate  
behavior, apathy/ euphoria)
- Aphasia
- ± Parkinsonian features



# FTD

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- This condition affects younger population and initially the behavioral manifestation brings the patient to medical attention.
- Majority of these patients have reduced ability to interact properly in social situation and exhibit inappropriate behavior.
- They suffer from compulsive eating and oral fixation and hypersexuality.
- They can exhibit difficulty with language or production of speech.

# FTD

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- FTD is usually diagnosed by a specialist based on the presentation and diagnostic tests such as brain MRI and brain PET and SPECT scans.
- Brain MRI usually shows atrophy in the frontal and temporal regions.
- PET scan can reveal hypometabolism in both frontal and temporal regions.

# FTD

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- There are different variants of FTD such as behavioral variant, non-fluent agrammatic variant as part of primary progressive aphasia.
- There are other types which are less common and present mostly with physical symptoms. These are corticobasal syndrome and progressive supranuclear palsy.
- In addition to mood instability, they present with rigidity and dystonia.

# FTD

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- There are no effective treatments for FTD and the main focus of therapy is symptom management.
- For behavioral issues, psychotropics can be used and for inappropriate behavior, certain mood stabilizers can be effective.
- Unfortunately, behavioral therapy is ineffective since the patients are not aware of any issues and usually do not follow instructions.

# CONCLUSION

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- Although most forms of dementia may present with some cognitive issues, there are subtle signs and symptoms that in the hands of an experienced specialist can be analyzed for more accurate diagnosis.
- Most likely, diagnosis can put the patients and their family at ease and allow the clinician to focus on appropriate diagnostic modality and implement most effective therapies.
- Remember that the management of any form of dementia requires a comprehensive approach to help the patient and empower the family to handle these difficult situations.