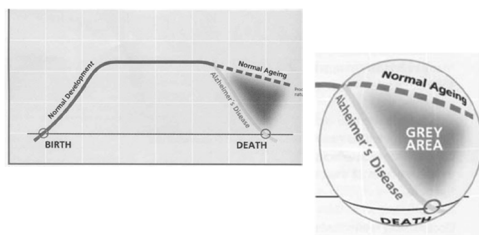


We are all aging...

- Ancient Greece - life expectancy at birth = 20
- 1776 - life expectancy at birth = 23
- 1900 - life expectancy at birth = 47
- 2009 - life expectancy at birth = 77.9
- Dr. Lindquist's Average Patient Age = 86.4
- Maximum documented human = 122

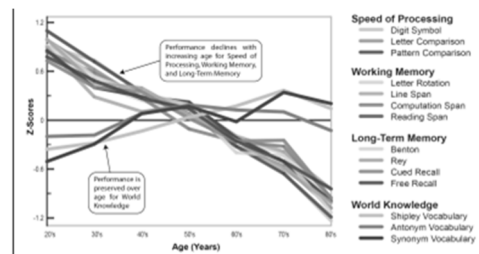
One study found that the diagnosis was missed in 21% of demented patients, while 20% non-demented patients were misjudged as demented

Memory Loss



World Health Organization 2012

Cognition across Lifespan



*Data adapted from Park et al. (2002)

Diagnosis of Cognitive Impairment

- Clinical history of cognitive losses
- Neuropsychology testing
- Cognitive Testing (What can I do in my office?)

Best Place for Evaluating Cognition?



US Dept Health Human Services Clinical Practice Guidelines
Patients with dementia may have difficulty with one or more of the following:

- Retaining new information (eg. trouble remembering events)
- Handling complex tasks (eg, balancing a checkbook)
- Reasoning (eg. unable to cope with unexpected events)
- Spatial ability/orientation (eg, getting lost in familiar places)
- Language (eg. word finding)
- Behavior

Clinical History

- What did you have for breakfast?
- Current Events?
- Smells, Dress, and other things?

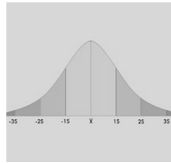
Tell me more about the forgetfulness?

Mary

I'm forgetting to take my medicines.

I forgot what I had for lunch

I'm really struggling with writing checks



Beverly

I forgot where I put my keys?

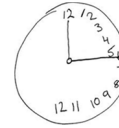
How do I do algebra again?

What was her name?

Screening Mini-Cog

- Mini-cog (3 words, clock draw, recall words)

Dog
Penny
Apple



Dog
Penny

Mini Mental Status Exam?

- 30 point memory testing
- Recently sold patent and enforcing patent through lawsuits/ in junctures.
- Multiple academic organizations sued.
- Sweet 16 (shortened MMSE) also disallowed and Harvard researchers forced to remove from website.

17

Montreal Cognitive Assessment (MoCA)

www.mocatest.org

- 30 different languages
- Blindness
- Low education
- Multiple versions to avoid learning effect.

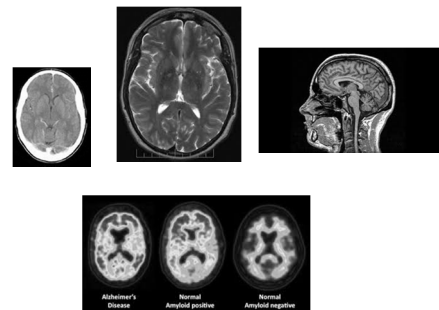
Screening for Depression to rule out “pseudo-dementia”

- PHQ -2
- PHQ - 9
- GDS

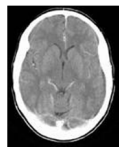
Neuropsych testing?

- When to order?
- Should not be used in isolation but correlate clinically.
- “Fooling the test.”

Five subtests (Animal naming, Modified Boston Naming Test, MMSE, Constructional Praxis, and Word List Memory) were identified to be a valid, reliable measure of cognition in normal aging and AD



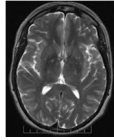
CT Scan of Brain - YES



- Non-contrast brain CT should at least be performed to evaluate for cerebrovascular disease, subdural hematoma, normal pressure hydrocephalus, or mass lesion.

Non-contrast vs contrast?

MRI of Brain?



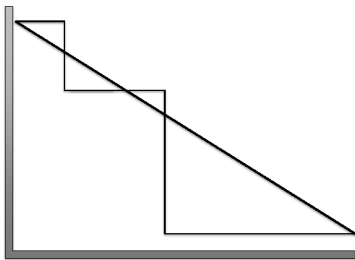
- Detect possible strokes or vascular issues
- More Sensitive than CT scan
- Higher Risk patients who may benefit from aggressive treatment of vascular issues.

MRI Impression Statements:

IMPRESSION:

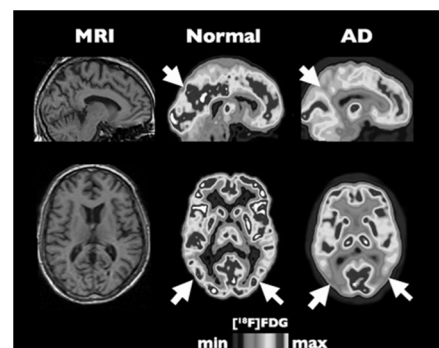
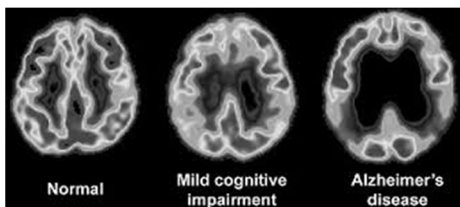
- No noncontrast MR evidence of an acute intracranial abnormality.
- Findings compatible with a background of mild chronic small vessel ischemic changes
- Findings compatible with a background of mild to moderate chronic small vessel ischemic changes with chronic infarcts in the high right parietal lobe and paramedian inferior left parietal occipital region, significantly progressed compared to the 2/10/2012 MR brain exam.
- Coronal imaging demonstrates hippocampal/parahippocampal and anterior temporal lobe volume loss that is slightly more prominent than the remaining supratentorial parenchyma.

Stepwise vs Gradual Loss?

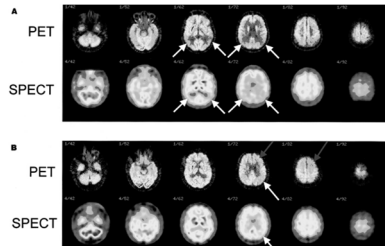


- MRI findings in AD include both generalized and focal atrophy as well as white matter lesions.
- In general, these findings are nonspecific.
- However, numerous investigators have correlated changes in hippocampal volume with cognitive decline

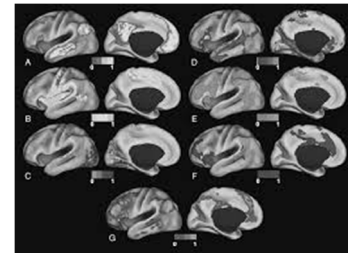
Positron emission tomography (PET)



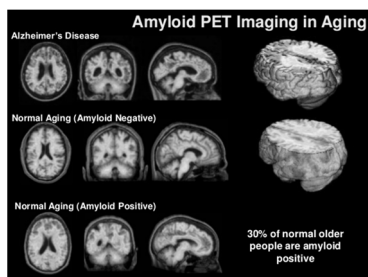
Single photon emission CT (SPECT)



Functional MRI



PET Amyloid Imaging



Blood Testing?

DO: B12 and TSH w reflex T4

No data to support or refute:
CBC, electrolytes, glucose, and
renal/liver function.

STOP: checking for neurosyphilis unless
there is a high clinical suspicion.

Genetic Testing?

Genetic testing for the apolipoprotein E epsilon
4 allele is not currently recommended, nor is
genetic testing for other potential causes of
dementia.

EEG or Lumbar Puncture?

No evidence exists that screening for early or mild dementia results in improved clinical outcomes

Caveat:

Younger patients (<60 years) or those with rapidly progressive dementia, may benefit from a more extensive evaluation that may include lumbar puncture, EEG, and/or serologic tests

US News and World Report Best Hospitals Specialty Rankings:

**For Geriatrics, Northwestern Medicine
is ranked #9 in Nationally, #1 in
Illinois.**