

**MRC COGNITIVE FUNCTION STUDY
NEUROPATHOLOGY PROTOCOL: FINAL DRAFT**

A: NAME:

Lab. No:

Referring Centre:

Study No:

For all questions: Don't Know = 7. Not Available/Applicable = 9

Sex: 1=Male 2=Female

Age:

DOB:

DOD:

Date of PM:

PM interval: hours.

Source of Autopsy

1= Premortem Declaration

2= Medical Interest

3= Hospital admission and mortuary monitoring 4= Coroner

B: GENERAL AUTOPSY:

Brain only
=0

Full
=1

Major Pathological findings/Mode of Death:

1. _____

3. _____

C: GROSS BRAIN FINDINGS:

1. Tissue Available: Whole =1 Half =2 Hemi =3 Slices =4 Other =5

If Other: Specify

, Brain weight (g.)

Fresh Fixed
=1 =2

Frozen tissue available

0 = No, 1 = Snap frozen, 3 = Slow frozen

2. Cortical Atrophy:

No =0 Yes =1

For all questions: Don't Know = 7. Not Available/Applicable = 9

a. Location and severity of atrophy

	Mild	Mod	Sev	
Frontal	=1	=3	=5	7 <input type="checkbox"/>
Temporal	=1	=3	=5	8 <input type="checkbox"/>
Hippocampus	=1	=3	=5	9 <input type="checkbox"/>
Parietal	=1	=3	=5	10 <input type="checkbox"/>
Occipital	=1	=3	=5	11 <input type="checkbox"/>
Cerebellum	=1	=3	=5	12 <input type="checkbox"/>

b. Ventricular enlargement?:

Nml	mild	mod	sev	
=0	=1	=3	=5	13 <input type="checkbox"/>

c. Unusual Atrophic Features

No	Yes	
=0	=1	14 <input type="checkbox"/>

If Yes, Describe:-

d. Pallor of Substantia nigra:

No	Yes	
=0	=1	15 <input type="checkbox"/>

e. White matter abnormality:

No	Yes	
=0	=1	16 <input type="checkbox"/>

If Yes, Describe:-

f. Mamillary body atrophy:

No	Yes	
=0	=1	17 <input type="checkbox"/>

3. Other Non-vascular CNS lesions:

No	Yes	
=0	=1	18 <input type="checkbox"/>

If Yes, Describe:-

D: VASCULAR DISEASE - GROSS FINDINGS:

1. Vessels:

Atherosclerosis	None	mld	mod	sev	
	=0	=1	=3	=5	19 <input type="checkbox"/>

50% Stenosis or Obstruction	No	Yes	
	=0	=1	20 <input type="checkbox"/>

If Yes, Describe:

2. Parenchymal Vascular lesions:

No	Yes	
=0	=1	21 <input type="checkbox"/>

3. Types of Lesion:

Lacune	No	Yes	
	=0	=1	22 <input type="checkbox"/>

Infarct	No	Yes	
	=0	=1	23 <input type="checkbox"/>

For all questions: Don't Know = 7. Not Available/Applicable = 9

Haemorrhage No | Yes 24
=0 | =1

a. Infarcts: +> 10mm. diameter Number: 25
Largest size(mm) 26

	0 = Absent	1 = Present			
Location:	Left	Right			
	ACA	ACA	27	<input type="checkbox"/>	<input type="checkbox"/>
	MCA	MCA	28	<input type="checkbox"/>	<input type="checkbox"/>
	PCA	PCA	29	<input type="checkbox"/>	<input type="checkbox"/>
	Dp.Gr.	Dp.Gr.	30	<input type="checkbox"/>	<input type="checkbox"/>
	Wtrshd	Wtrshd	31	<input type="checkbox"/>	<input type="checkbox"/>
	Otther	Other	32	<input type="checkbox"/>	<input type="checkbox"/>

b. Lacunes: < 5mm. diameter

Location:	Dp.Gr	WhMtr	Bstem	Othr	Mult	
	=1	=2	=3	=4	=5	
Number:	1-4		5-9		10>	33
	=1		=3		=5	<input type="checkbox"/>

c. Haemorrhages:

Number:	Single	Mutple				
	=1	=3				
Size of Largest:	<5mm 6-10mm >10mm		35			
	=1 =3 =5		<input type="checkbox"/>			
Loc. of largest:	CTx	WhMtr	Dp.Gr	Bstem	Cbm	36
	=1	=2	=3	=4	=5	<input type="checkbox"/>

E: VASCULAR DISEASE - MICROSCOPIC FINDINGS:

a. Atherosclerosis No | Yes 38
0 | =1

b. Arteriolar Sclerosis No | Yes 39
=0 | =1

Severity:	Mild	Mod	Sev	
	=1	=3	=5	40

c. V-R Space Expansion No | Yes 41
=0 | =1

Location:	WhMtr	Dp.Gr	Both	
	=1	=3	=5	42

d. Perivascular Gliosis No | Yes 43
0 | =1

For all questions: Don't Know = 7. Not Available/Applicable = 9

Location: WhMtr|Dp.Gr|Both 44
 =1 =3 =5

e. White Matter Pallor No | Yes 45
 =0 =1

Location: Front|Temp|Pari|Occip|Multip 46
 =1 =2 =3 =4 =5

f. Other Micro Vascular Disease No | Yes 47
 If Yes, Describe:- =0 =1

F: OTHER MAJOR NON VASCULAR MICROSCOPIC FINDINGS:

No | Yes 48
 =0 =1
 If Yes, list

- a. _____
- b. _____
- c. _____

G: HIPPOCAMPUS AND NEOCORTEX

1. Hippocampus and Entorhinal cortex

0=None 1 = + 3 = ++ 5 = +++

	Ento.	Hippo
a. Plaques		
Neuritic	49	<input type="checkbox"/>
Diffuse	50	<input type="checkbox"/>
b. Tangles		
	51	<input type="checkbox"/>
c. Amyloid		
Parenchymal	52	<input type="checkbox"/>
Meningeal	53	<input type="checkbox"/>
d. Other microscopic features		
GVD	54	<input type="checkbox"/>
Hirano Bodies	55	<input type="checkbox"/>
Neuronal loss	56	<input type="checkbox"/>
Gliosis	57	<input type="checkbox"/>
Pick bodies	58	<input type="checkbox"/>
Lewy Bodies	59	<input type="checkbox"/>
Spongiform change	60	<input type="checkbox"/>

2. Neocortex

0=None 1 = + 3 = ++ 5 = +++

	Front	Temp	Pariet	Occip
a. Plaques				
Neuritic	61	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diffuse	62	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Tangles				
	63	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For all questions: Don't Know = 7. Not Available/Applicable = 9

c. Amyloid

Parenchymal	64	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meningeal/Vascular	65	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

d. Other microscopic features

0 = None 1 = Present

Severe Neuronal loss	66	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Severe Gliosis	67	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Superficial gliosis	68	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pick bodies	69	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ballooned neurons	70	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lewy Bodies	71	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spongiform change	72	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

H. BRAINSTEM

0 = None, 1 = +, 3 = ++, 5 = +++

		Sub.nig.	N.Bas.	Raphe	Loc.C.	Vagus
Neuronal loss	73	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gliosis	74	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pigmentary Incontinence	75	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lewy Bodies	76	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tangles	77	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plaques	78	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	79	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If Yes, Describe _____

I: OTHER MICROSCOPIC FEATURES:

	No	Yes	
f. Mammillary bodies (WE)	=0	=1	80 <input type="checkbox"/>
g. Other	=0	=1	81 <input type="checkbox"/>

If Yes, Describe _____

For all questions: Don't Know = 7. Not Available/Applicable = 9

J: PRELIMINARY NEUROPATHOLOGIC DIAGNOSIS:

1. Normal Brain
2. P and T insufficient for AD
3. Alzheimer's Disease
4. Parkinson's Disease
5. Cortical LB Disease
6. Lewy Bodies insuff. for PD
7. Vascular Disease NOS
 - a. Infarcts only
 - b. Multiple Lacunes
 - c. "small vessel dis
 - d. Binswanger's Dis
 - e. Haemorrhage
 - f. Other
8. Pick's Disease
9. Lobar Atrophy
10. C-J Disease
11. Down's Syndrome
 - a. With AD
 - b. Without AD
12. White Matter Dis
If Yes, Specify _____
13. Tumour NOS
 - a. Primary
 - b. Metastatic
14. AIDS
15. Other
If yes, Specify _____

K. BRAAK STAGE (Optional)

82

L: PRELIMINARY ASSESSMENT:

	Rank	Diagnosis
83	<input type="checkbox"/>	<input type="checkbox"/>
84	<input type="checkbox"/>	<input type="checkbox"/>
85	<input type="checkbox"/>	<input type="checkbox"/>
86	<input type="checkbox"/>	<input type="checkbox"/>

For all questions: Don't Know = 7. Not Available/Applicable = 9

M: CERAD NEUROPATHOLOGIC DIAGNOSIS:

1. Normal Brain
2. Definite AD
3. Probable AD
4. Possible AD
5. Definite PD
6. Cortical LB Disease
7. Lewy Bodies not PD
8. Vascular Disease NOS
 - a. Infarcts only
 - b. Multiple Lacunes
 - c. "small vessel dis
 - d. Binswanger's Dis
 - e. Haemorrhage
 - f. Other
9. Pick's Disease
10. Lobar Atrophy
11. C-J Disease
12. Down's Syndrome
 - a. With AD
 - b. Without AD
13. White Matter Dis
If Yes, Specify _____
14. Tumour
 - a. Primary
 - b. Metastatic
15. AIDS
16. Other
If yes, Specify _____

N: FINAL ASSESSMENT:

	Rank	CERAD Diagnosis
87	<input type="checkbox"/>	<input type="checkbox"/>
88	<input type="checkbox"/>	<input type="checkbox"/>
89	<input type="checkbox"/>	<input type="checkbox"/>
90	<input type="checkbox"/>	<input type="checkbox"/>

N: ADDITIONAL COMMENTS: Please indicate KEYWORDS to be inserted into the database in CAPITALS. (limit of 10)
