

NNTC Public Reports

The data presented in the following report reflects the NNTC central database as of October 3rd, 2011.

Usage Statement

Distribution of the data contained in this report through publication or presentation should be reported to the Data Coordinating Center. Reporting usage of the NNTC resources helps to ensure continuation of this valuable resource!

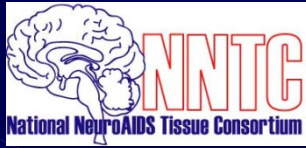
The NNTC is directly funded by the NIMH and NINDS.

Questions regarding this data should be directed to the
Data Coordinating Center

The EMMES Corporation Rockville, MD

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Consortium Members

- **Texas NeuroAIDS Research Center**
University of Texas Medical Branch
Dr. Benjamin Gelman, Principal Investigator
- **California NeuroAIDS Tissue Network**
University of California, San Diego
Dr. Igor Grant, Principal Investigator
- **National Neurological AIDS Bank**
University of California, Los Angeles
Dr. Elyse Singer, Principal Investigator
- **Manhattan HIV Brain Bank**
Mount Sinai Medical Center
Dr. Susan Morgello, Principal Investigator

NNTC Cohort Enrollment and Current Study Status^a

N = 2522

HIV Positive

N = 2292

HIV Negative

N = 230

At Enrollment

At Enrollment

Anatomical Gift

N = 265

Longitudinal Cohort

N = 2027

Longitudinal Cohort

N = 71

Anatomical Gift

N = 159

Autopsy in Study

N = 500

Inactive^b

N = 923

Inactive^c

N = 17

Autopsy in Study

N = 26

Currently Active

N = 604

Currently Active

N = 28

Tissue Bank

Tissue Bank

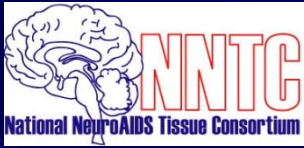
Longitudinal Cohort: Participants enrolled with measurable time in study.

Tissue Bank: Participants deceased with autopsy.

a. Total does not include 106 patients with unknown HIV or study status or who were lost to follow-up/administratively censored or deceased without autopsy prior to enrollment.

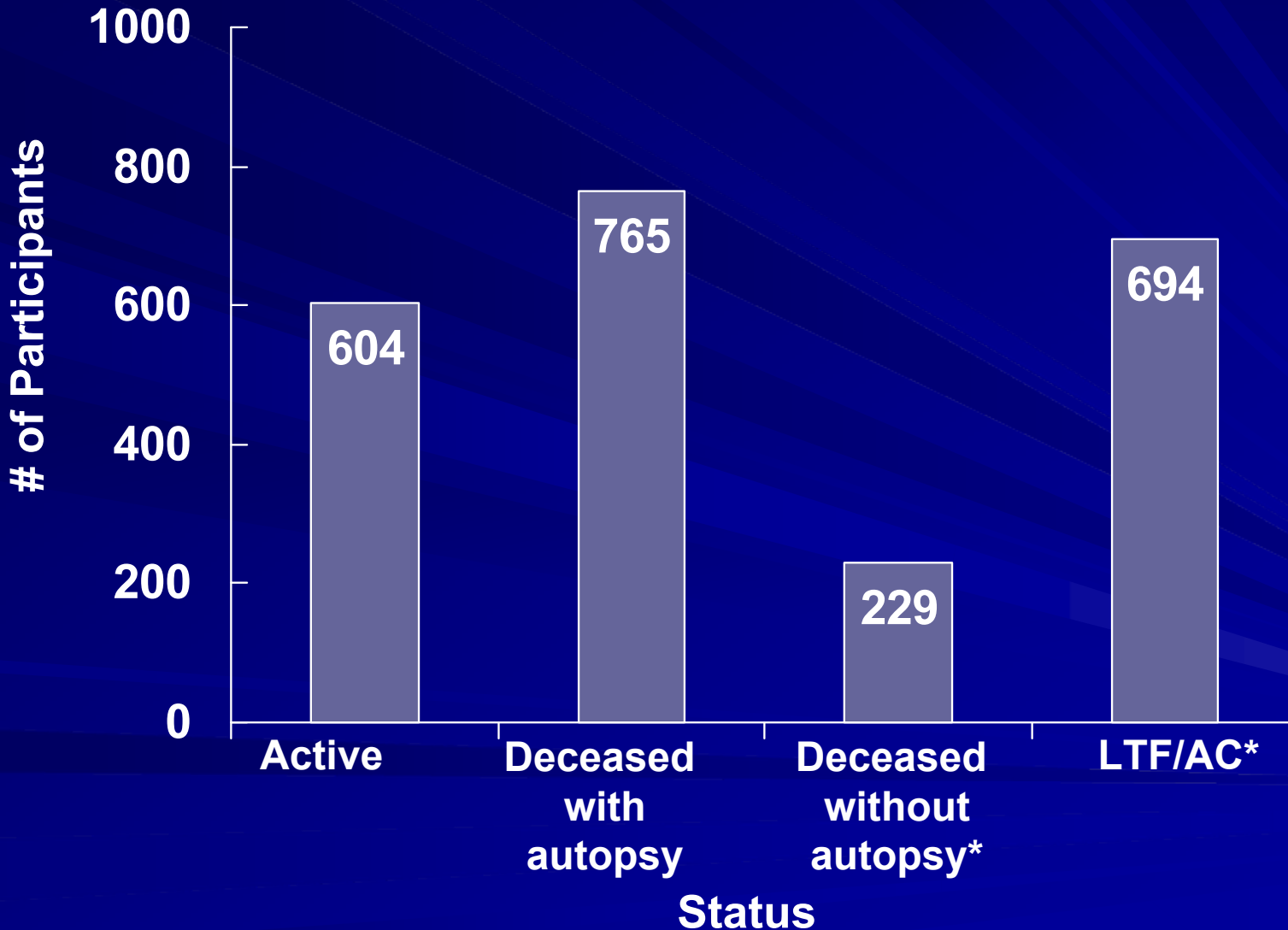
b. HIV+ inactive cases are either lost to follow-up/administratively censored (N=694) or deceased without autopsy (N=229).

c. HIV- inactive cases are either lost to follow-up/administratively censored (N=10) or deceased without autopsy (N=7)

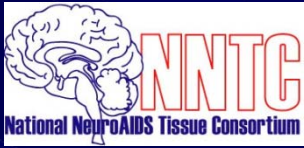


Cohort Overview: HIV+

Cohort Status (N=2292)

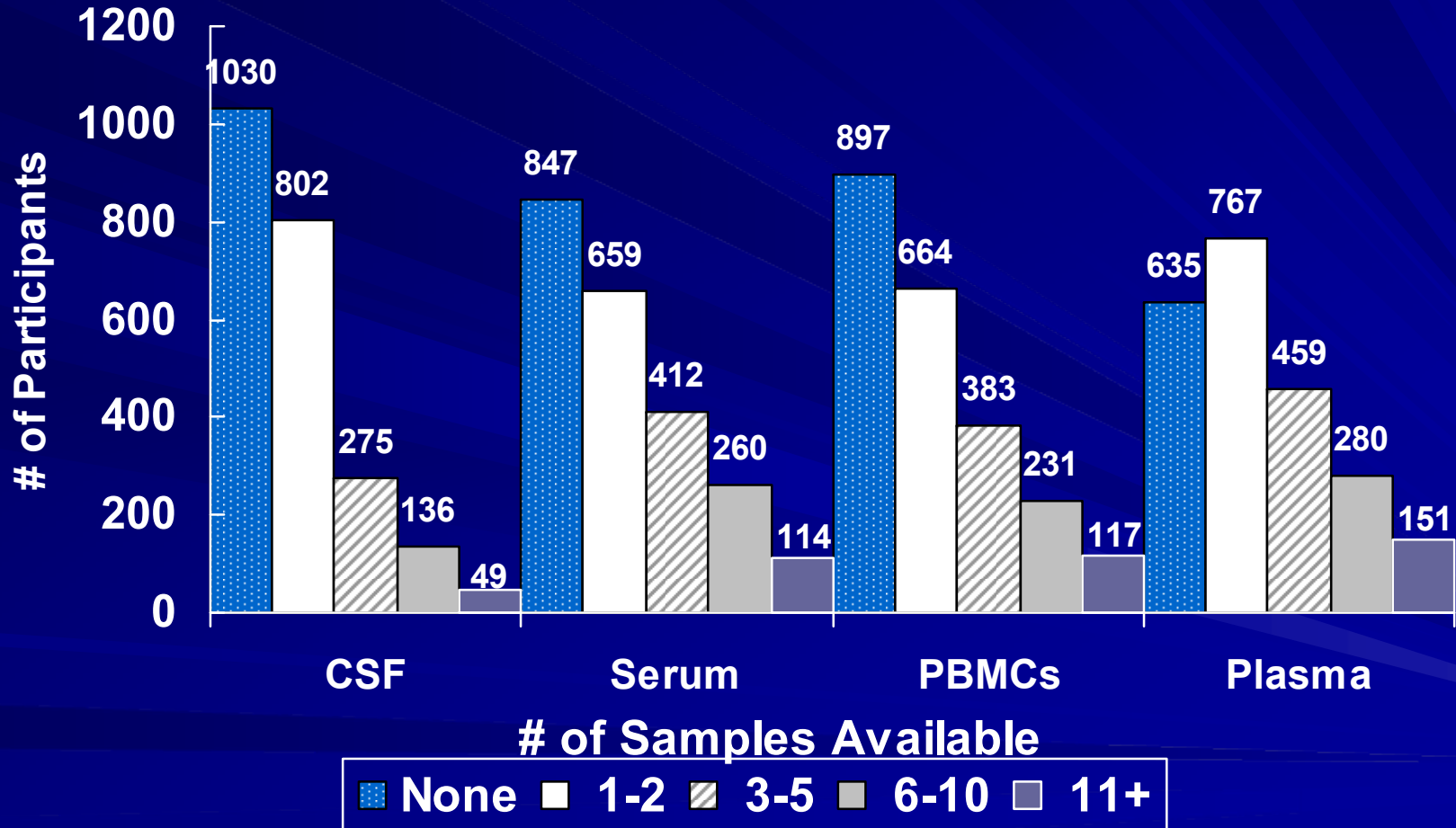


*Group #'s reflect only those lost to follow-up (LTF) or administratively censored (AC) on study



Cohort Overview: HIV+

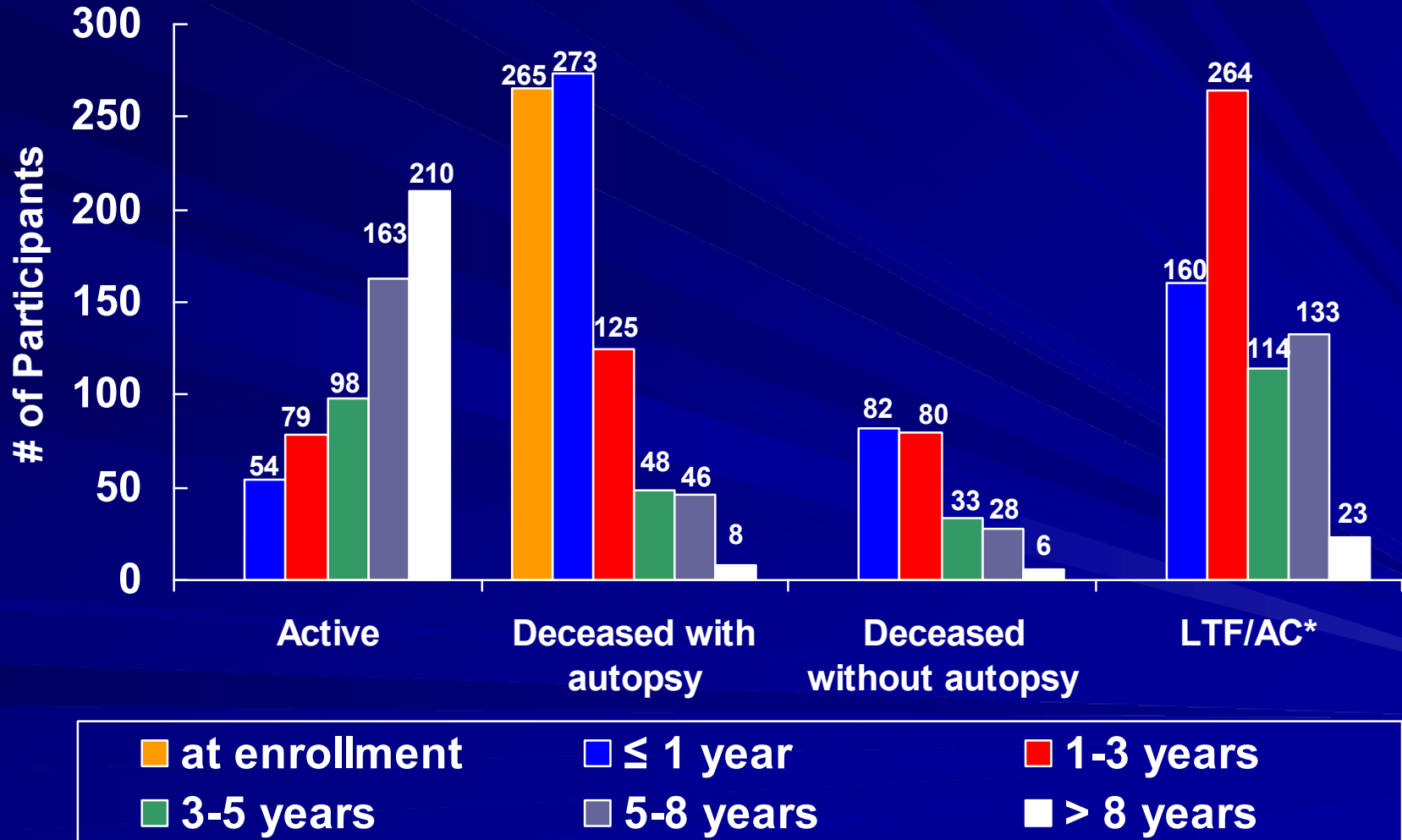
Serial Fluid Sample Inventory



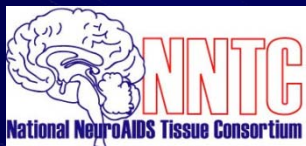
*Each bar represents # of participants; Inventory numbers include any post-mortem collection

Cohort Overview: HIV+

Length of Study Participation

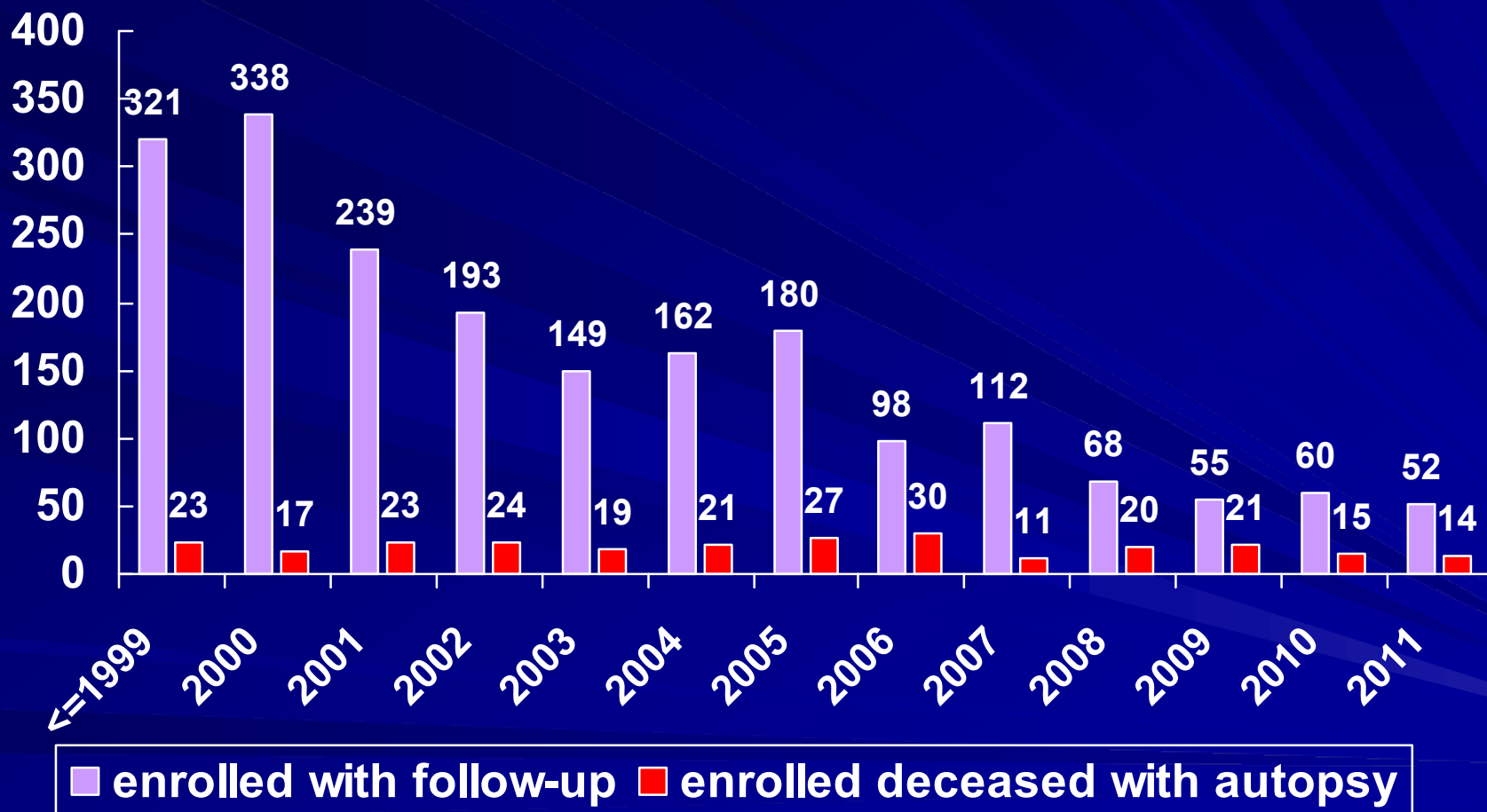


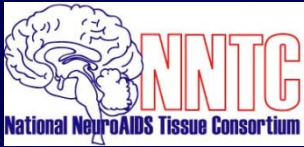
*LTF= Lost to follow-up (LTF); AC= Administratively censored



Cohort Overview: HIV+

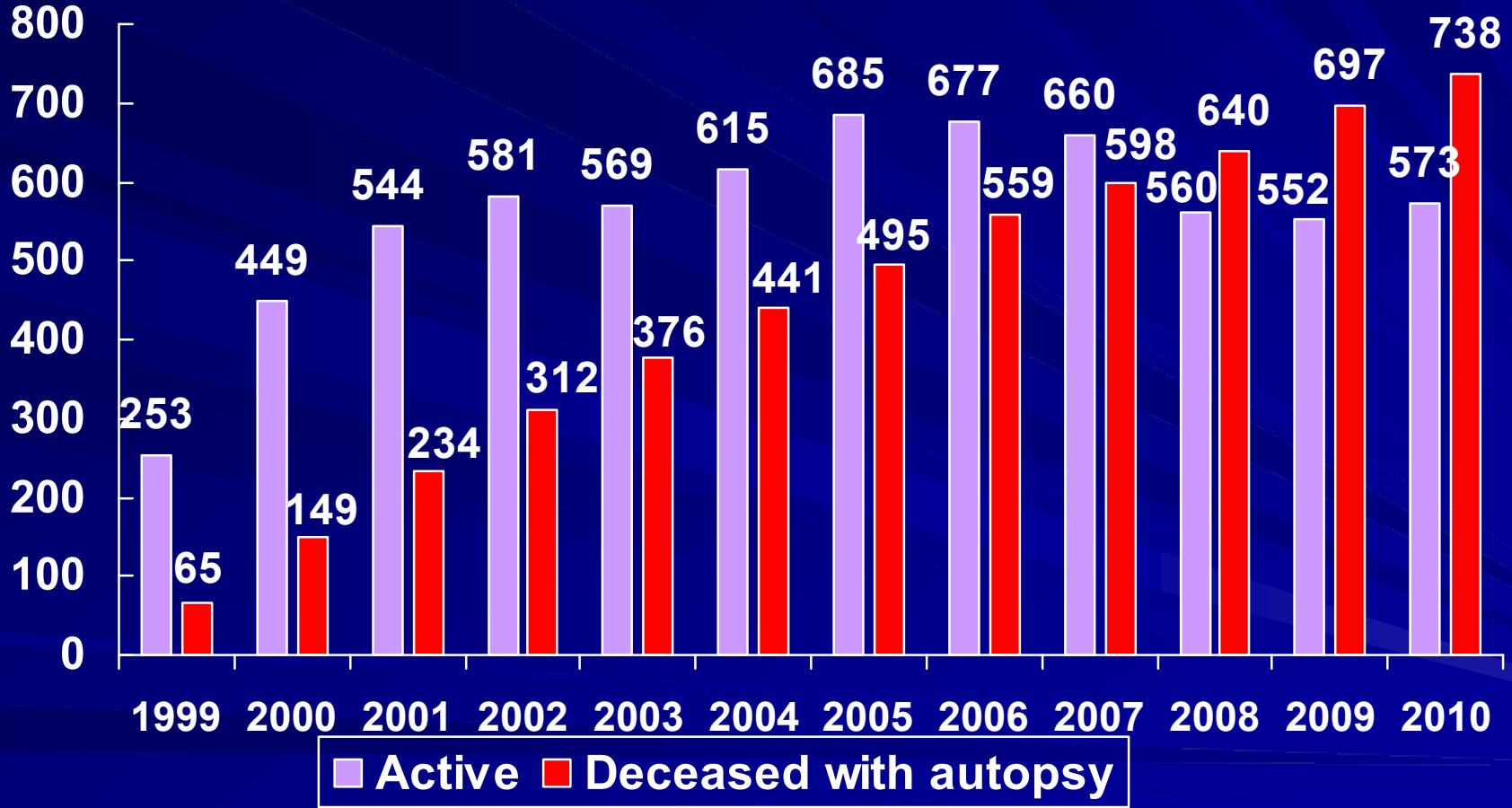
Participants Enrolled by Year

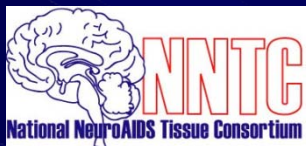




Cohort Overview: HIV+

Cohort Status Over Time





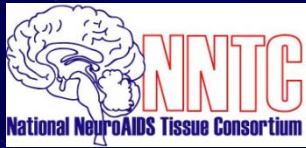
Cohort Overview: HIV+

Diagnostic Normality

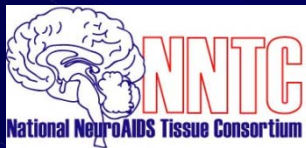
Diagnosis at Baseline:	Active Cohort (N=604)	Overall Cohort (N=2027)
Normal Neuromedical DX	122 (20%)	314 (15%)
No abuse/dependence on PRISM/CIDI*	120 (20%)	299 (15%)
Both normal (Neuromedical & PRISM/CIDI)	23 (4%)	54 (3%)

Diagnosis \geq5 yrs on study	Active Cohort (N=373)	Overall Cohort (N=617)
Normal Neuromedical DX	83 (22%)	126 (20%)
No abuse/dependence on PRISM/CIDI*	69 (18%)	107 (17%)
Both normal (Neuromedical & PRISM/CIDI)	13 (3%)	18 (3%)

*No abuse/dependence DX reflects those cases with a submitted PRISM/CIDI where all drug categories are reported as “normal”.



Longitudinal Cohort Overview



Longitudinal Cohort: HIV+

Baseline Demographics

Characteristics:

N	2027
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Age

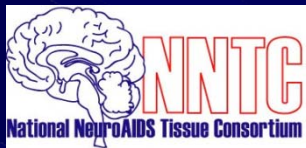
Mean	43.4
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SD	9.1
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25th Percentile	37
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Median	43
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75th Percentile	49
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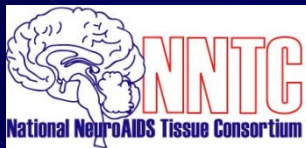


Longitudinal Cohort: HIV+

Demographics

Characteristics:

	<u>N</u>	<u>%</u>
Gender		
Male	1651	81
Female	371	19
Ethnicity		
Hispanic origin	553	27
Race		
White	1147	57
Black	655	32
Other	221	11

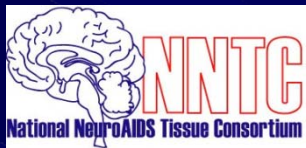


Longitudinal Cohort: HIV+

Baseline HIV Characteristics

Characteristics:

	<u>N</u>	<u>%</u>
HIV risk		
IV drug use	509	25
Male to male sex	910	45
Heterosexual sex	392	19
Other	216	11
ARV med use	1495	74



Longitudinal Cohort: HIV+

Baseline HIV Characteristics

Characteristics:

CD4 count (N=1781)

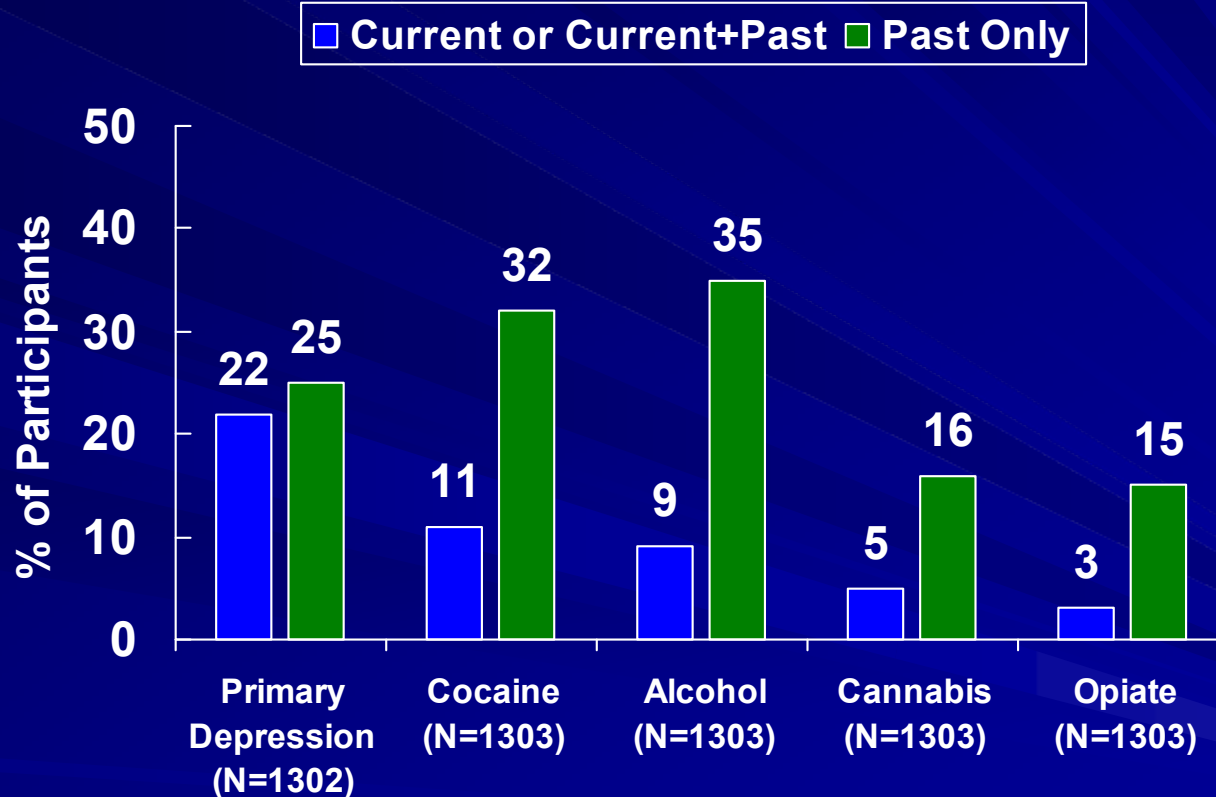
25th Percentile	35
Median	126
75th Percentile	281

Log Plasma viral load (N=1650)

25th Percentile	2.6
Median	3.3
75th Percentile	4.8

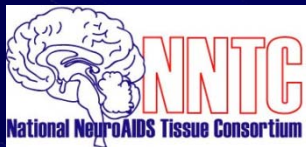
Longitudinal Cohort: HIV+

Baseline Psychiatric Diagnoses

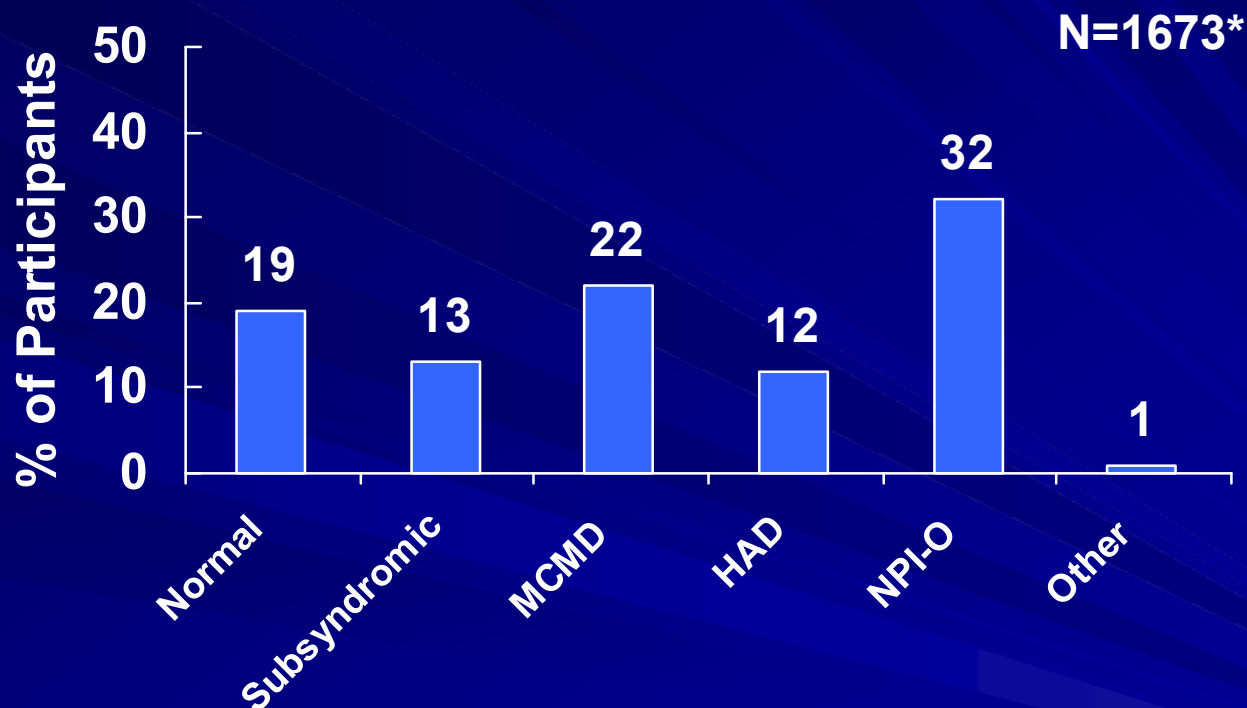


Psychiatric Diagnosis: Dependence

*Please note the totals listed above reflect only those cases in the longitudinal cohort who have undergone a PRISM/CIDI evaluation at baseline.



Longitudinal Cohort: HIV+ Baseline Cognitive Diagnoses



Cognitive Diagnosis

MCMD = Minor Cognitive Motor Disorder

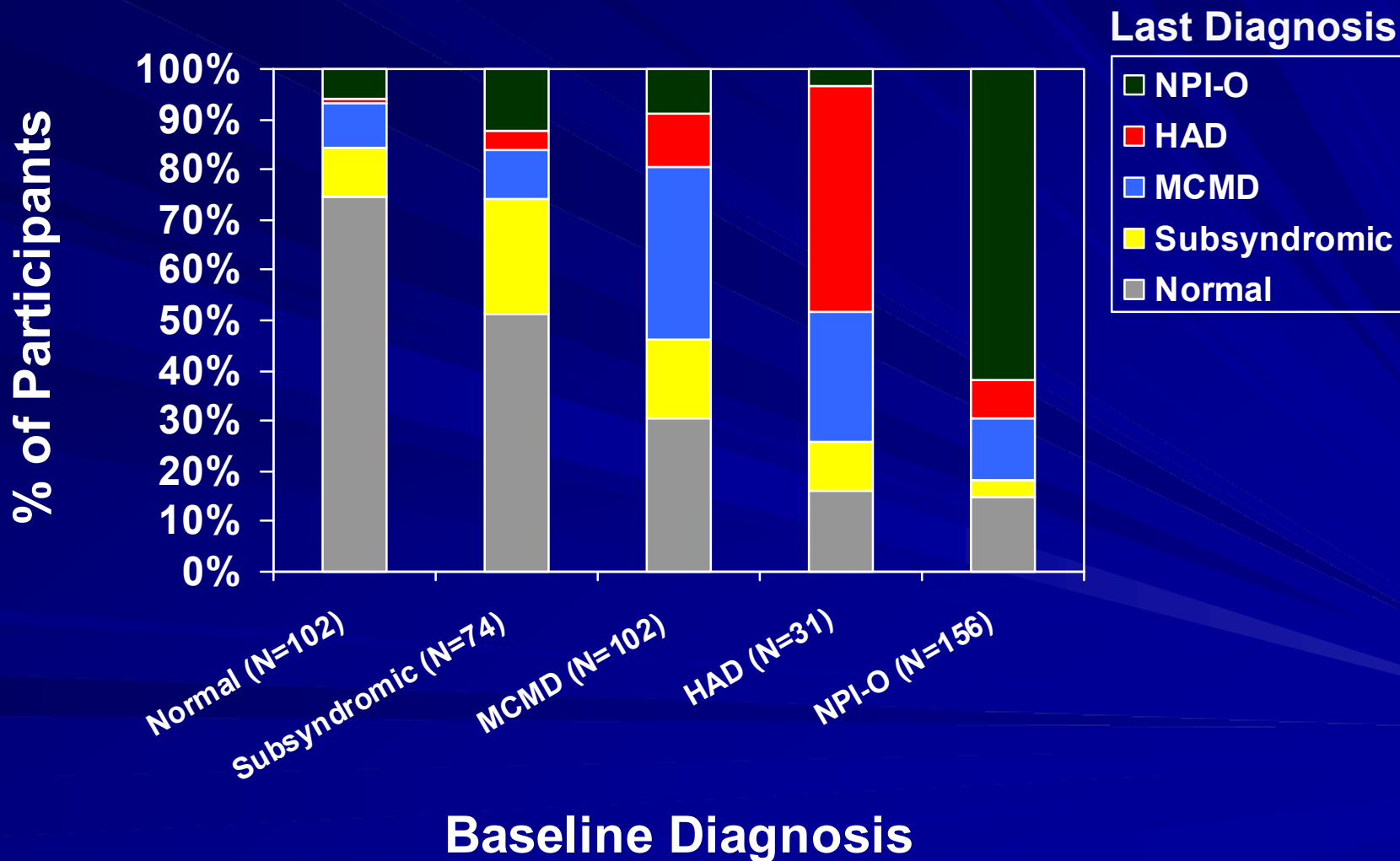
HAD = HIV – Associated Dementia

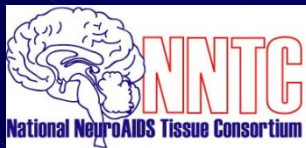
NPI-O = Neuropsychological Impairment- Other cause, not HIV

*Please note the totals listed above reflect only those cases in the longitudinal cohort who were assigned a cognitive dx at baseline.

Longitudinal Cohort : HIV+

Change in Cognitive Diagnosis





Longitudinal Cohort: HIV+

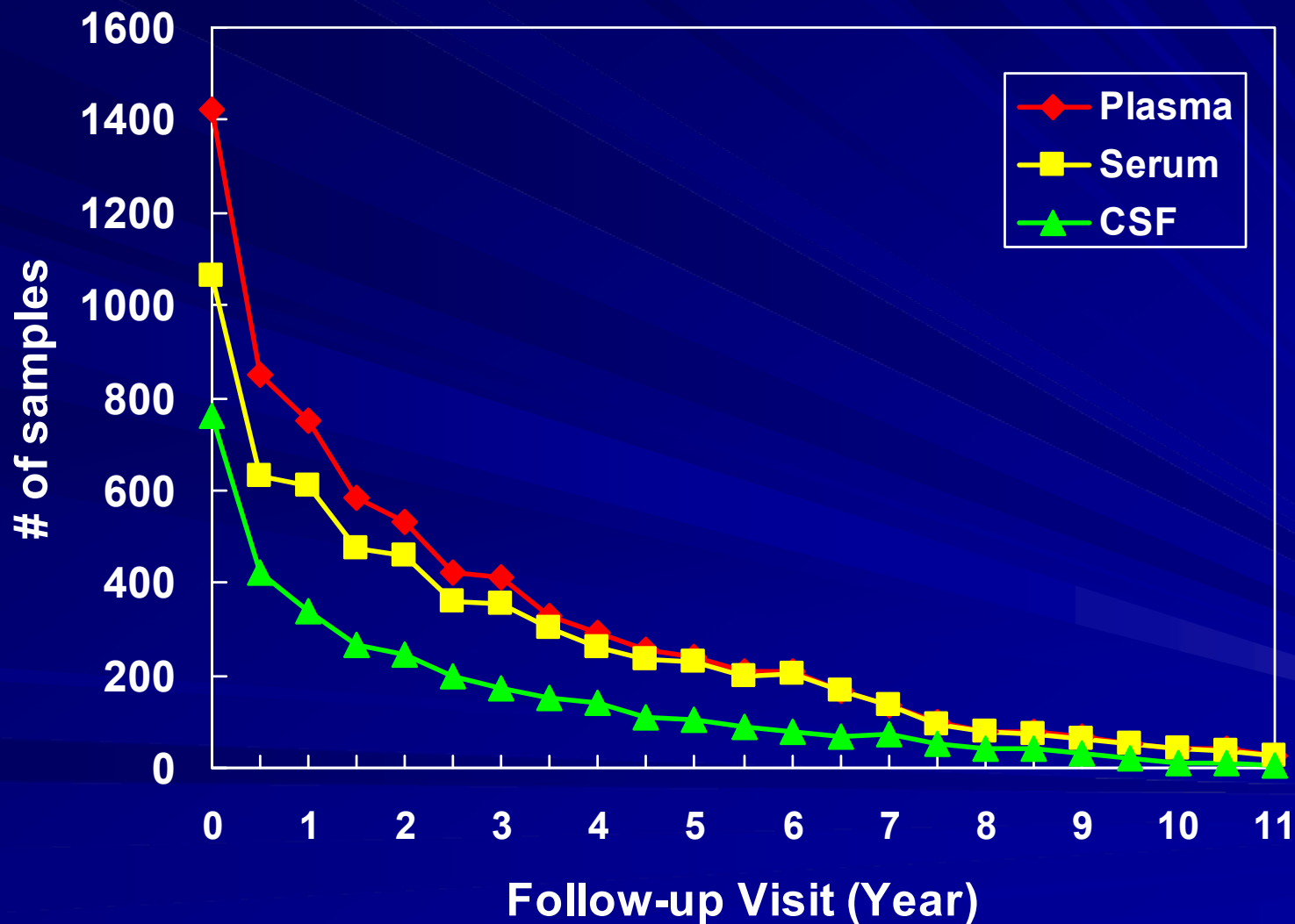
Baseline Neurologic Diagnoses

Condition:

	<u>N</u>	<u>%</u>
Clinical Myelopathy (N=1688)		
HIV associated	158	9
Other	27	2
None	1503	89
Neuropathy (N=1580)		
HIV associated DSP	492	31
Nucleoside-associated	10	1
HIV / nucleoside	200	13
None	878	56

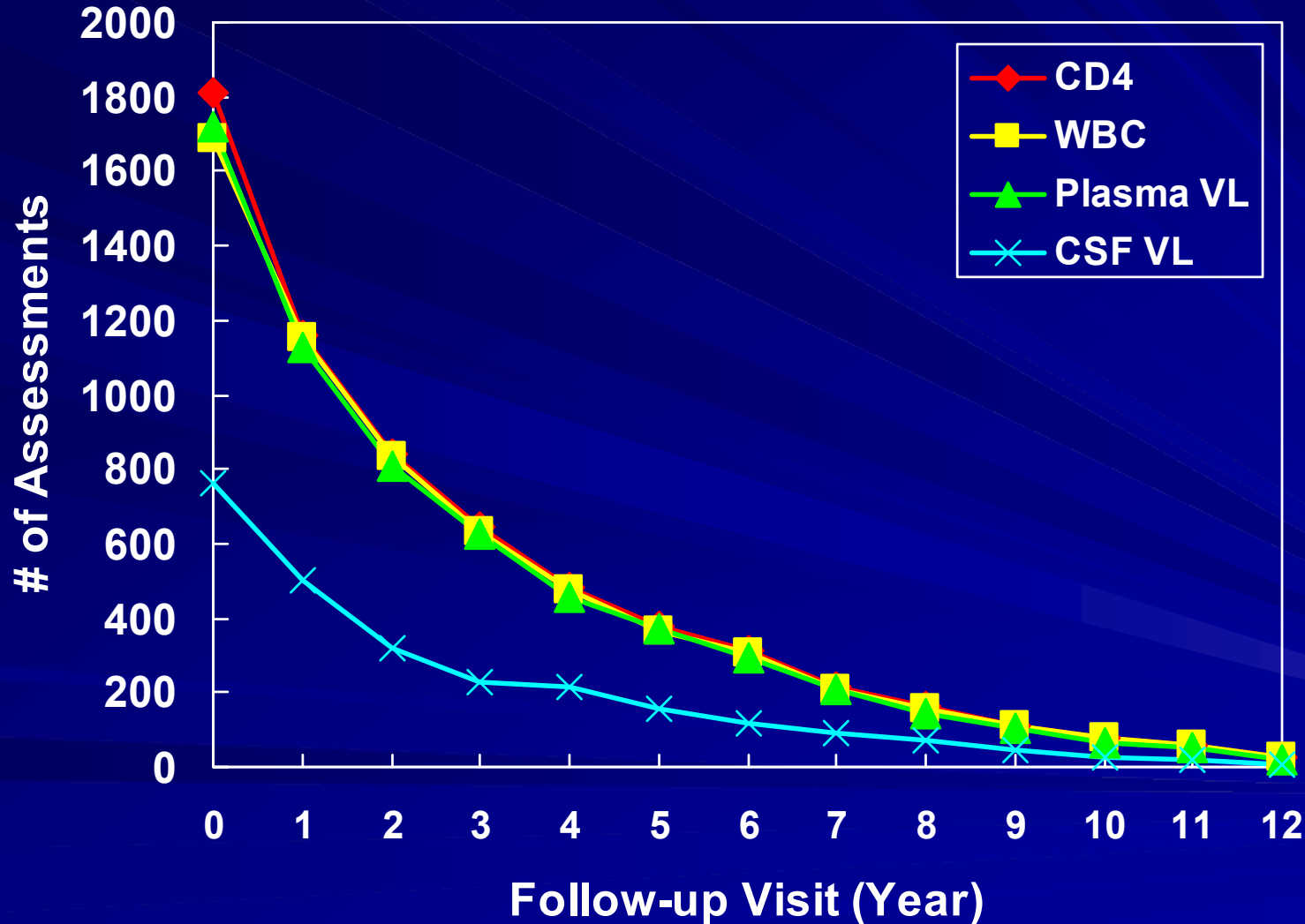
Longitudinal Cohort: HIV+

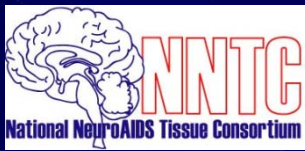
Total Fluid Samples Available



Longitudinal Cohort: HIV+

Total Assessments Completed

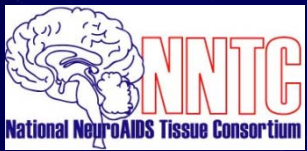




Longitudinal Cohort: HIV+

Concomitant Medications

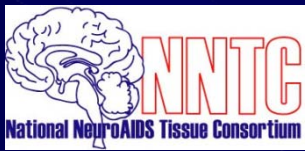
Medication	# of Participants
Total # participants assessed for concomitant medications	540 (100%)
CNS Agents	478 (88.5%)
Anti-infective Agents	407 (75.4%)
Vitamins	315 (58.3%)
Gastrointestinal Drugs	298 (55.2%)
Cardiovascular Drugs	266 (49.3%)
Hormones and Synthetic Substitutes	211 (39.1%)
Electrolytic, Caloric, and Water Balance	191 (35.4%)
Autonomic Drugs	184 (34.1%)
Blood Formation, Coagulation, and Thrombosis Agents	137 (25.4%)
Antihistamine Drugs	128 (23.7%)
Skin and Mucous Membrane Agents	99 (18.3%)
Miscellaneous Therapeutic Agents	97 (18%)
Antineoplastic Agents	59 (10.9%)
Eye, Ear, Nose, and Throat (EENT) Preparations	50 (9.3%)
Local Anesthetics	39 (7.2%)
No medication use reported on at least one occasion	38 (7%)
Respiratory Tract Agents	32 (5.9%)
Smooth Muscle Relaxants	19 (3.5%)
Pharmaceutical Aids	9 (1.7%)



Longitudinal Cohort: HIV+

Ancillary Lab Measurements

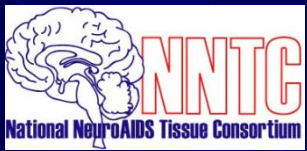
Ancillary Lab:	Total # records overall	% cohort with at least 1 measure	Total # cases with baseline measure	% cohort with baseline and one other measure
Mean Corpuscular Volume (MCV)	7415	49	992	36
Blood Lymphocyte Percent	7211	48	948	34
Blood Monocyte Percent	7203	48	951	34
Blood Eosinophil Percent	7160	48	945	34
Blood Basophil Percent	7006	48	906	32
Creatinine	6827	60	1104	38
Glucose	6786	60	1112	38
Sodium	6754	60	1104	37
BUN	6740	59	1092	37
Bilirubin	6530	58	1069	37
Calcium	6511	57	1040	35
Chloride	6237	49	950	33
Potassium	6233	49	948	33
Blood Alkaline Phosphatase	6124	49	950	33
Total Protein	6054	48	935	33
AST	5830	47	854	29
ALT	5704	46	806	27
CO2	5591	46	824	27



Longitudinal Cohort: HIV+

Ancillary Lab Measurements cont.

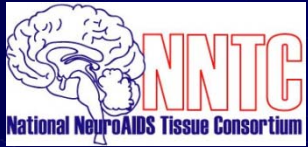
Ancillary Lab:	Total # records overall	% cohort with at least 1 measure	Total # cases with baseline measure	% cohort with baseline and one other measure
Blood Neutrophil Percent	5372	33	500	18
Red Blood Cells	2828	28	563	20
Mean Corpuscular Hemoglobin Concentration (MCHC)	2825	28	560	20
Mean Corpuscular Hemoglobin (MCH)	2824	28	560	20
Urine Toxicology; Methamphetamine	2666	26	499	18
Blood CD3 Percent	2664	26	520	19
PT	2380	21	364	12
INR	2321	18	330	12
Urinalysis: Glucose	2164	20	394	14
Urinalysis: pH	2164	20	395	14
Urinalysis: Protein	2164	20	395	14
Urinalysis: Specific Gravity	2161	20	393	14
Urinalysis: Ketones	2160	20	394	14
Urinalysis: Bilirubin	2156	20	392	14
Blood Hepatitis C Antibodies (HCV)	1619	58	632	6
Urinalysis: White Blood Cells	1301	16	230	7
Urinalysis: Red Blood Cells	1298	16	231	8
Phosphorus	1147	13	255	8



Longitudinal Cohort: HIV+

Ancillary Lab Measurements cont.

Ancillary Lab:	Total # records overall	% cohort with at least 1 measure	Total # cases with baseline measure	% cohort with baseline and one other measure
Direct Bili	1131	14	262	8
TG	1130	14	252	8
Cholesterol	1127	13	250	8
LDH	1107	13	243	8
Blood Red cell Distribution Width (RDW)	1026	13	89	3
Urate	1015	12	239	7
Blood CD3 Antibodies	919	13	86	3
CSF Appearance	862	12	194	6
CSF Color	860	12	194	6
Blood Mean Platelet Volume (MPV)	813	11	74	2
Blood Hepatitis B Surface Antigens	568	16	262	4
Blood Hepatitis B Surface Antibodies	543	16	255	3
CSF-VDRL Test	517	7	102	3
Blood HBc Antibodies	507	15	247	3
Blood Hepatitis C Viral Load	326	10	104	1
HDL	283	5	33	1
LDL	255	5	29	1
TSH	78	3	34	1

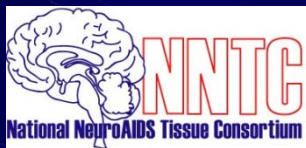


Tissue Bank Cohort Overview



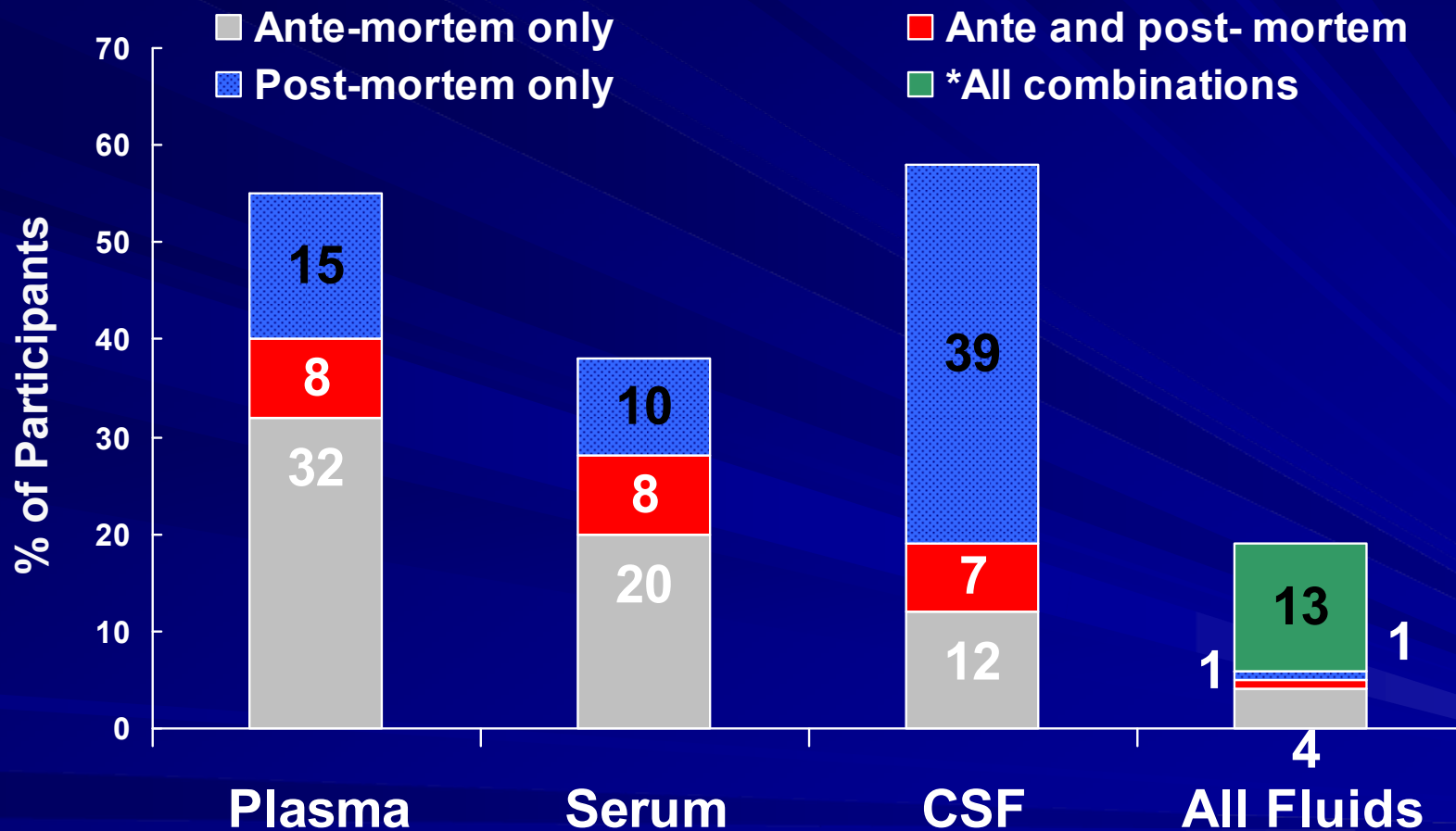
Tissue Bank: HIV+ and HIV- CNS Specimens Available

Type:	HIV+	HIV-
Fixed brain	665	165
Frozen brain	683	165
Spinal cord	702	141
Liver	641	130
Spleen	626	121
Peripheral Nerve	585	109
Dorsal Root Ganglia	550	113
Lymph node	519	84
Bone Marrow	519	86
Heart	444	68
Kidney	317	73
Lung	290	64
Eye	36	2



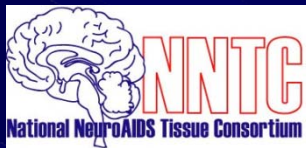
Tissue Bank: HIV+

Fluids Available (%)*



*All-combinations (e.g., one specimen might be available ante-mortem while the other two might be ante- and post-mortem or any of the other 23 combinations where all 3 specimen availabilities are not the same)

Please note the totals listed above reflect only those cases who have a fixed brain sample available and fluids collected within 1 year of death

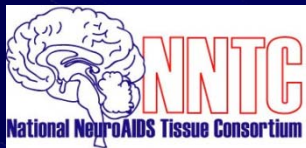


Tissue Bank: HIV+

Demographics*

Characteristic:	At Time of Death
N	665
Age	
Mean	46.6
SD	9.9
25th Percentile	40
Median	46
75th Percentile	53

***Cases with a fixed brain specimen available with a measurement at baseline and within 1 year of death**



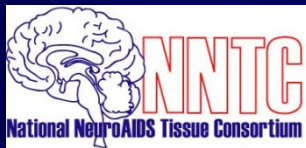
Tissue Bank: HIV+

Demographics*

Characteristics:

	<u>N</u>	<u>%</u>
Gender		
Male	542	82
Female	123	18
Ethnicity		
Hispanic origin	189	28
Race		
White	406	61
Black	190	29
Other	69	10

*Cases with a fixed brain specimen available



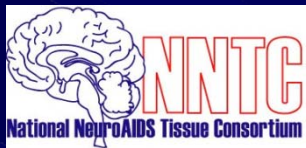
Tissue Bank: HIV+

*HIV Characteristics of autopsy cases**

Characteristics:

	<u>N</u>	<u>%</u>
Baseline HIV risk		
IV drug use	186	28
Male to male sex	268	40
Heterosexual sex	98	15
Other	113	17
ARV med use: at baseline	303	46
at last visit	281	42

*Cases with a fixed brain specimen available



Tissue Bank: HIV+

*HIV Characteristics at time of death**

Characteristic

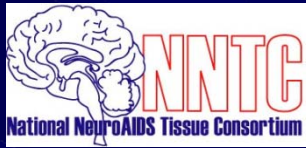
CD4 count (N=477)

25 th Percentile	12
Median	69
75 th Percentile	199

Log plasma viral load (N=446)

25 th Percentile	2.6
Median	4.5
75 th Percentile	5.3

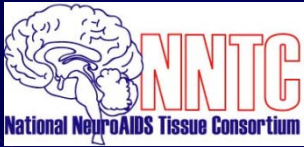
* Cases with a fixed brain specimen available in addition to both a baseline measurement and a measurement within 1 yr of death.



Tissue Bank: HIV+

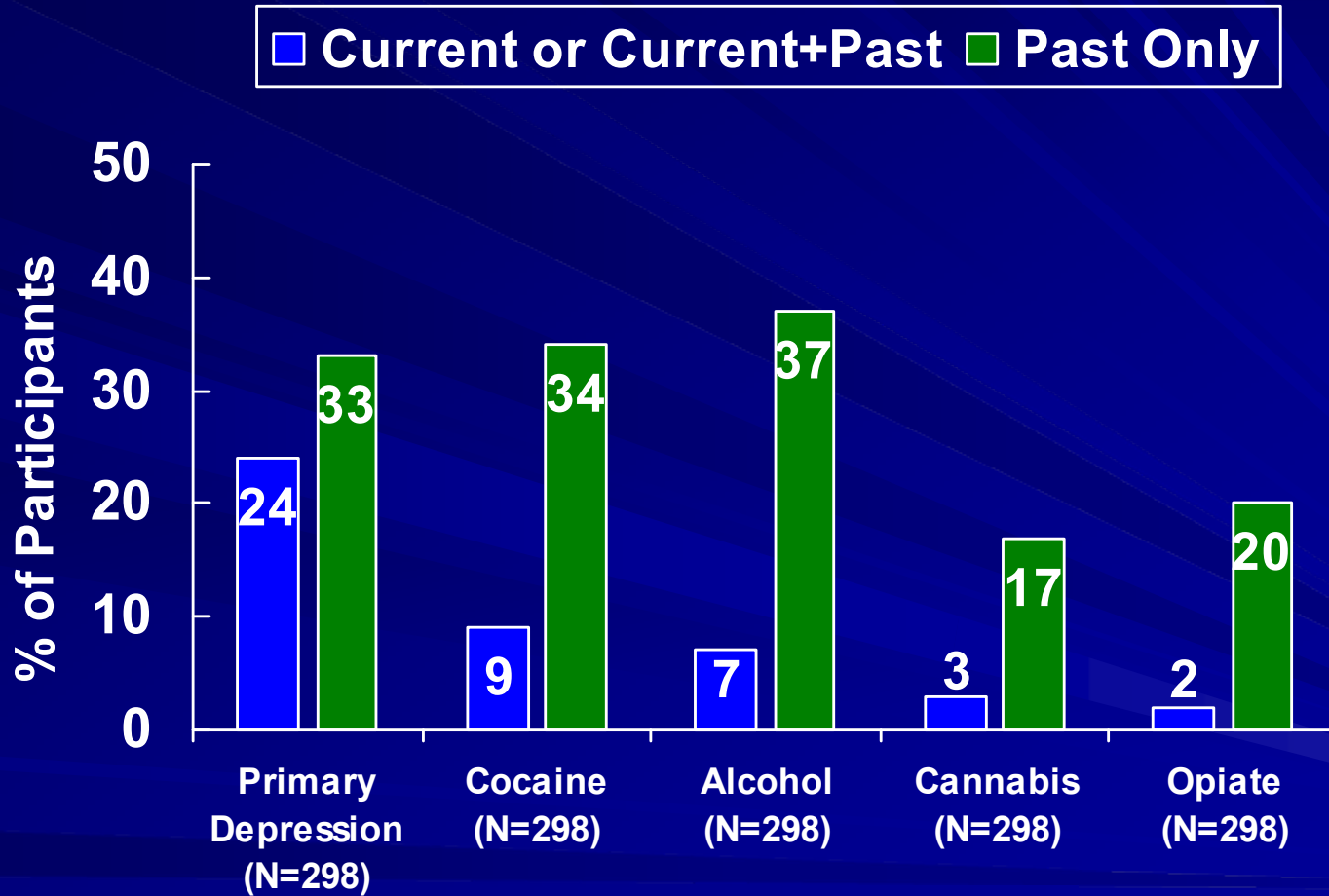
Pathological Conditions: Year of Autopsy

TYPE:	Year of Autopsy			
	1998-2000	2001-2005	2006-present	Total Cases
<i>Total Fixed Specimens:</i>	144	304	215	663
Normal/minor neuropath changes	36 (25%)	100 (33%)	76 (35%)	212 (32%)
Other non-infectious pathology	29 (20%)	56 (18%)	51 (24%)	136 (21%)
Alzheimer's type 2 gliosis	29 (20%)	46 (15%)	16 (7%)	91 (14%)
HIV encephalitis	25 (17%)	30 (10%)	22 (10%)	77 (12%)
Focal infarct	15 (10%)	38 (13%)	23 (11%)	76 (11%)
Hypoxic/ischemic damage	15 (10%)	16 (5%)	30 (14%)	61 (9%)
Aseptic Leptomeningitis	11 (8%)	14 (5%)	15 (7%)	40 (6%)
Microglial nodule encephalitis	14 (10%)	18 (6%)	7 (3%)	39 (6%)
Hemorrhage-parenchymal	8 (6%)	12 (4%)	12 (6%)	32 (5%)
Primary CNS lymphoma	11 (8%)	12 (4%)	6 (3%)	29 (4%)
Other infections	8 (6%)	13 (4%)	6 (3%)	27 (4%)
Progressive Multifocal Leucoencephalopathy	3 (2%)	17 (6%)	12 (6%)	32 (5%)
Cytomegalovirus encephalitis	7 (5%)	14 (5%)	3 (1%)	24 (4%)
Cryptococcus	6 (4%)	9 (3%)	13 (6%)	28 (4%)



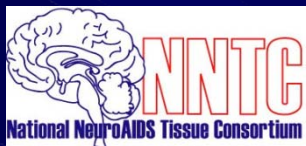
Tissue Bank: HIV+

Last Psychiatric Diagnosis



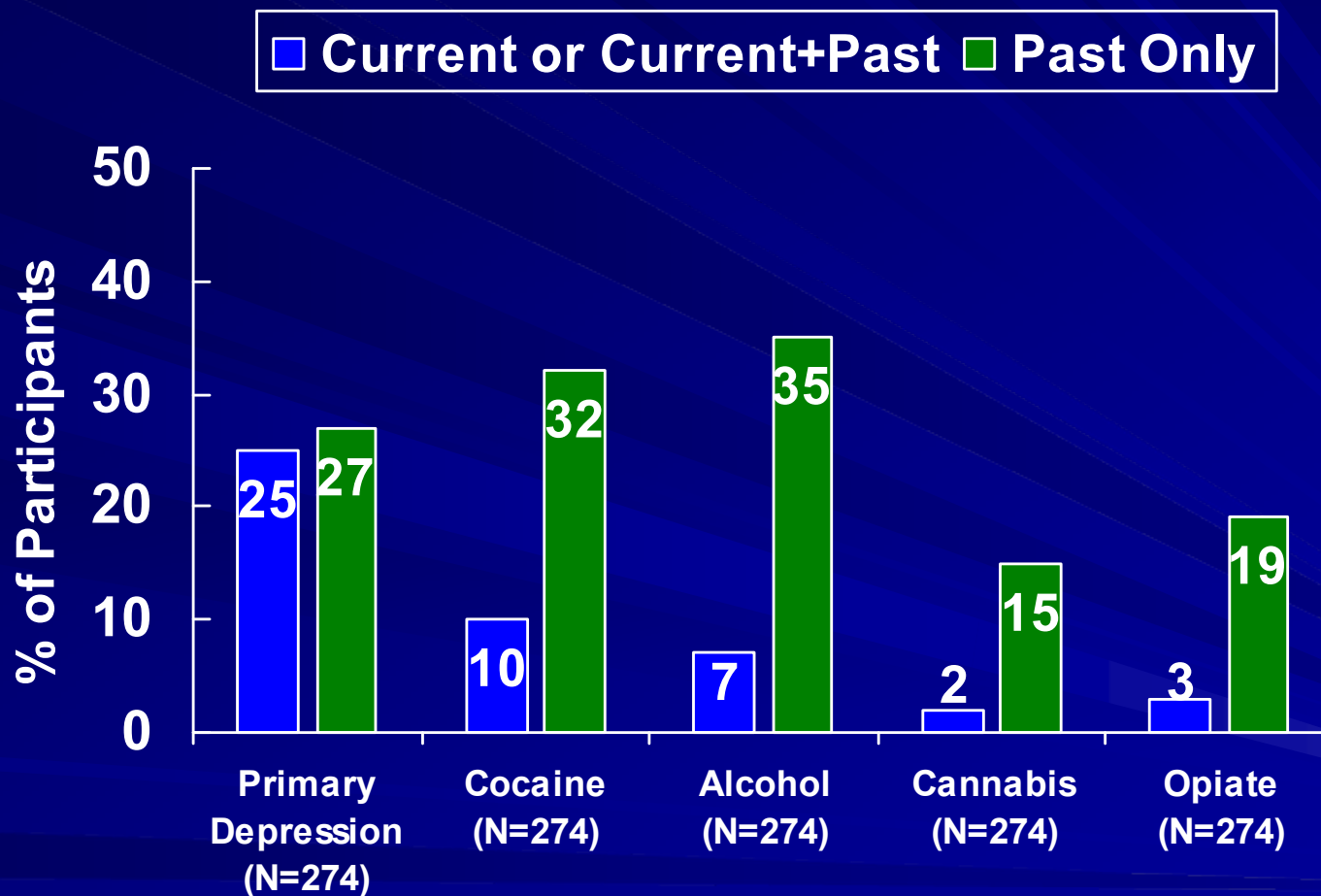
Psychiatric Diagnosis: Dependence

*Please note the totals listed above reflect only those cases who have a fixed brain sample available and data from the last PRISM/CIDI evaluation before death. 10-03-2011



Tissue Bank: HIV+

Baseline Psychiatric Diagnosis

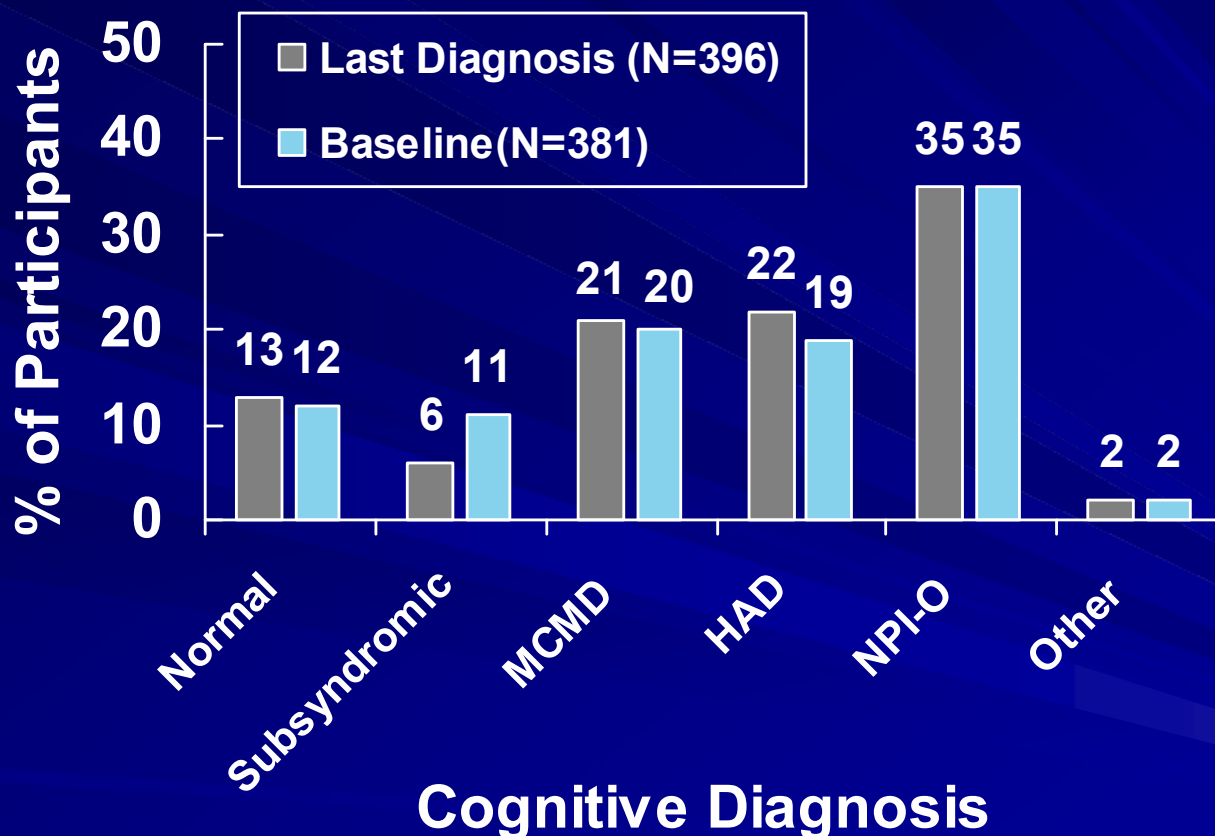


Psychiatric Diagnosis: Dependence

*Please note the totals listed above reflect only those cases who have a fixed brain sample available and data from the PRISM/CIDI evaluation closest to baseline. 10-03-2011

Tissue Bank: HIV+

Cognitive Diagnosis (%)



MCMD = Minor Cognitive Motor Disorder

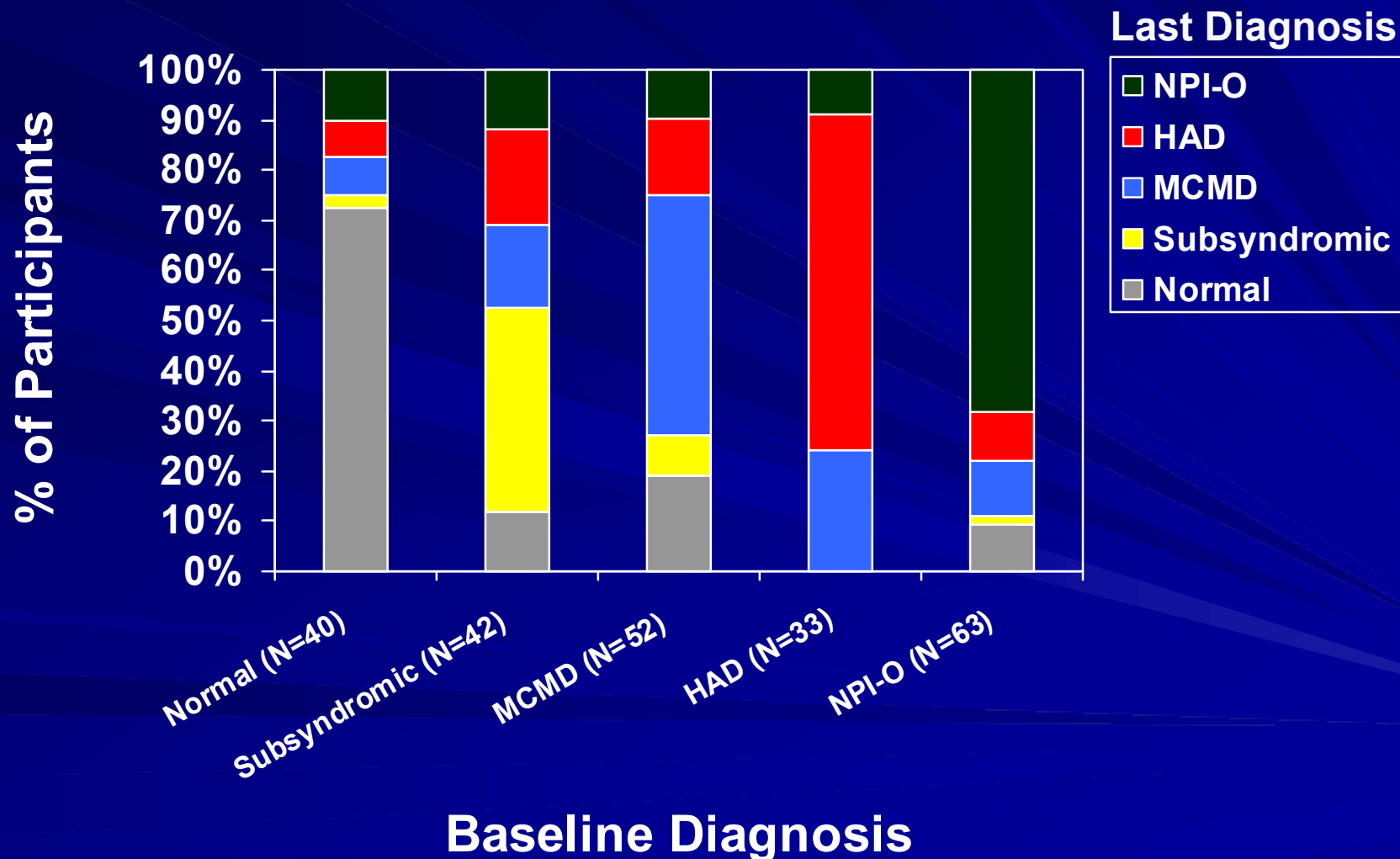
HAD = HIV – Associated Dementia

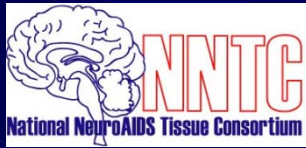
NPI-O = Neurological Impairment- Other cause, not HIV

*Please note the totals listed above reflect only those cases who have a fixed brain sample available.

Tissue Bank: HIV+

Change in Cognitive Diagnosis



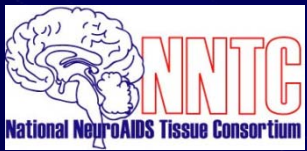


Tissue Bank: HIV+

*Neurologic Diagnoses**

Condition:	Last Dx		Baseline	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
Clinical Myelopathy	N=367		N=383	
HIV associated	51	14	48	13
Other	6	2	8	2
None	309	84	327	85
Neuropathy	N=311		N=331	
HIV associated DSP	125	40	116	35
Nucleoside-associated	4	1	2	1
HIV / nucleoside	47	15	53	16
None	135	43	160	48

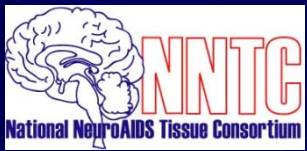
*Cases with a fixed brain specimen available



Tissue Bank: HIV+

Concomitant Medications

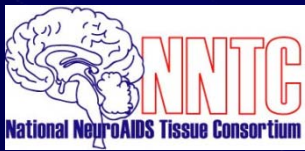
Medication	# of Participants
Total # participants with a reported concomitant medication	156 (100%)
CNS Agents	135 (86.5%)
Anti-infective Agents	134 (85.9%)
Gastrointestinal Drugs	97 (62.2%)
Cardiovascular Drugs	75 (48.1%)
Vitamins	74 (47.4%)
Hormones and Synthetic Substitutes	71 (45.5%)
Electrolytic, Caloric, and Water Balance	69 (44.2%)
Blood Formation, Coagulation, and Thrombosis Agents	57 (36.5%)
Autonomic Drugs	48 (30.8%)
Antihistamine Drugs	25 (16%)
Antineoplastic Agents	24 (15.4%)
Miscellaneous Therapeutic Agents	22 (14.1%)
Skin and Mucous Membrane Agents	11 (7.1%)
Eye, Ear, Nose, and Throat (EENT) Preparations	10 (6.4%)
Local Anesthetics	10 (6.4%)
Respiratory Tract Agents	6 (3.8%)
Pharmaceutical Aids	5 (3.2%)
No medication use reported on at least one occasion	4 (2.6%)
Smooth Muscle Relaxants	4 (2.6%)



Tissue Bank: HIV+

Ancillary Lab Measurements

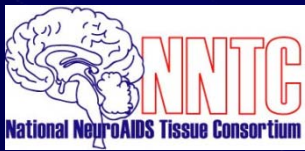
Ancillary Lab:	Total # records overall	% cohort with at least 1 measure	Total # cases with baseline measure	% cohort with baseline and one other measure
Mean Corpuscular Volume (MCV)	1587	45	293	19
Blood Monocyte Percent	1521	43	277	19
Blood Lymphocyte Percent	1520	43	277	19
Blood Eosinophil Percent	1505	42	276	18
Blood Basophil Percent	1486	42	270	17
Creatinine	1360	53	320	20
Glucose	1350	53	317	20
BUN	1346	53	315	20
Sodium	1341	52	313	20
Blood Neutrophil Percent	1304	31	191	12
Calcium	1283	51	305	19
Bilirubin	1248	52	310	20
Potassium	1225	44	274	17
Chloride	1224	44	276	17
CO2	1178	42	262	15
Blood Alkaline Phosphatase	1140	44	277	17
Total Protein	1124	43	270	17
ALT	1074	41	253	14



Tissue Bank: HIV+

Ancillary Lab Measurements cont.

Ancillary Lab:	Total # records overall	% cohort with at least 1 measure	Total # cases with baseline measure	% cohort with baseline and one other measure
AST	1018	40	247	15
PT	562	24	139	9
INR	530	21	120	8
Urinalysis: Glucose	487	23	149	10
Urinalysis: pH	487	23	149	10
Urinalysis: Specific Gravity	487	23	149	10
Blood Hepatitis C Antibodies (HCV)	486	56	215	5
Urinalysis: Protein	486	23	149	10
Urinalysis: Bilirubin	485	23	148	10
Urinalysis: Ketones	485	23	148	10
Urinalysis: Red Blood Cells	333	19	109	6
Urinalysis: White Blood Cells	330	19	107	6
Mean Corpuscular Hemoglobin Concentration (MCHC)	296	15	95	7
Mean Corpuscular Hemoglobin (MCH)	295	15	95	7
Red Blood Cells	294	15	95	7
Blood CD3 Percent	246	14	90	7
CSF Appearance	242	14	80	5
CSF Color	242	14	80	5



Tissue Bank: HIV+

Ancillary Lab Measurements cont.

Ancillary Lab:	Total # records overall	% cohort with at least 1 measure	Total # cases with baseline measure	% cohort with baseline and one other measure
Blood Hepatitis B Surface Antigens	230	21	122	3
Urine Toxicology; Methamphetamine	212	11	69	6
Blood Hepatitis B Surface Antibodies	211	20	113	3
Blood HBc Antibodies	197	18	105	3
Phosphorus	164	9	58	3
Direct Bili	140	10	61	3
Blood Hepatitis C Viral Load	137	17	66	1
Urate	137	9	60	3
Cholesterol	134	9	57	3
LDH	129	8	55	3
TG	129	9	56	3
CSF – VDRL Test	89	4	23	2
Blood Red cell Distribution Width (RDW)	76	2	3	0
Blood Mean Platelet Volume (MPV)	56	2	3	0
TSH	28	3	15	0
Blood CD3 Antibodies	26	2	1	0
Blood Hepatitis C Viral Load	23	2	7	0
pH	16	2	7	0