

The data presented in the following reports reflect the NNTC central database as of
February 01, 2024

Usage Statement

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The NNTC is directly funded by the NIMH, NIA, NIDA, and NINDS.

Questions regarding these data should be directed to the Data Coordinating Center
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Texas NeuroAIDS Research Center

University of Texas Medical Branch
Dr. Benjamin Gelman, Principal Investigator

California NeuroAIDS Tissue Network

University of California, San Diego
Dr. David Moore, Principal Investigator

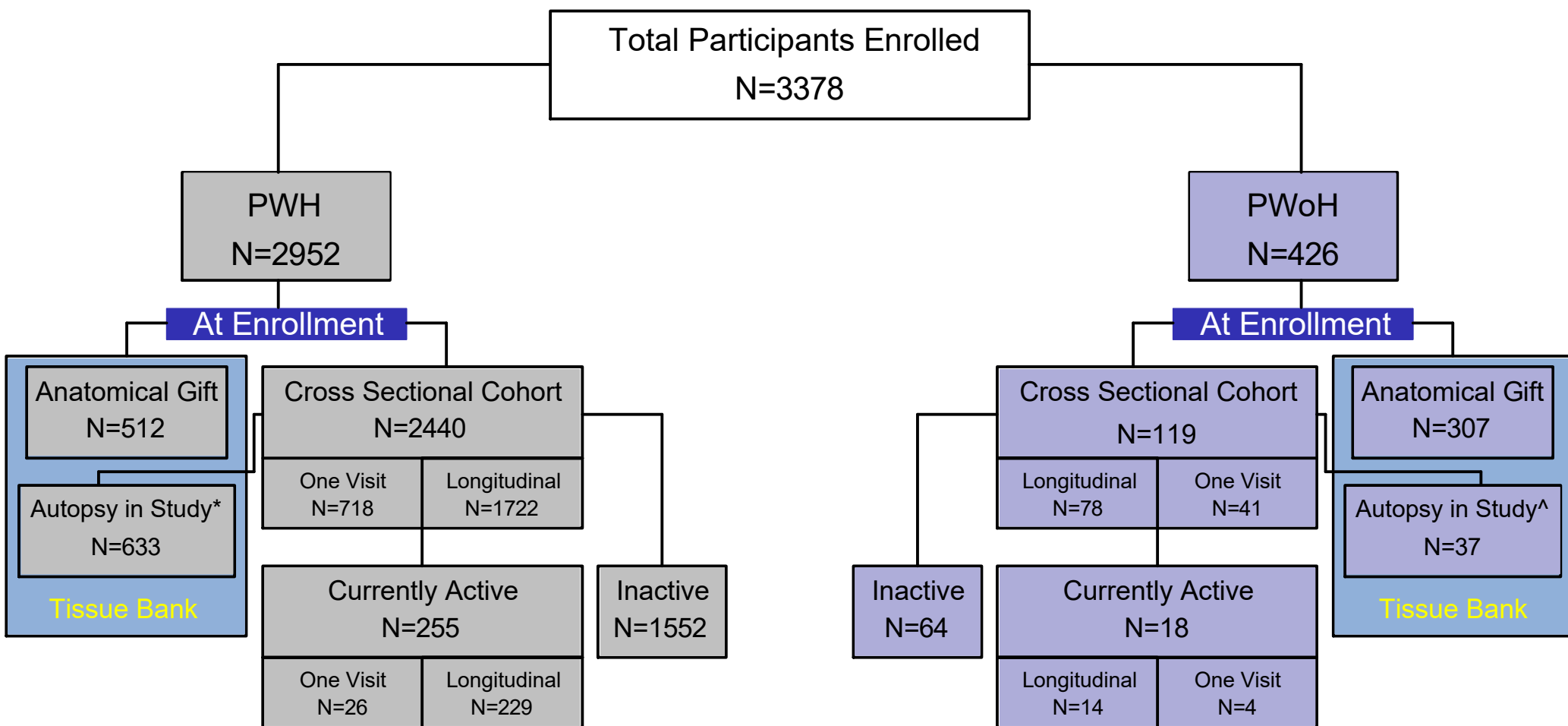
National Neurological AIDS Bank

University of California, Los Angeles
Dr. Elyse Singer, Principal Investigator

Manhattan HIV Brain Bank

Mount Sinai Medical Center, New York
Dr. Susan Morgello, Principal Investigator

Cohort Status Overview



PWH: People with HIV.

PWoH: People without HIV.

Longitudinal Cohort: Participants enrolled with 2 or more study visits.

Tissue Bank: Participants deceased with autopsy.

Total does not include 252 cases categorized as unknown HIV status, unknown study status, lost to follow-up, administratively censored, withdrawn, or deceased without autopsy prior to enrollment.

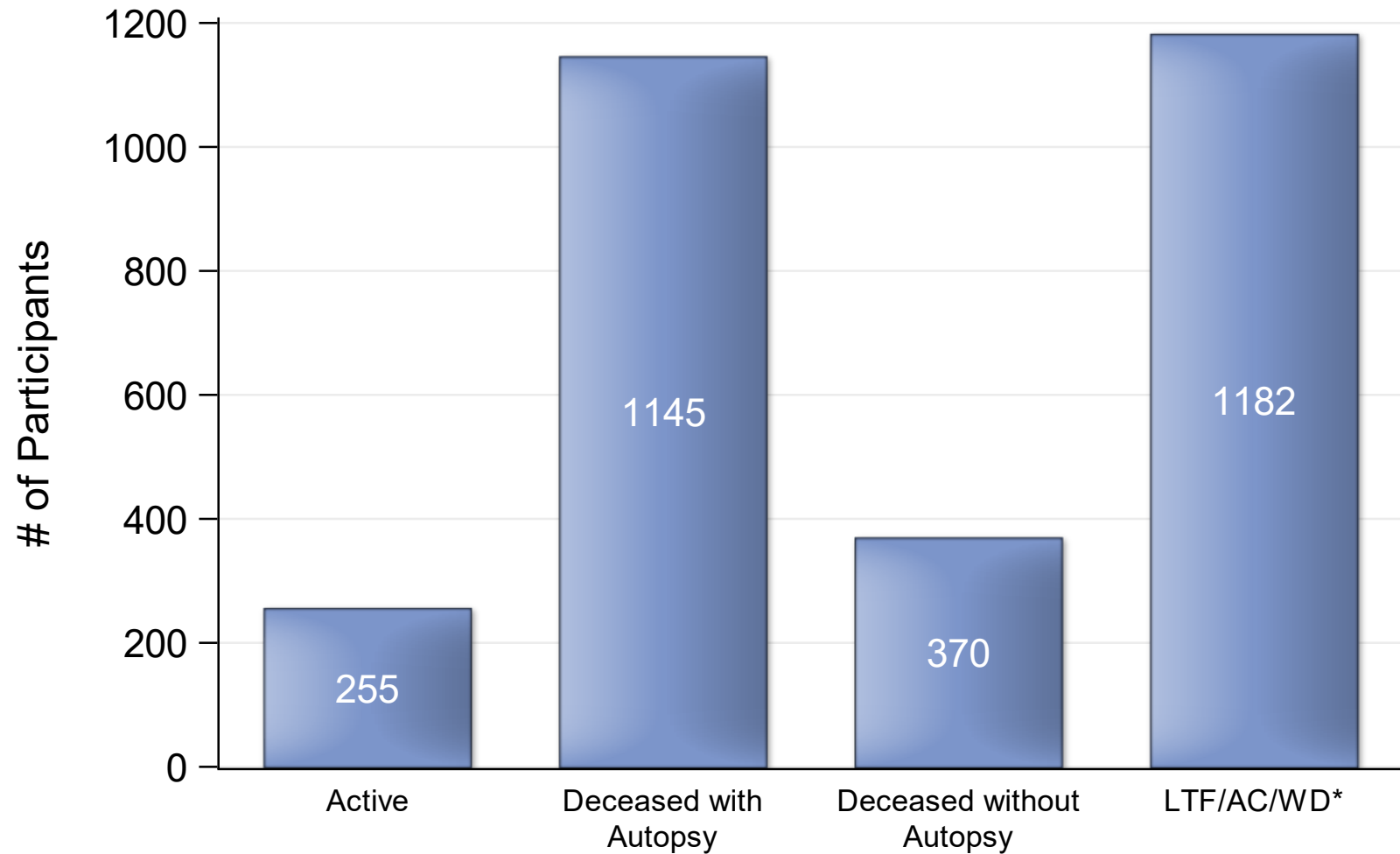
PWH inactive cases are either lost to follow-up/administratively censored/withdrawn (N=1182) or deceased without autopsy (N=370).

PWoH inactive cases are either lost to follow-up/administratively censored/withdrawn (N=44) or deceased without autopsy (N=20).

* 252 autopsy cases included in Cross Sectional Cohort; 381 autopsy cases included in Longitudinal Cohort.

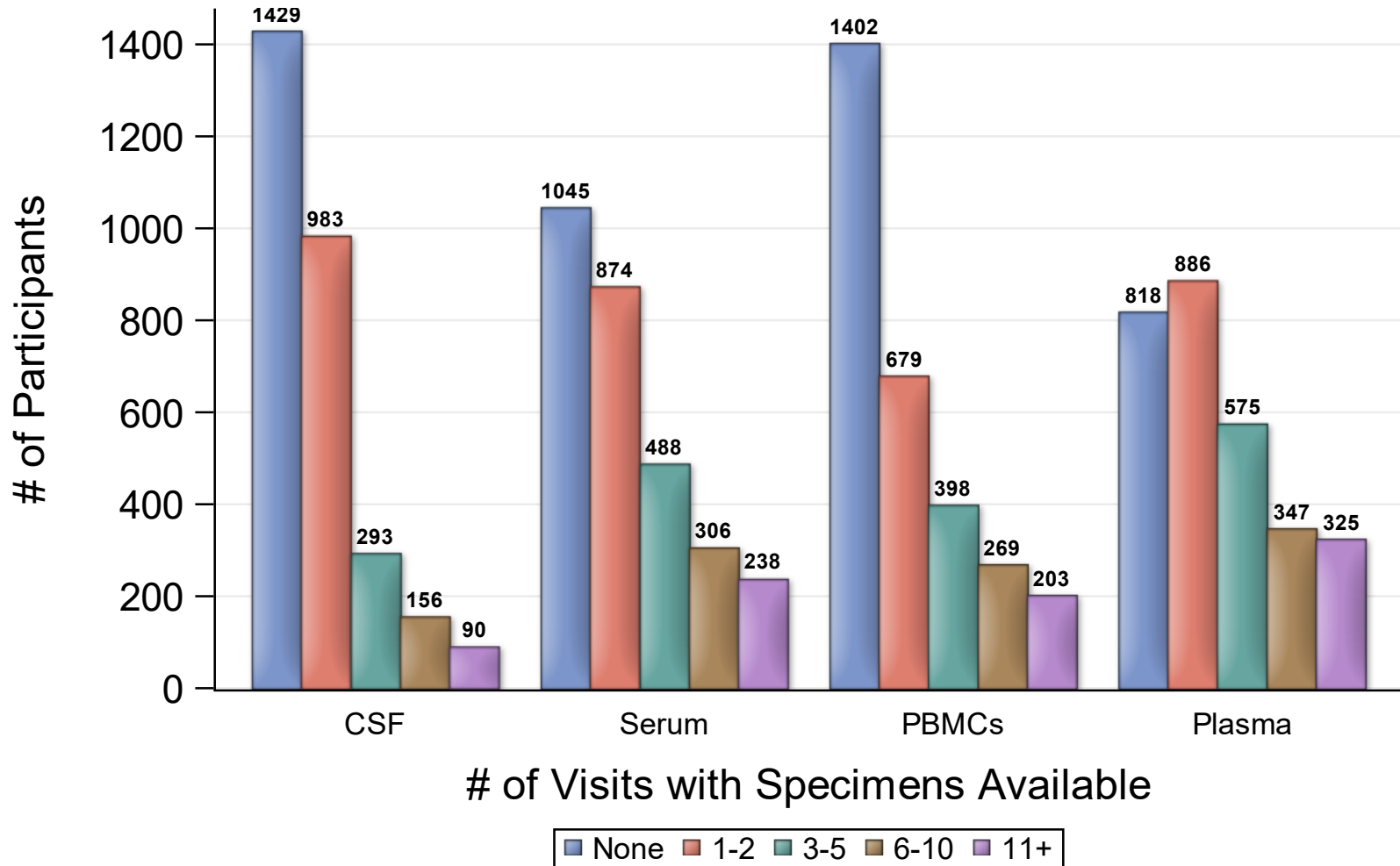
^ 24 autopsy cases included in Cross Sectional Cohort; 13 autopsy cases included in Longitudinal Cohort.

Cohort Status (N=2952)



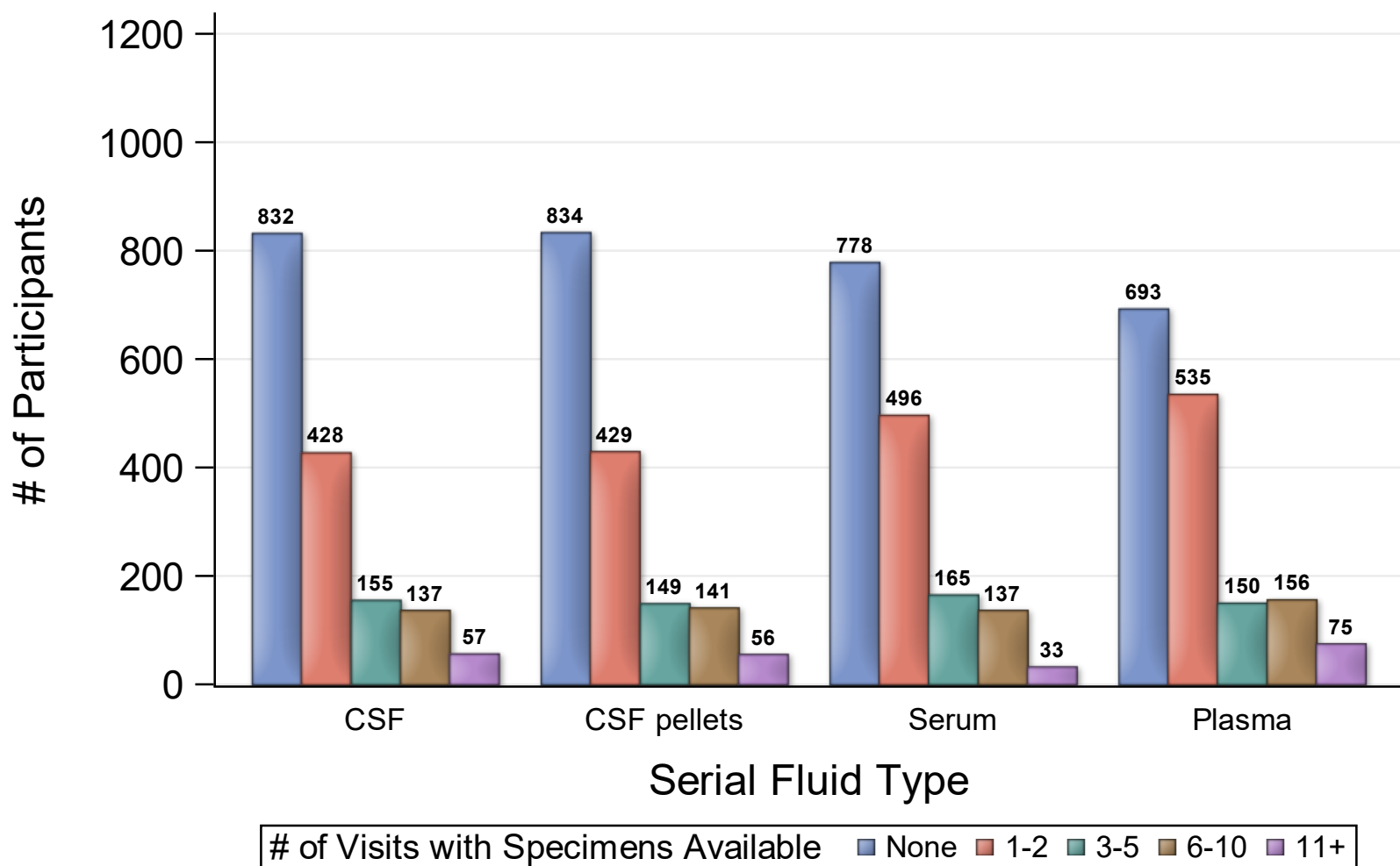
*Group #'s reflect only those lost to follow-up (LTF), administratively censored (AC), or withdrawn (WD) on study

Serial Fluid Specimen Inventory



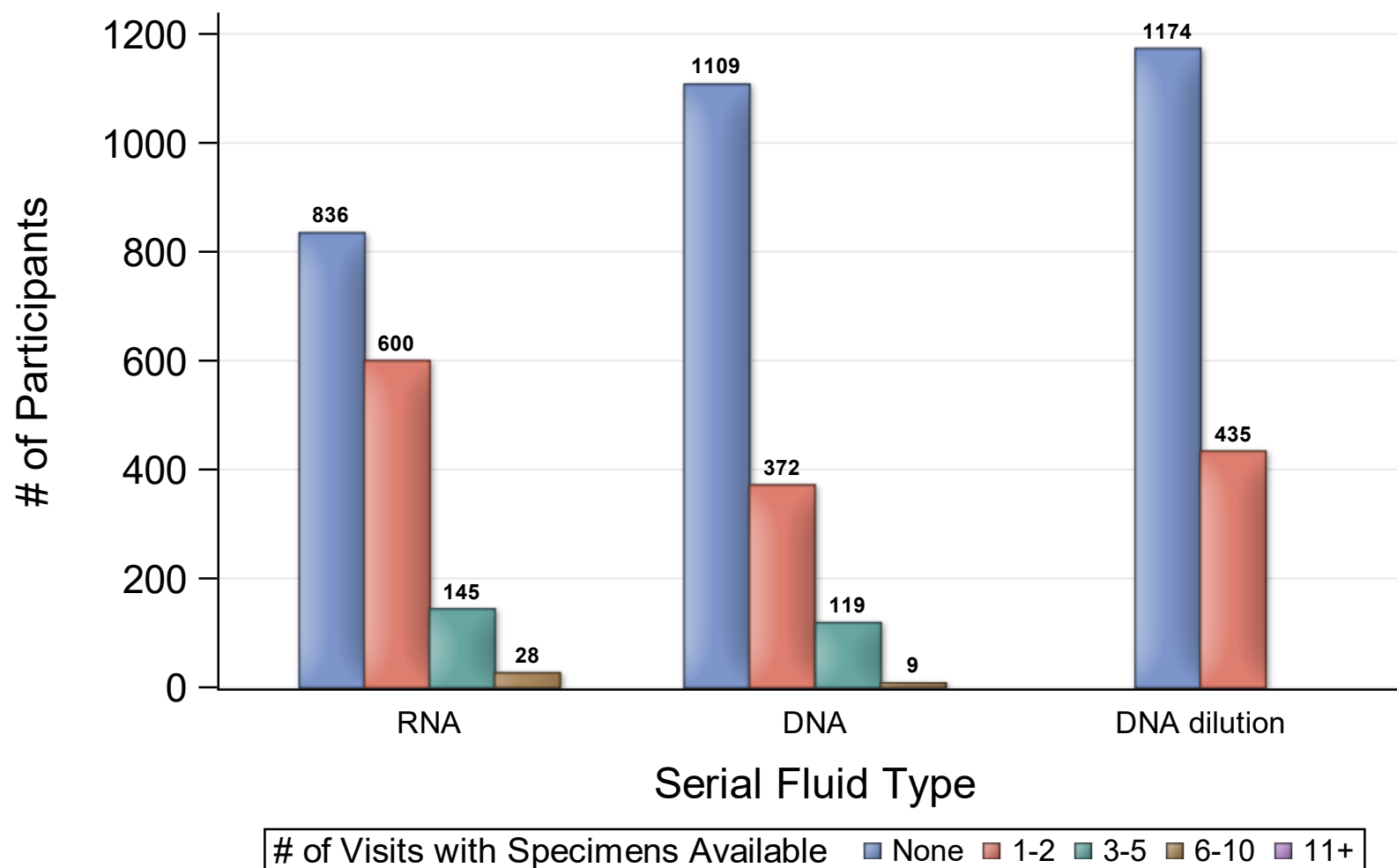
*Each bar represents # of participants. 'None' represents a visit where the specimen type was either not collected or is depleted; Inventory totals include both ante- and post-mortem collections.

CHARTER Serial Fluid Specimen Inventory



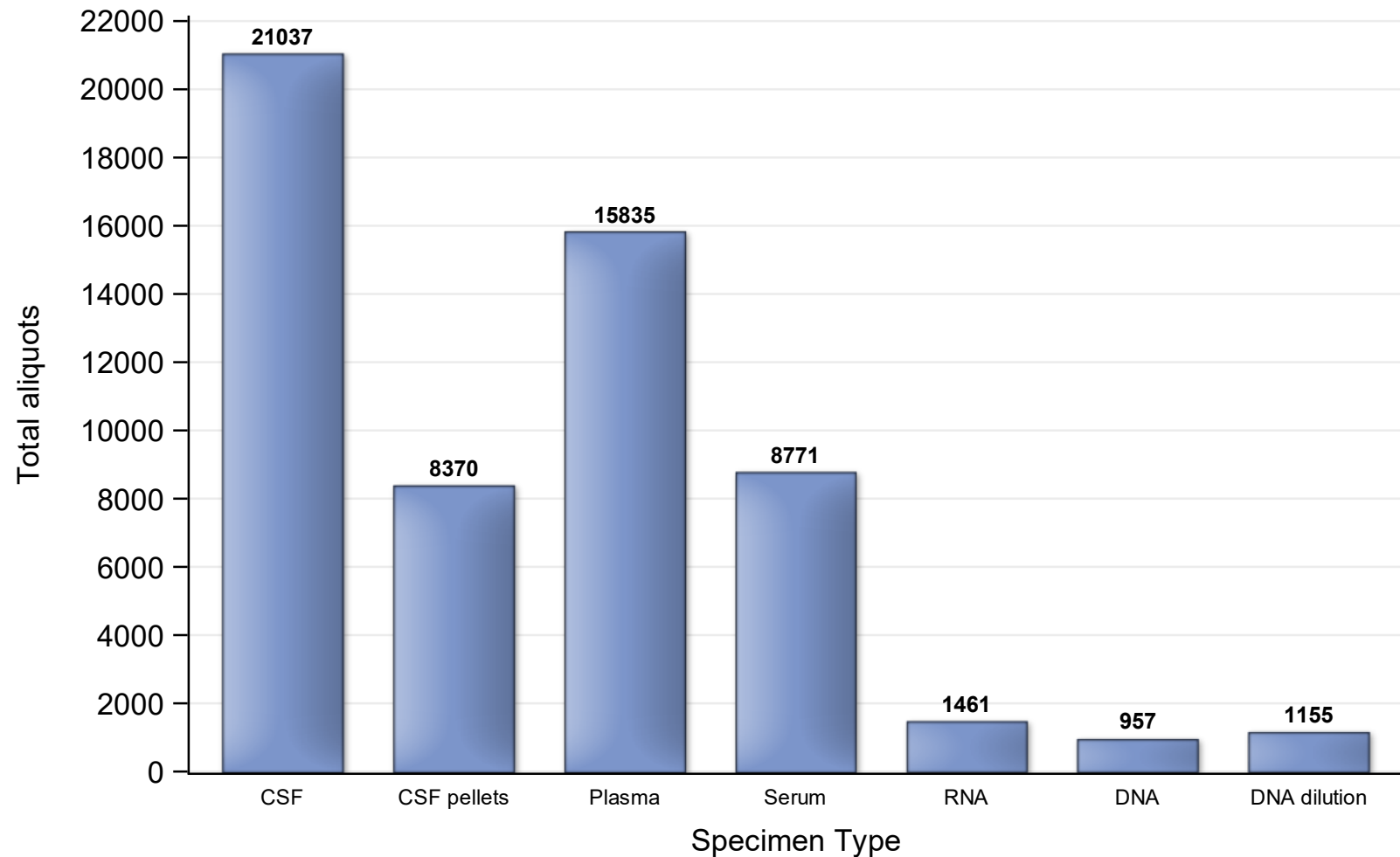
*Each bar represents # of participants. 'None' represents a visit where the specimen type was either not collected or is depleted. CHARTER data presented on slides 10, 11, 12, 17, 18 and 19 only.

CHARTER Serial Fluid Specimen Inventory

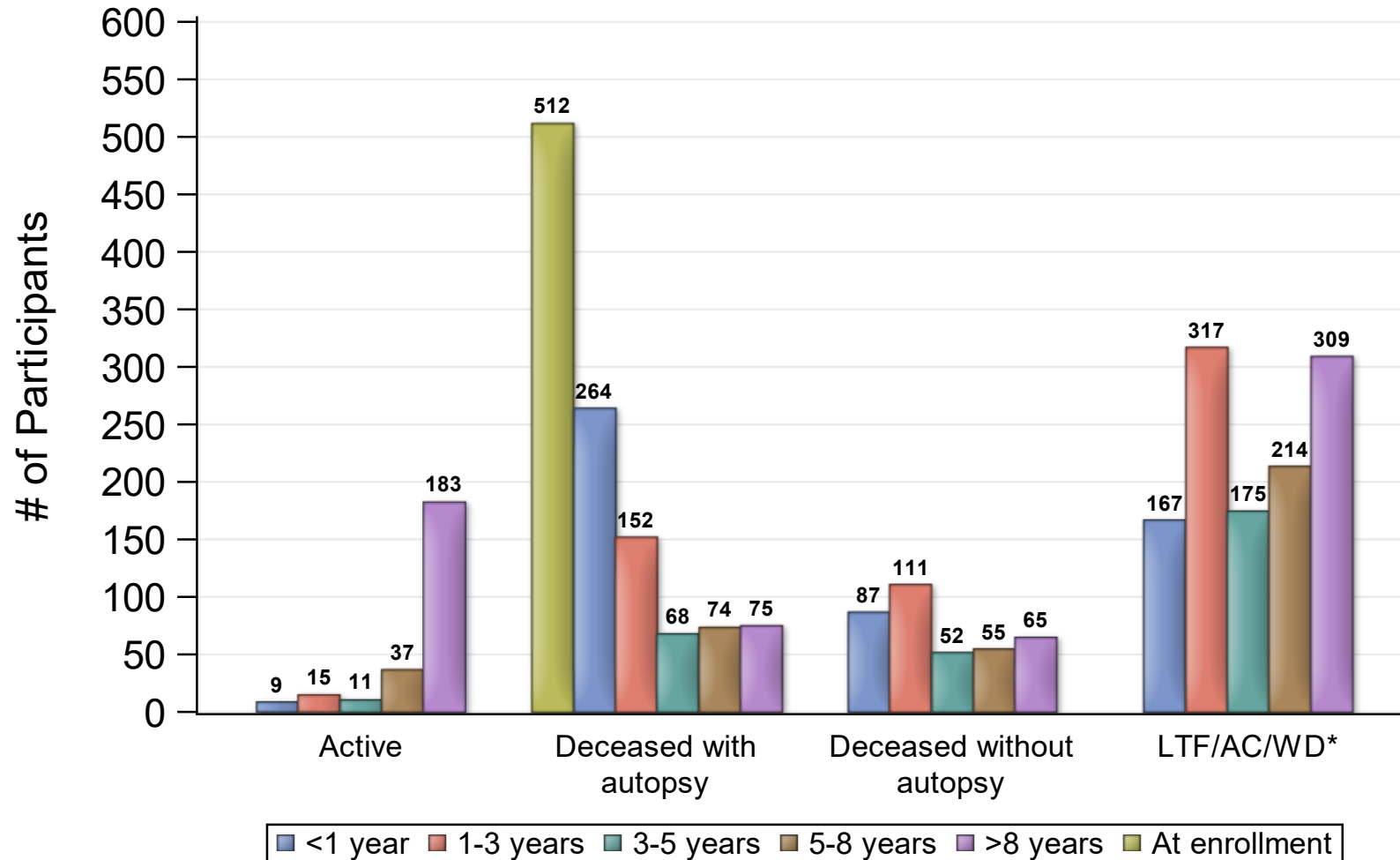


*Each bar represents # of participants. 'None' represents a visit where the specimen type was either not collected or is depleted. CHARTER data presented on slides 10, 11, 12, 17, 18 and 19 only.

Total Available CHARTER Aliquots by Specimen Type

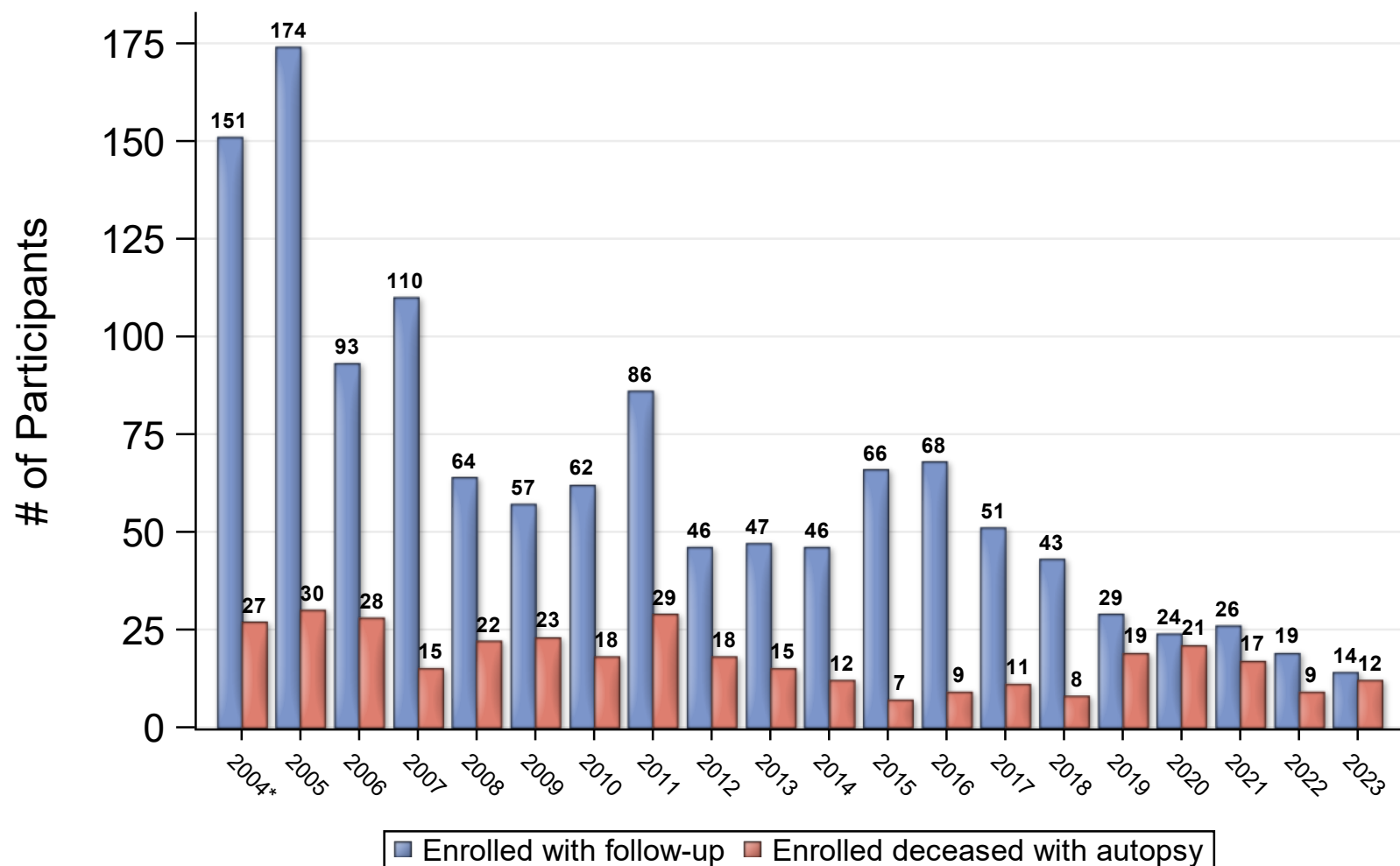


Length of Study Participation



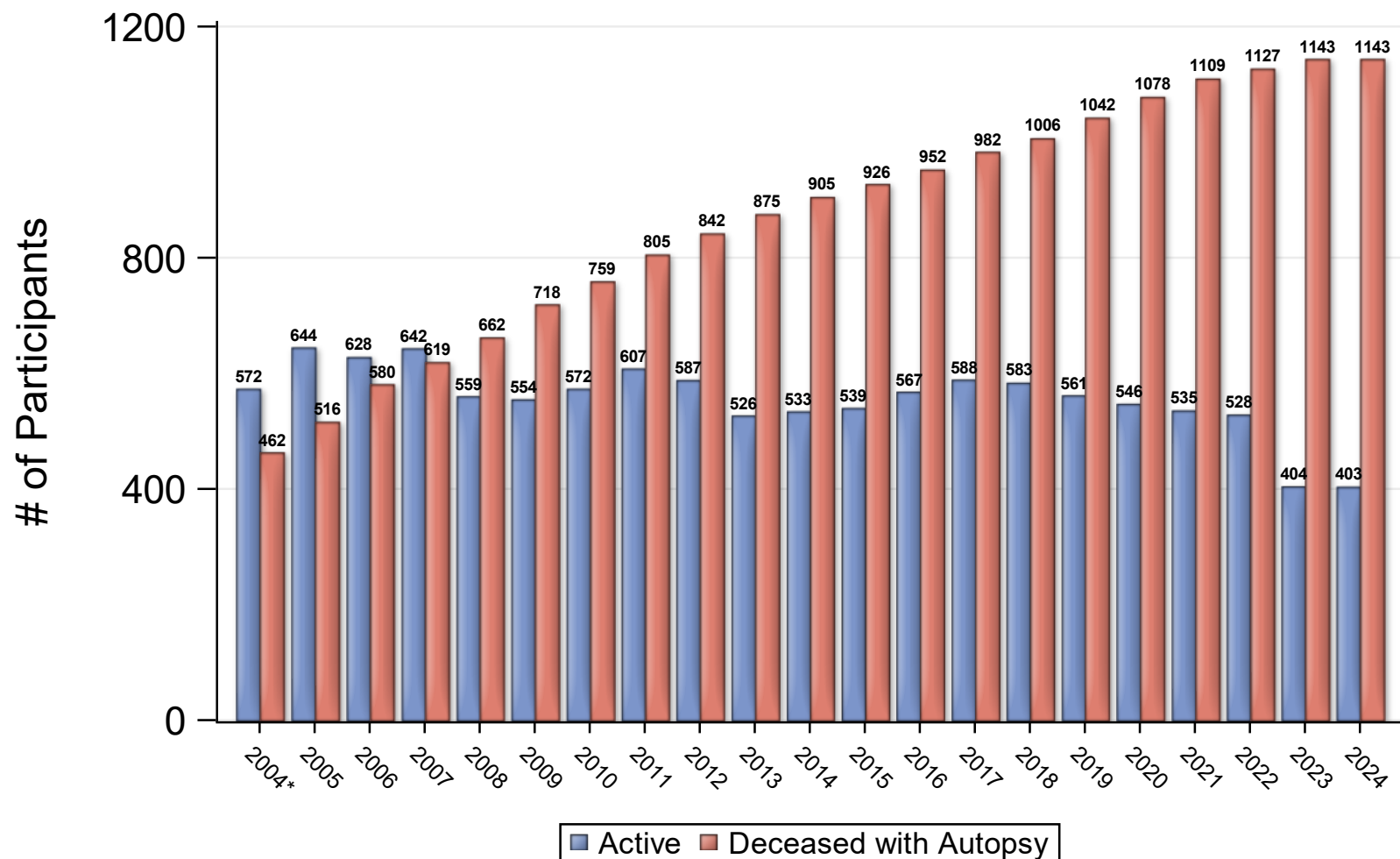
*LTF = Lost to follow-up (LTF); AC = Administratively censored; WD = Withdrawn

Participants Enrolled by Year



*1164 Enrolled with follow-up and 162 Enrolled deceased with autopsy prior to 2004

Cohort Status Over Time



*770 Active and 397 Deceased w/ Autopsy prior to 2004

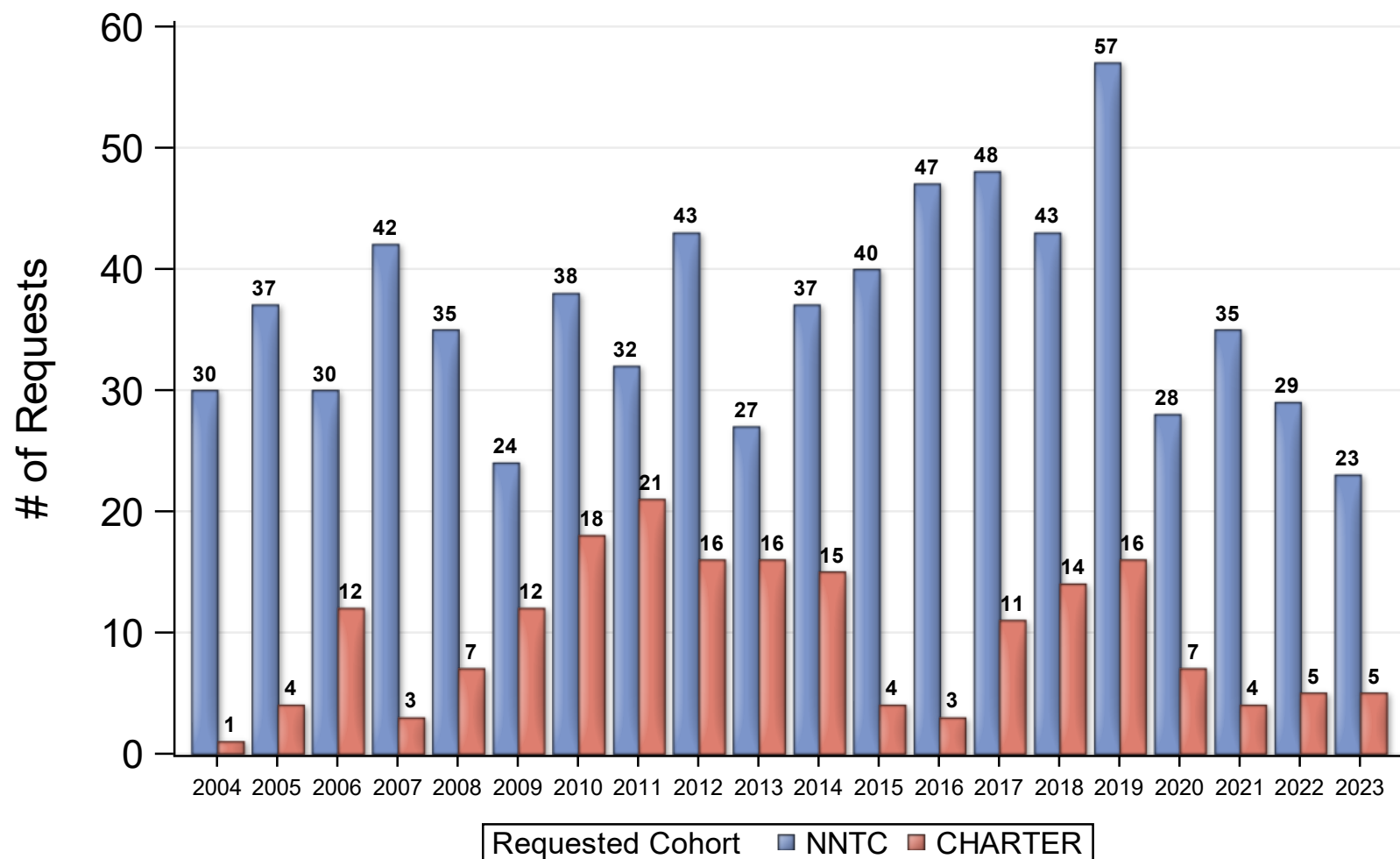
Diagnostic Normality

Diagnosis at Baseline:	Active Cohort (N=255)	Overall Cohort (N=2440)
Normal Neuromedical Diagnosis	94 (37%)	579 (24%)
No abuse/dependence on PRISM/CIDI*	91 (36%)	511 (21%)
Both normal (Neuromedical & PRISM/CIDI)	40 (16%)	141 (6%)

Diagnosis \geq 5 yrs on study:	Active Cohort (N=220)	Overall Cohort (N=1011)
Normal Neuromedical Diagnosis	80 (36%)	306 (30%)
No abuse/dependence on PRISM/CIDI*	80 (36%)	247 (24%)
Both normal (Neuromedical & PRISM/CIDI)	36 (16%)	84 (8%)

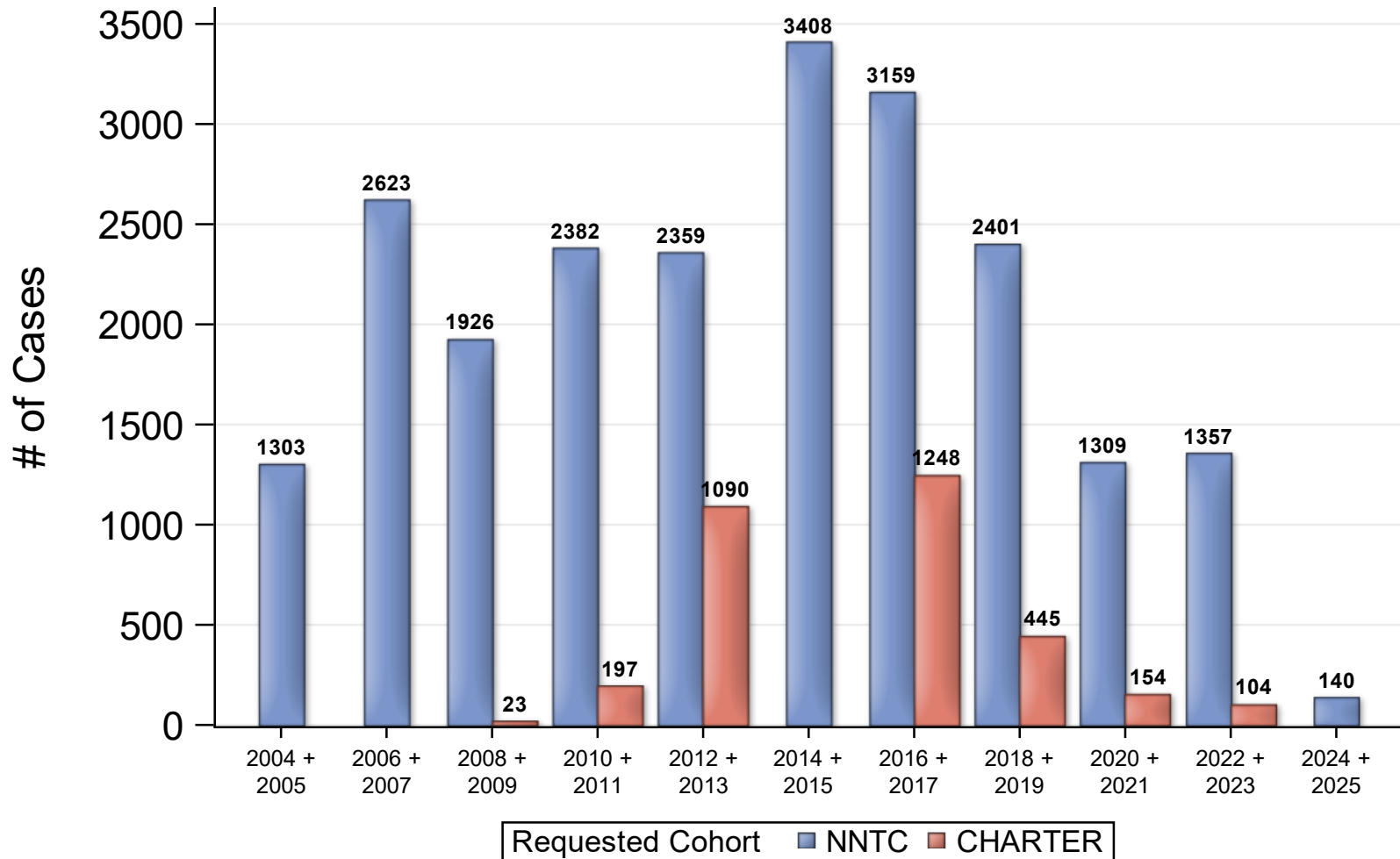
*No abuse/dependence diagnosis reflects those cases with a submitted PRISM/CIDI where all drug categories are reported as 'normal'.

Requests Submitted (N=981)



*96 requests submitted prior to 2004. Resource requests include consortium-wide requests and local requests for biospecimens, as well as requests for data and Letters of Support for grant submissions.

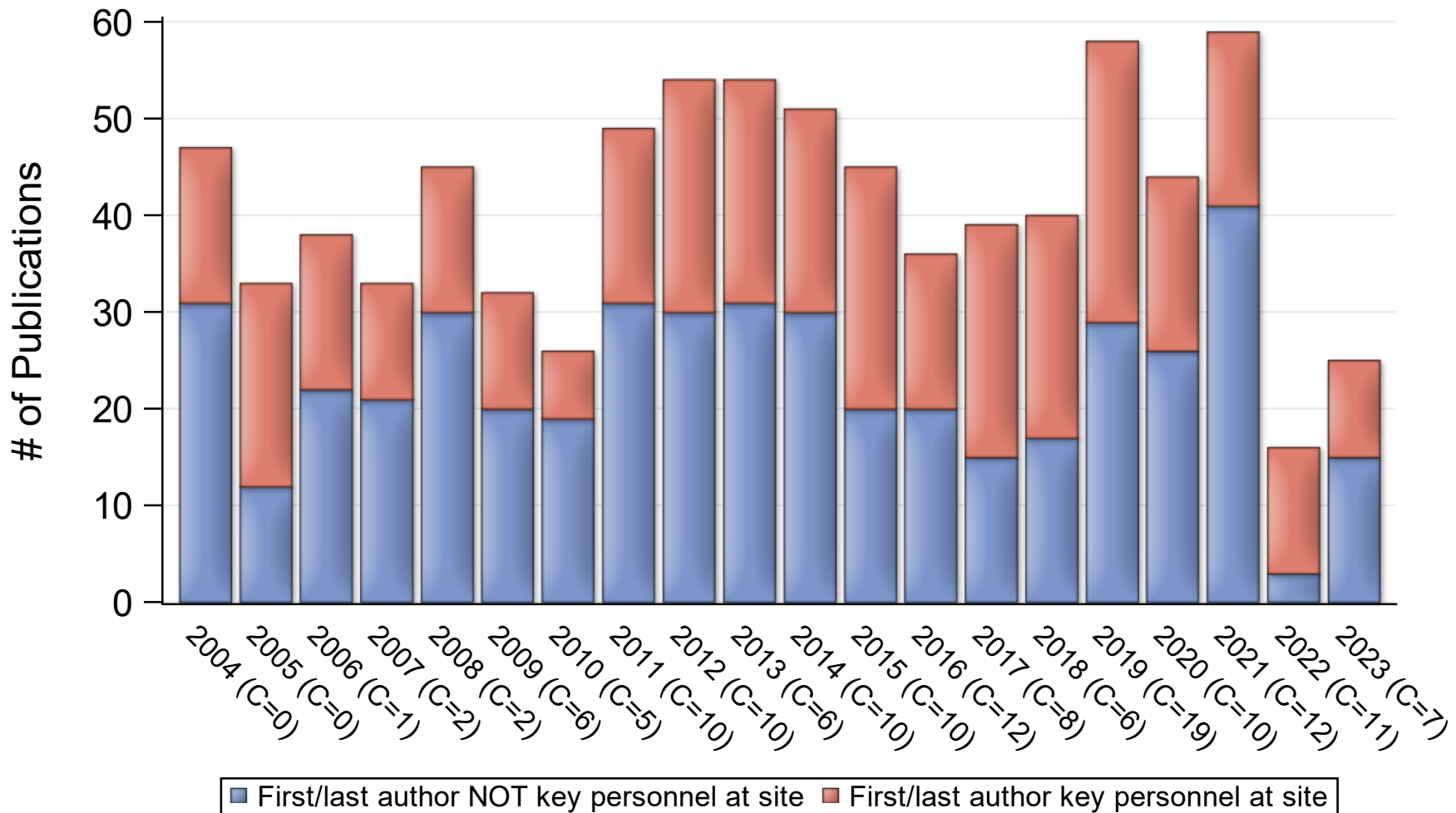
Cases Shipped (N=27251)



*1623 cases shipped prior to 2004. More than one specimen may be shipped per case.

Information limited on CHARTER shipments. CHARTER data presented on slides 10, 11, 12, 17, 18 and 19 only.

Total Publications* (Total N=798; CHARTER N=147)



*74 publications prior to 2004.

Total N includes 147 CHARTER (C=) publications. Total does not include 12 In Prep/Submitted/In Press, 279 Meeting Presentations/Abstracts, 8 Dissertations/Theses, 33 Books/Book Chapters, 8 Student Awards, or 24 Miscellaneous/Grants

CHARTER data presented on slides 10, 11, 12, 17, 18 and 19 only.

Test Results

<u>Result</u>	<u>N</u>	<u>%</u>		<u>N</u>	<u>%</u>
Negative	301	86	CDC PCR Test (FDA Approved)	70	20
Positive	49	14	DiaSorin Molecular PCR Test (FDA Approved)	33	9
Unique participants tested positive	40	29*	ABBOT SARS-COV-2 IGG/IGM	28	8
Nasopharyngeal swab	111	32	COVID-19 IGM/IGG RAPID TE	28	8
Nasopharynx	43	12	Roche COBAS 6800 System	25	7
Nasal swab	32	9	Other	21	6
Anterior Nares	31	9	Agena MassARRAY	20	6
Blood	8	2	Lumria Dx	10	3
Pharyngeal swab	1	0	Cepheid GeneXpert	9	3
Unknown	124	35	ID NOW Assay	8	2
			Panther	8	2
			COV-2 NAAT	4	1
			SARS-COV-2 NAAT	4	1
			DiaSorin IgG test	3	1
			CDC COVID-19 PCR TEST (FD	3	1
			COVID-19 IgM/IgG Rapid Test	1	0
			DIASORIN COVID-19 IGG TES	1	0
			IGM/IGG RAPID TEST	1	0
			MOLECULAR COVID-19 PCR TE	1	0
			NASAL SWAB	1	0
			RAPID ID NOW COVID-19 ASS	1	0
			RAPID TEST	1	0
			SARS COV-2-RAPID ID NOW	1	0
			SARS-COV-2 RAPID ID NOW	1	0
			Unknown	67	19

*Of unique participants tested.

Specimen collections

Type:	# cases*
CNS tissue	9
Systemic tissue	9
Pre-mortem fluids	37
Post-mortem fluids	5

*Indicates collection of at least one specimen type in respective category:

CNS: fixed/frozen brain, spinal cord, trigeminal and dorsal root ganglia.

Systemic: Pituitary gland, peripheral nerve, lymph node, liver, spleen, adipose tissue, bone marrow, muscle, hair, heart, thymus, kidney, lung, eye, bowel, and testes.

Pre-mortem fluids: plasma, serum, PBMC, CSF, and urine.

Post-mortem fluids: plasma, cardiac aspirate, CSF, serum, urine, and ascites fluid.

Cross Sectional Cohort Overview

Baseline Demographics

<u>N</u>	<u>2440</u>
<u>Age</u>	
Mean	46.5
SD	11
25th Percentile	39
Median	45
75th Percentile	53

Baseline Demographics cont.

	<u>N</u>	<u>%</u>
<u>Gender</u>		
Male	1986	81
Female	453	19
<u>Ethnicity</u>		
Hispanic origin	657	27
<u>Race</u>		
White	1369	56
Black	803	33
Other	267	11

Baseline Demographics cont.

	<u>N</u>	<u>%</u>
<u>Furthest Education</u>		
8th grade or less	238	11
Some High School	467	21
High School Graduate	504	22
Some College/Associate's Degree	632	28
College Graduate	249	11
Advanced Degree work	174	8

Baseline HIV Characteristics

	<u>N</u>	<u>%</u>
<u>HIV risk</u>		
IV drug use	594	24
Male to male sex	1152	47
Heterosexual sex	548	22
Other	145	6
ARV med use	2267	93

Baseline HIV Characteristics cont.

CD4 Count (N=2271)

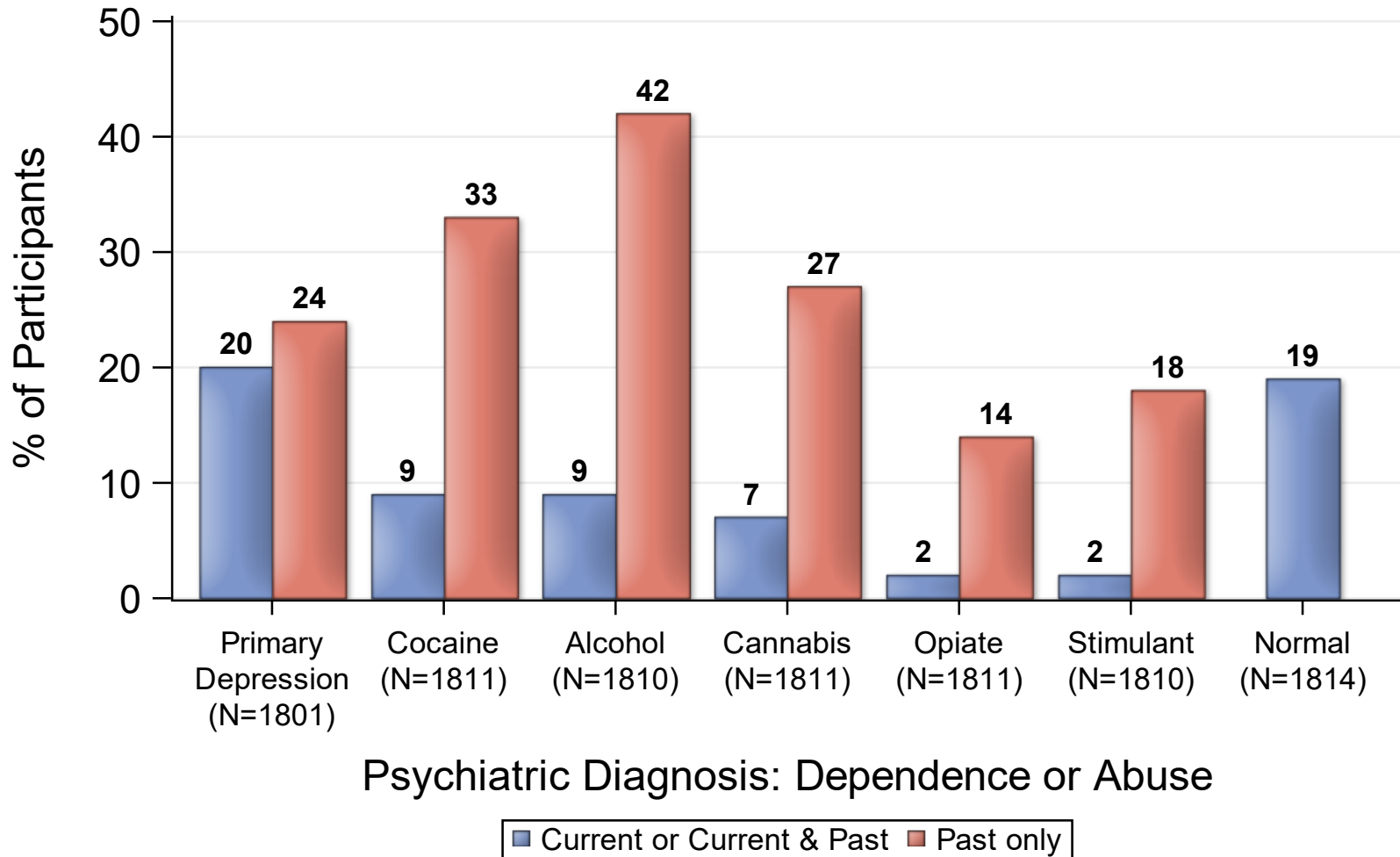
25th Percentile	51
Median	170
75th Percentile	399

Log Plasma Viral Load* (N=1958)

25th Percentile	1.70
Median	2.67
75th Percentile	4.56

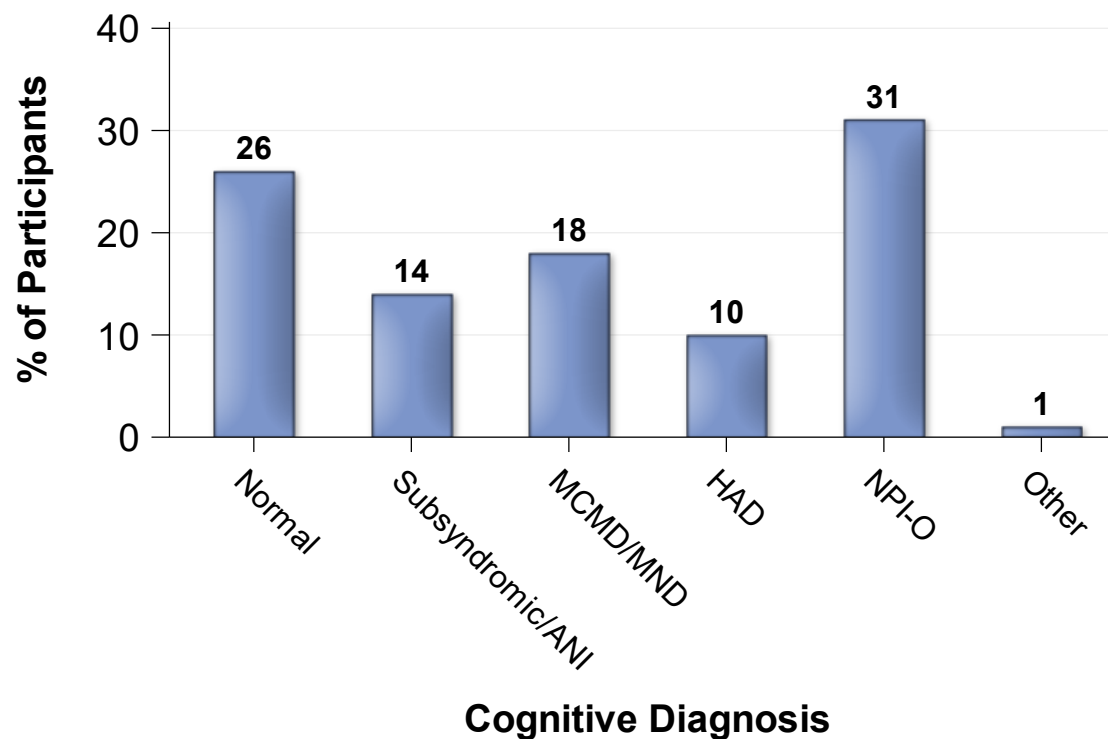
*Among those with known ARV medication status. 72 participants had detectable VL values of 0 where a viral log could not otherwise be calculated.

Baseline Psychiatric Diagnoses



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

Baseline Cognitive Diagnosis (N=2262*)



ANI = Asymptomatic Neurocognitive Impairment

MCMD = Minor Cognitive Motor Disorder

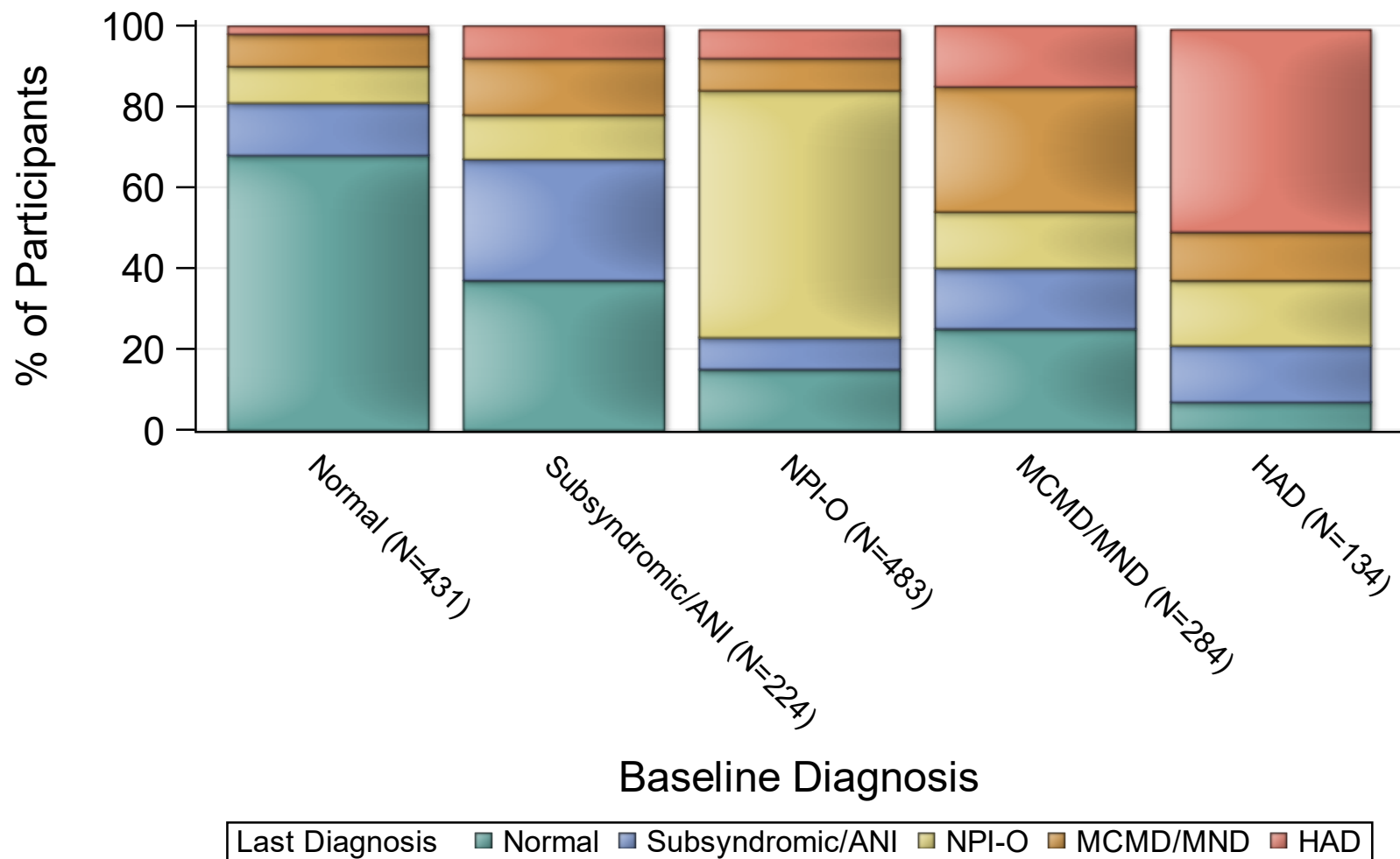
MND = Minor Neurocognitive Disorder

HAD = HIV-Associated Dementia

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

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

Change in Cognitive Diagnosis



Baseline Neurologic Diagnoses

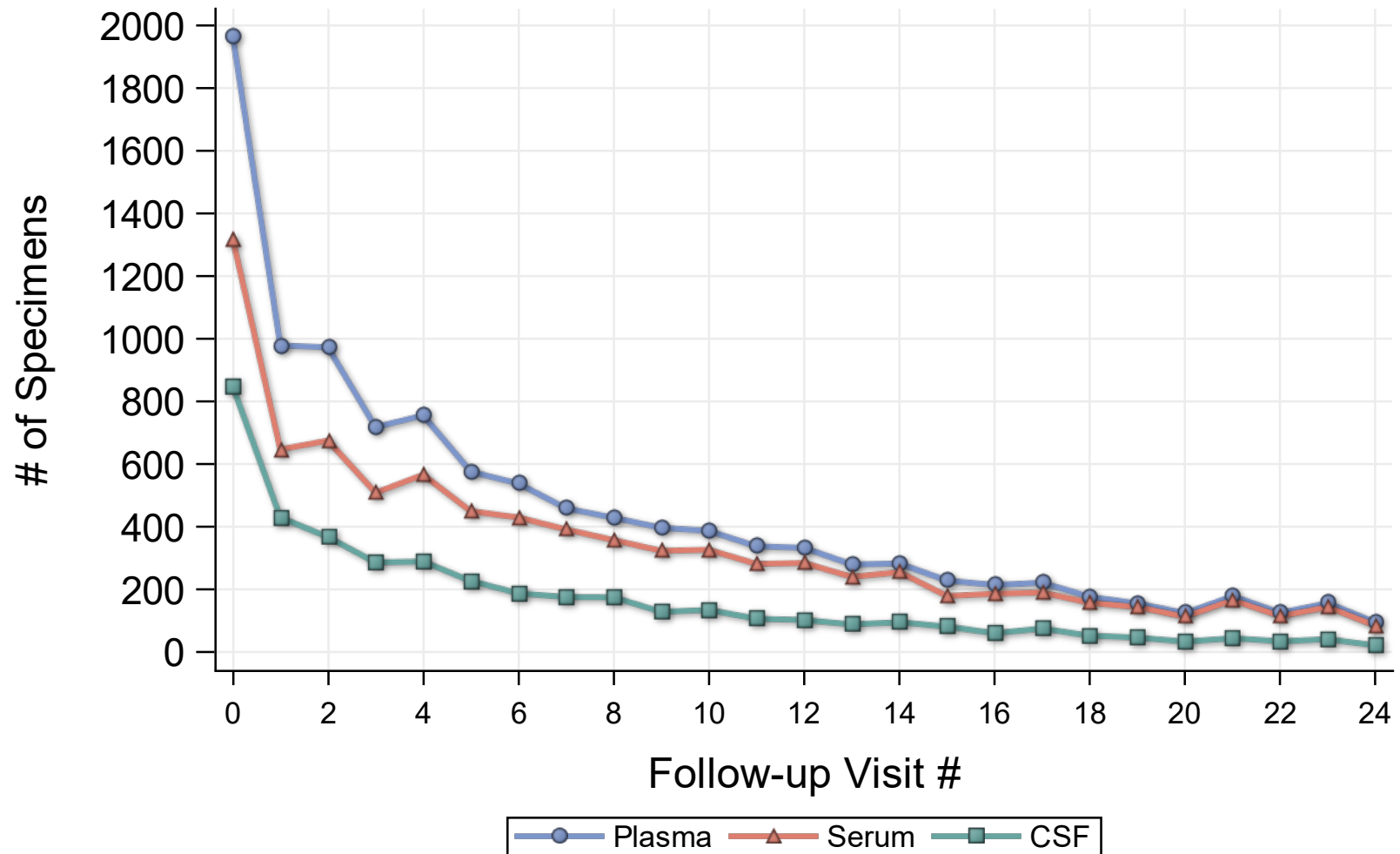
Clinical Myelopathy (N=2250)

	<u>N</u>	<u>%</u>
HIV associated	166	7
Other	30	1
None	2054	91

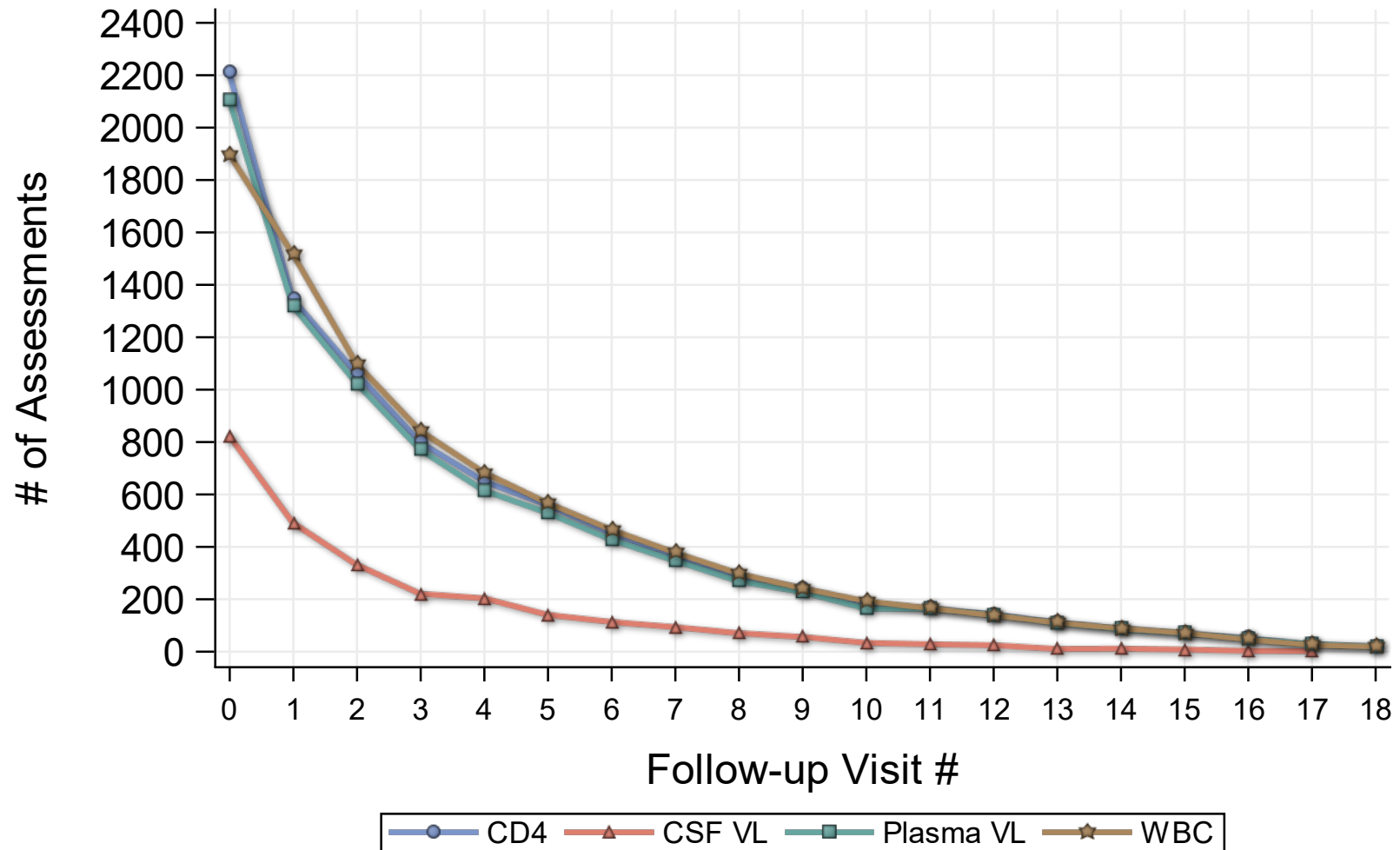
Neuropathy (N=2117)

HIV associated DSP	704	33
Nucleoside associated	11	1
HIV/nucleoside	210	10
None	1192	56

Number of Available Fluid Collections, By Visit



Number of Assessments Completed, By Visit



Participants Reporting Concomitant Medications

Medication	# of Pts (N=2001)	%
Central Nervous System Agents	1773	88.6
Anti-infective Agents	1560	78
Gastrointestinal Drugs	1227	61.3
Cardiovascular Drugs	1145	57.2
Vitamins	1110	55.5
Hormones and Synthetic Substitutes	947	47.3
Autonomic Drugs	766	38.3
Electrolytic, Caloric, and Water Balance	751	37.5
Antihistamine Drugs	587	29.3
Blood Formation, Coagulation, and Thrombosis Agents	546	27.3
Skin and Mucous Membrane Agents	546	27.3
Miscellaneous Therapeutic Agents	517	25.8
Eye, Ear, Nose, and Throat (EENT) Preparations	382	19.1
Antineoplastic Agents	239	11.9
Respiratory Tract Agents	196	9.8
Local Anesthetics	140	7
No medication use reported on at least one occasion	133	6.6
Smooth Muscle Relaxants	102	5.1
Pharmaceutical Aids	72	3.6
Serums, Toxoids, and Vaccines	35	1.7

Ancillary Lab Measurements

Ancillary Lab	Total # records overall	% cohort with at least 1 measure	Total # cases with baseline measure	% cohort with baseline & one other measure
<u>Miscellaneous Hematology</u>				
Red blood cells	8220	40	855	26
Mean Corpuscular Hemoglobin (MCH)	8191	39	852	26
Mean Corpuscular Volume (MCV)	16227	61	1363	43
Mean Corpuscular Hemoglobin Concentration (MCHC)	8155	38	849	26
Blood Red cell Distribution Width (RDW)	6407	27	400	12
Blood Rapid Plasma Reagin (RPR)	3047	37	490	10
Blood Neutrophil Percent	13864	47	889	28
Blood Lymphocyte Percent	16024	60	1343	42
Blood Monocyte Percent	15716	60	1338	42
Blood Eosinophil Percent	15625	59	1321	41
Blood Basophil Percent	15357	59	1273	39
Blood Mean Platelet Volume (MPV)	4659	19	256	8
Blood CD3 Percent	3060	25	554	17
Blood CD3 Absolute	1317	14	134	4
<u>Miscellaneous Serology & virology</u>				
Blood Hepatitis B Surface Antigens	1191	25	467	6
Blood Hepatitis B Surface Antibodies	1007	21	394	6
Blood Hepatitis B Core Antibodies	941	21	392	5
Blood Hepatitis B Viral Load	119	2	15	0
Blood Hepatitis C Antibodies (HCV)	3502	67	1057	15
Blood Hepatitis C Viral Load	654	14	151	1
<u>Miscellaneous Serology & virology</u>				
COVID-19 Test Results (qualitative)	318	5	14	0

Ancillary Lab Measurements cont.

Ancillary Lab	Total # records overall	% cohort with at least 1 measure	Total # cases with baseline measure	% cohort with baseline & one other measure
Miscellaneous Blood Chemistries				
Glucose	15220	63	1438	44
Hemoglobin A1c	3983	32	307	8
Sodium	14897	65	1450	44
Calcium	14358	61	1366	42
Chloride	14160	59	1268	39
Potassium	14511	60	1315	40
Total Protein	12584	59	1260	39
Alkaline Phosphatase	12843	58	1298	40
AST	12694	57	1232	38
ALT	12589	56	1180	36
Total Bilirubin	14092	69	1477	45
Direct Bilirubin	3200	25	461	13
Creatinine	17307	75	1607	48
BUN	14852	64	1440	43
CO2	13765	56	1186	35
PT	4608	25	500	15
INR	4567	25	479	15
Urate	1276	12	239	6
Triglycerides	7199	50	802	23
Cholesterol	7231	50	809	23
LDL	5638	38	503	15
HDL	6106	42	562	16
Phosphorus	3502	23	451	13
LDH	1851	17	329	9
TSH	596	10	120	2
T4	44	1	9	0

Ancillary Lab Measurements cont.

Ancillary Lab	Total # records overall	% cohort with at least 1 measure	Total # cases with baseline measure	% cohort with baseline & one other measure
<u>Miscellaneous CSF values</u>				
CSF-VDRL Test	824	12	174	4
<u>Miscellaneous Urine values</u>				
Urinalysis: Glucose	4644	26	536	17
Urinalysis: Protein	4692	26	540	17
Urinalysis: pH	4646	26	538	17
Urinalysis: Specific Gravity	4647	26	537	17
Urinalysis: Ketones	4639	26	537	17
Urinalysis: Bilirubin	4636	26	534	17
Urine Toxicology; Methamphetamine	5596	41	898	28
Urinalysis: Red Blood Cells	2202	20	298	8
Urinalysis: White Blood Cells	2209	20	296	8

Comorbidities

Diagnosis	# Pts before Baseline (N=1321)	# Pts at Baseline (N=2440)	# Pts Current* (N=1410)
Viral Hepatitis	587 (44%)	699 (36%)	440 (31%)
Tobacco Smoking	588 (45%)	661 (34%)	392 (28%)
Hypertension	425 (32%)	617 (32%)	598 (42%)
Hyperlipidemia	344 (26%)	463 (24%)	502 (36%)
Non AIDS Defining Cancer	161 (12%)	333 (17%)	338 (24%)
Cardiac Disease	176 (13%)	271 (14%)	283 (20%)
Diabetes	183 (14%)	261 (14%)	258 (18%)
Cerebrovascular Disease	146 (11%)	203 (11%)	197 (14%)
COPD	144 (11%)	199 (10%)	237 (17%)
Chronic Renal Disease	118 (9%)	196 (10%)	213 (15%)
Lipodystrophy	107 (8%)	182 (10%)	139 (10%)
End Stage Liver Disease	48 (4%)	86 (4%)	61 (4%)

*Includes participants where last visit is different from baseline visit.

Active Cohort Overview

Current Demographics

<u>N</u>	<u>255</u>
<u>Age</u>	
Mean	64.8
SD	8.3
25th Percentile	59
Median	64
75th Percentile	71
<u>ARV med use</u>	
N	199
%	78

Baseline Demographics

<u>N</u>	<u>255</u>
<u>Age</u>	
Mean	52.2
SD	11.3
25th Percentile	43
Median	52
75th Percentile	62

Demographics

	<u>N</u>	<u>%</u>
<u>Gender</u>		
Male	169	66
Female	86	34
<u>Ethnicity</u>		
Hispanic origin	72	29
<u>Race</u>		
White	137	54
Black	88	35
Other	30	12

Demographics cont.

	<u>N</u>	<u>%</u>
<u>Furthest Education</u>		
8th grade or less	16	6
Some High School	56	22
High School Graduate	45	18
Some College/Associate's Degree	74	29
College Graduate	33	13
Advanced Degree work	30	12

Baseline HIV Characteristics

	<u>N</u>	<u>%</u>
<u>HIV risk</u>		
IV drug use	52	20
Male to male sex	116	45
Heterosexual sex	77	30
Other	10	4
ARV med use	243	95

Current HIV Characteristics

CD4 Count (N=253)

25th Percentile	351
Median	505
75th Percentile	703

Log Plasma Viral Load* (N=247)

25th Percentile	1.48
Median	1.70
75th Percentile	1.70

Baseline HIV Characteristics

CD4 Count (N=249)

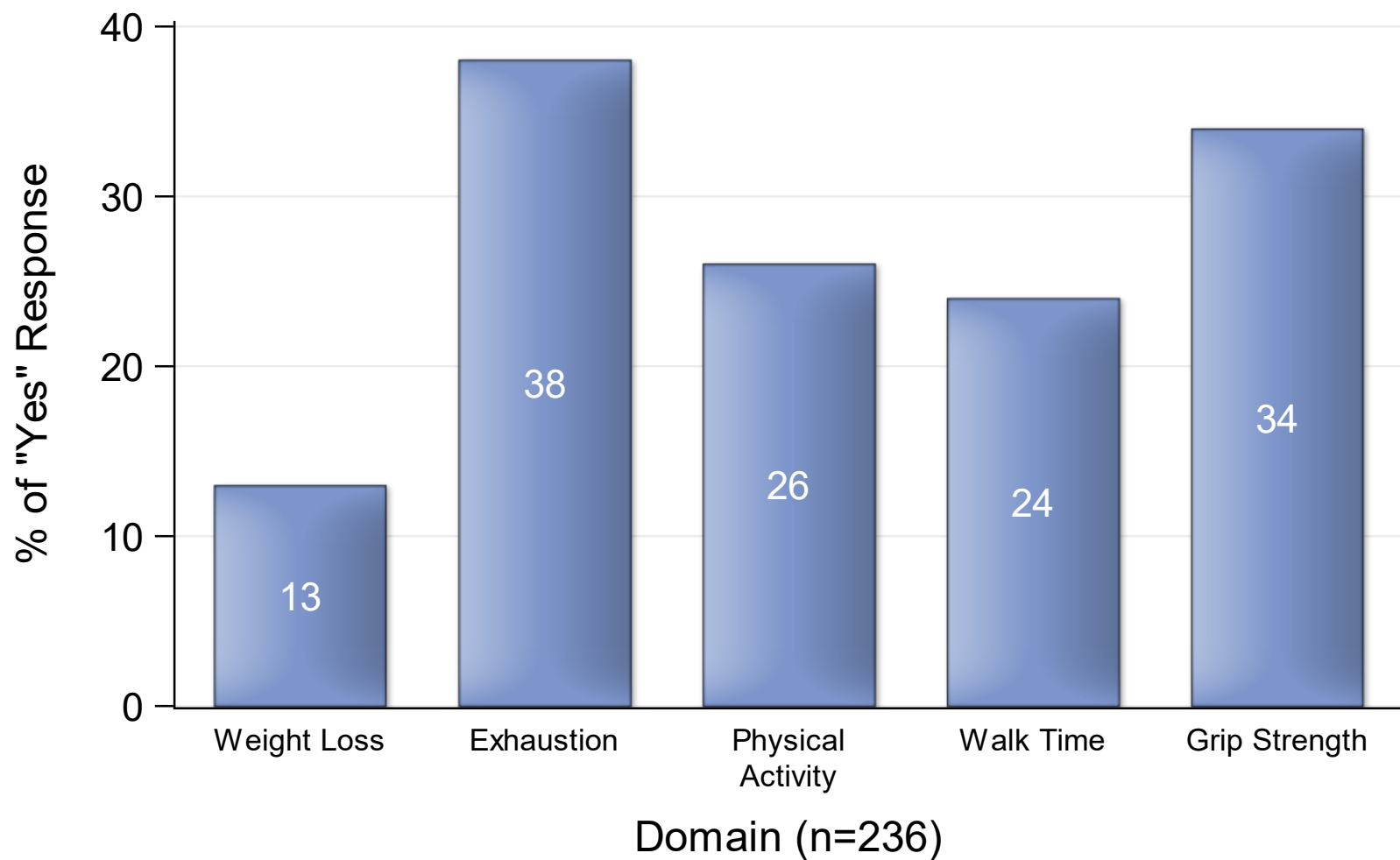
25th Percentile	190
Median	413
75th Percentile	662

Log Plasma Viral Load* (N=211)

25th Percentile	1.70
Median	1.70
75th Percentile	2.80

*Among those with known ARV medication status. 19 participants had detectable VL values of 0 where a viral log could not otherwise be calculated.

Frailty Domain Frequency



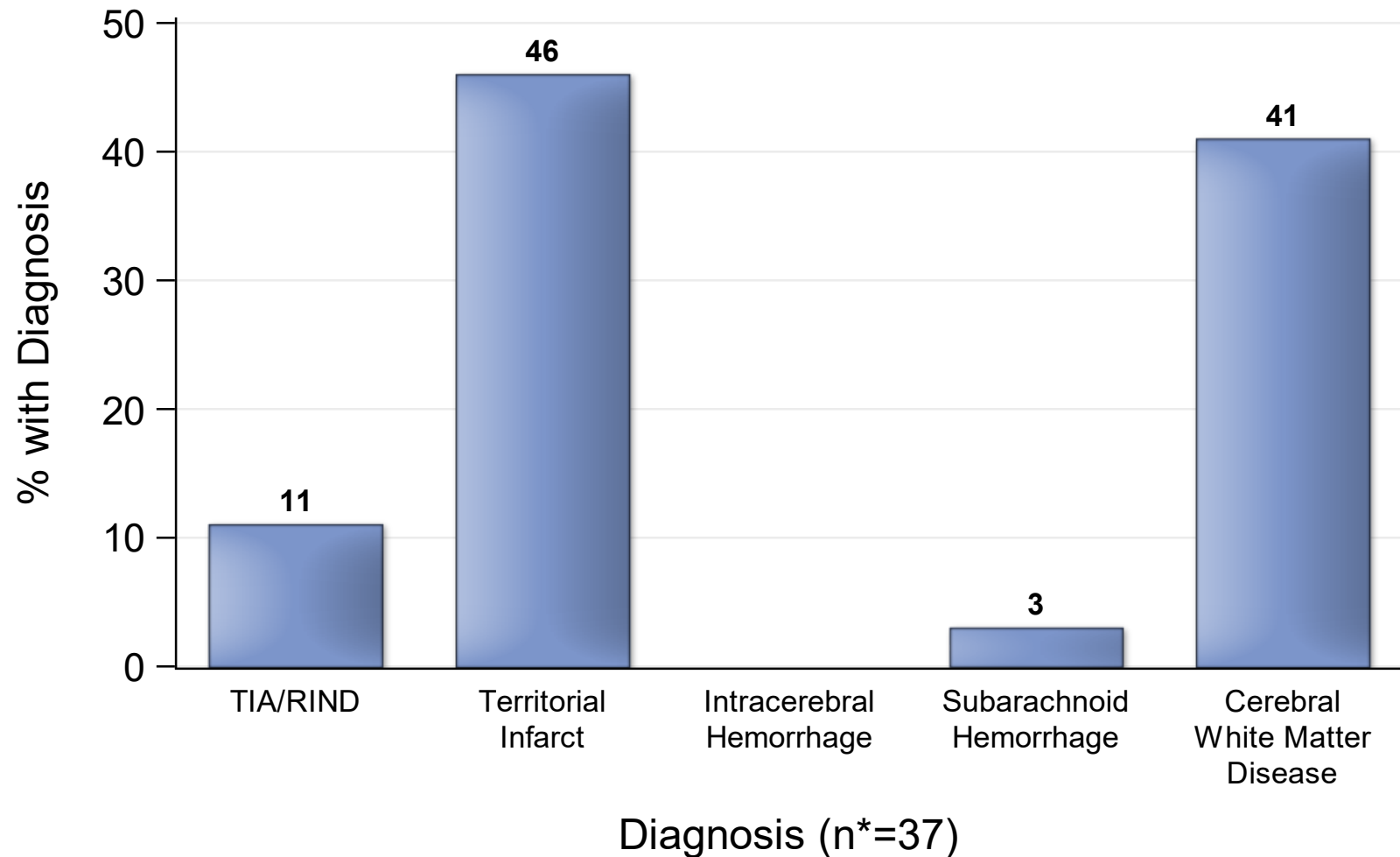
*From the first available visit. Domains with missing responses are categorized as 'no'.

Frailty Demographics

<u>Characteristics:</u>	<u>All Frailty Stages</u>	<u>Not Frail</u>	<u>Pre-frail</u>	<u>Frail</u>
N*	236	61	136	39
<u>Age</u>				
Mean	58.8	58.4	58.9	59.0
Std	8.2	7.7	8.2	9.0
<u>Gender</u>				
Male	156 (66%)	45 (29%)	87 (56%)	24 (15%)
Female	80 (34%)	16 (20%)	49 (61%)	15 (19%)

*Frailty stage from the first available visit. Gender unknown for some recent cases.

Cerebrovascular Diagnosis Frequency



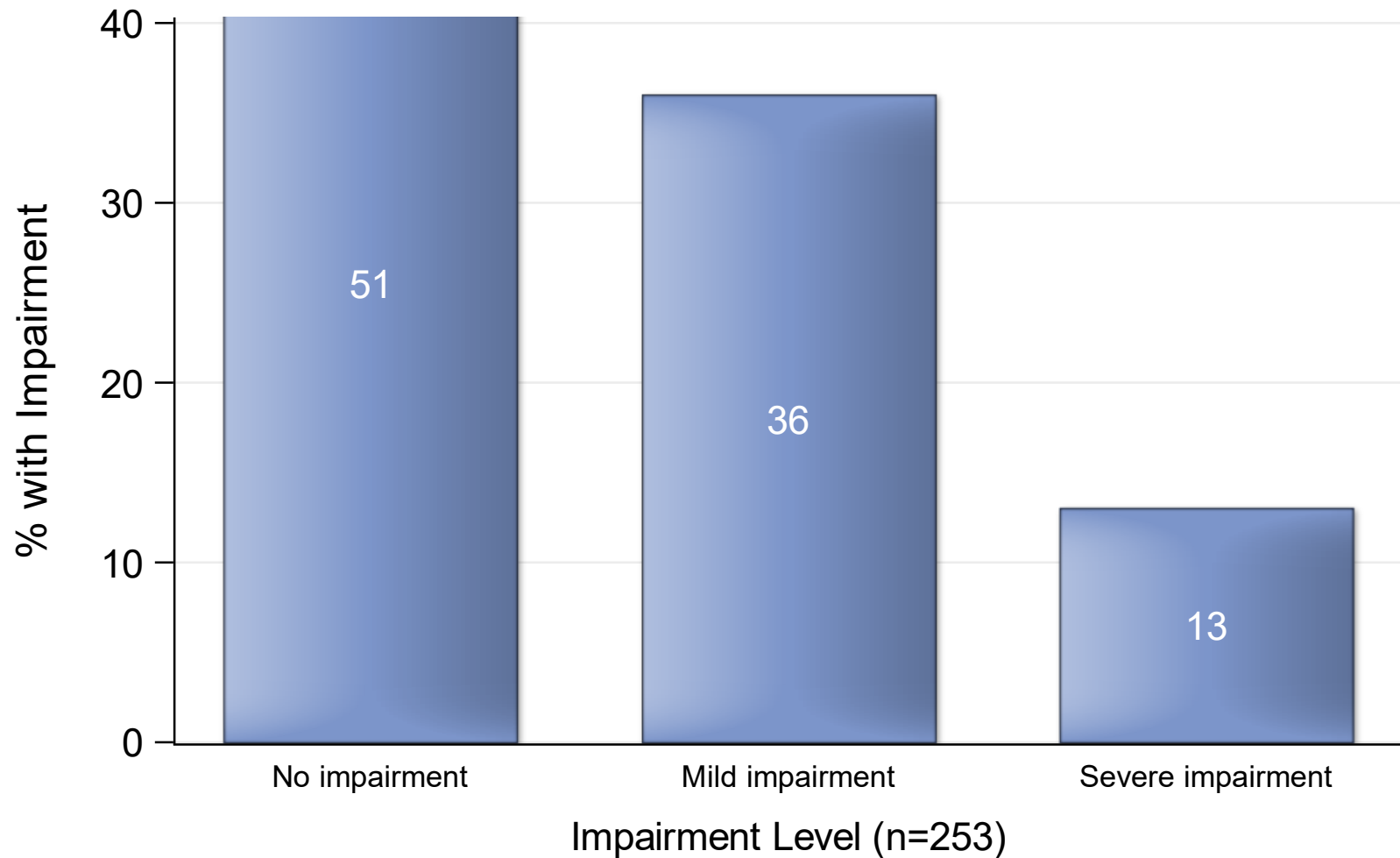
*From the first available visit. 51 participants have an assigned diagnosis at baseline.

Cerebrovascular Demographics

<u>Characteristics:</u>	<u>All Records</u>	<u>Condition not present</u>	<u>Condition present</u>	<u>Unable to definitively diagnose</u>
N*	226	178	37	11
<u>Age</u>				
Mean	57.9	57.3	60.8	56.5
Std	8.7	8.8	7.7	8.7
<u>Gender</u>				
Male	145 (64%)	118 (81%)	20 (14%)	7 (5%)
Female	81 (36%)	60 (74%)	17 (21%)	4 (5%)

*Cerebrovascular disease diagnosis from the first available visit. Gender unknown for some recent cases.

HIV Motor Scale - Impairment Rating

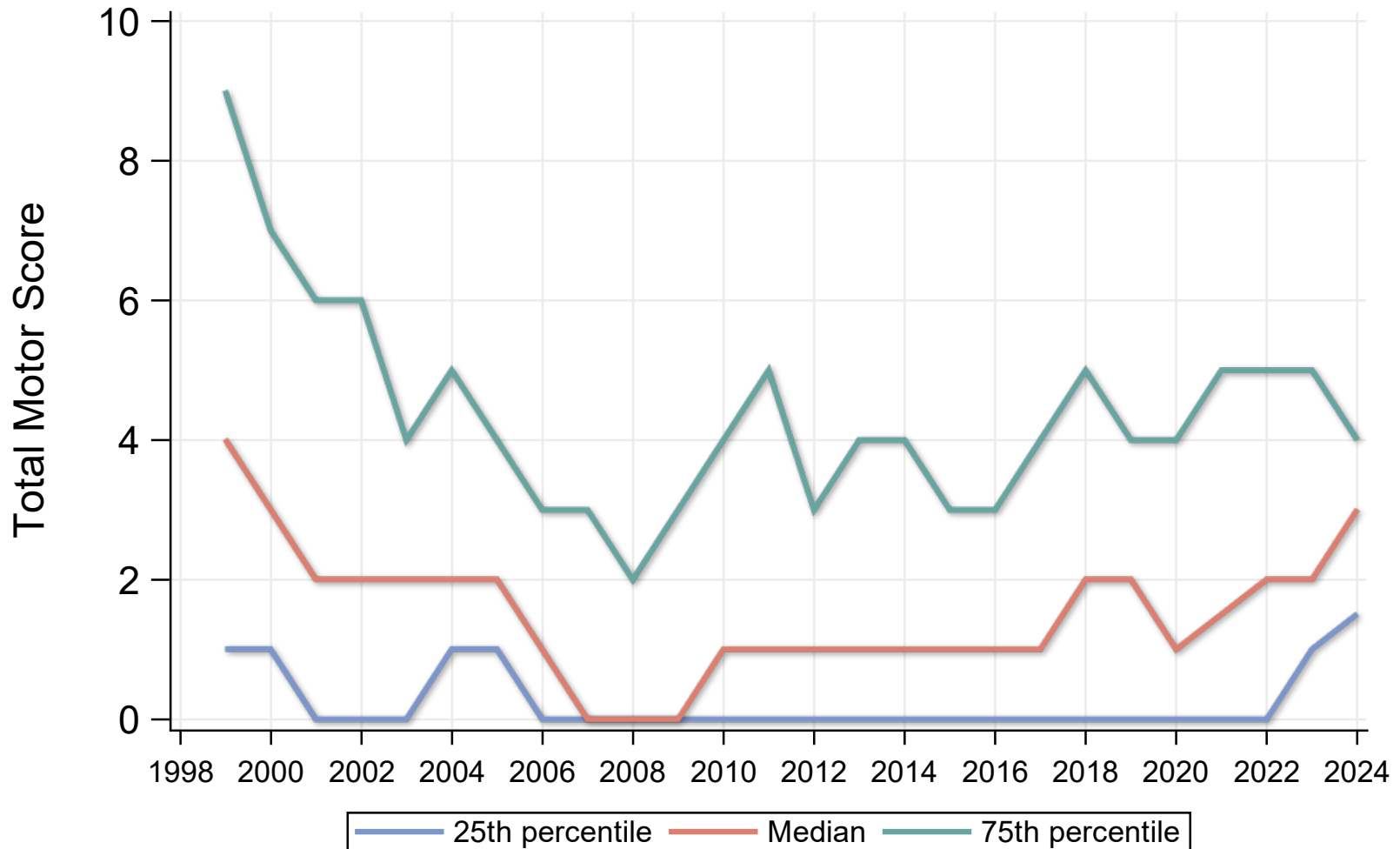


*From the first available visit.

The HIV Motor Scale measures neurological function in the following domains: strength, deep tendon reflexes, motor tone and strength, and coordination and gait.

The Total Motor Score is a continuous measure on a scale of 0-18, with a score of 0 indicating a normal assessment; 1-4 indicating mild impairment; and 5 or more indicating severe impairment.

HIV Motor Scale



The HIV Motor Scale measures neurological function in the following domains: strength, deep tendon reflexes, motor tone and strength, and coordination and gait.

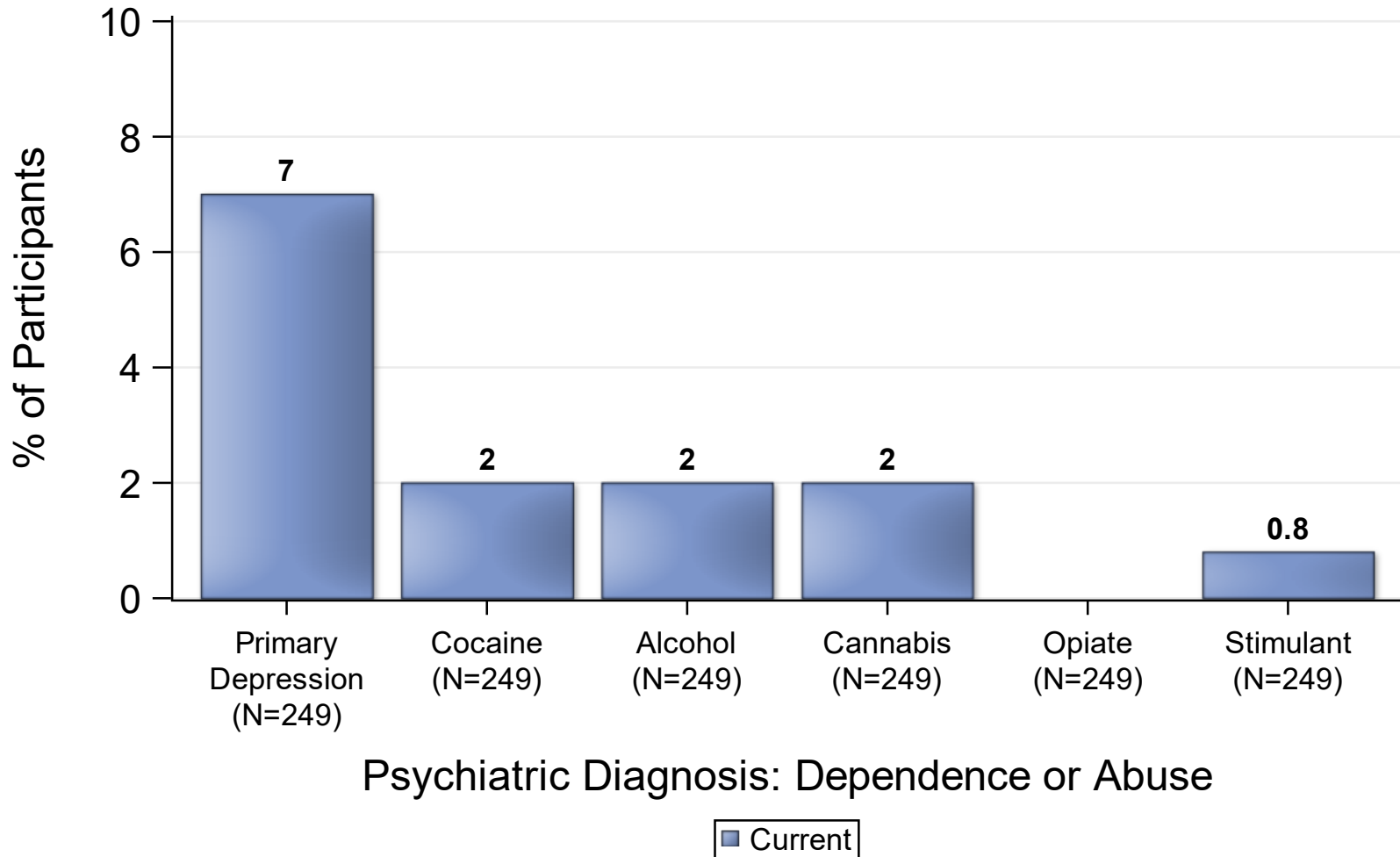
The Total Motor Score is a continuous measure on a scale of 0-18, with a score of 0 indicating a normal assessment; 1-4 indicating mild impairment; and 5 or more indicating severe impairment.

HIV Motor Scale Demographics

<u>Characteristics:</u>	<u>All Records</u>	<u>No impairment</u>	<u>Mild impairment</u>	<u>Severe impairment</u>
N*	253	128	91	34
<u>Age</u>				
Mean	52.7	51.0	55.9	50.4
Std	10.8	10.6	10.3	11.2
<u>Gender</u>				
Male	167 (66%)	86 (51%)	62 (37%)	19 (11%)
Female	86 (34%)	42 (49%)	29 (34%)	15 (17%)

*HIV Motor Scale impairment from the first available visit. Gender unknown for some recent cases.

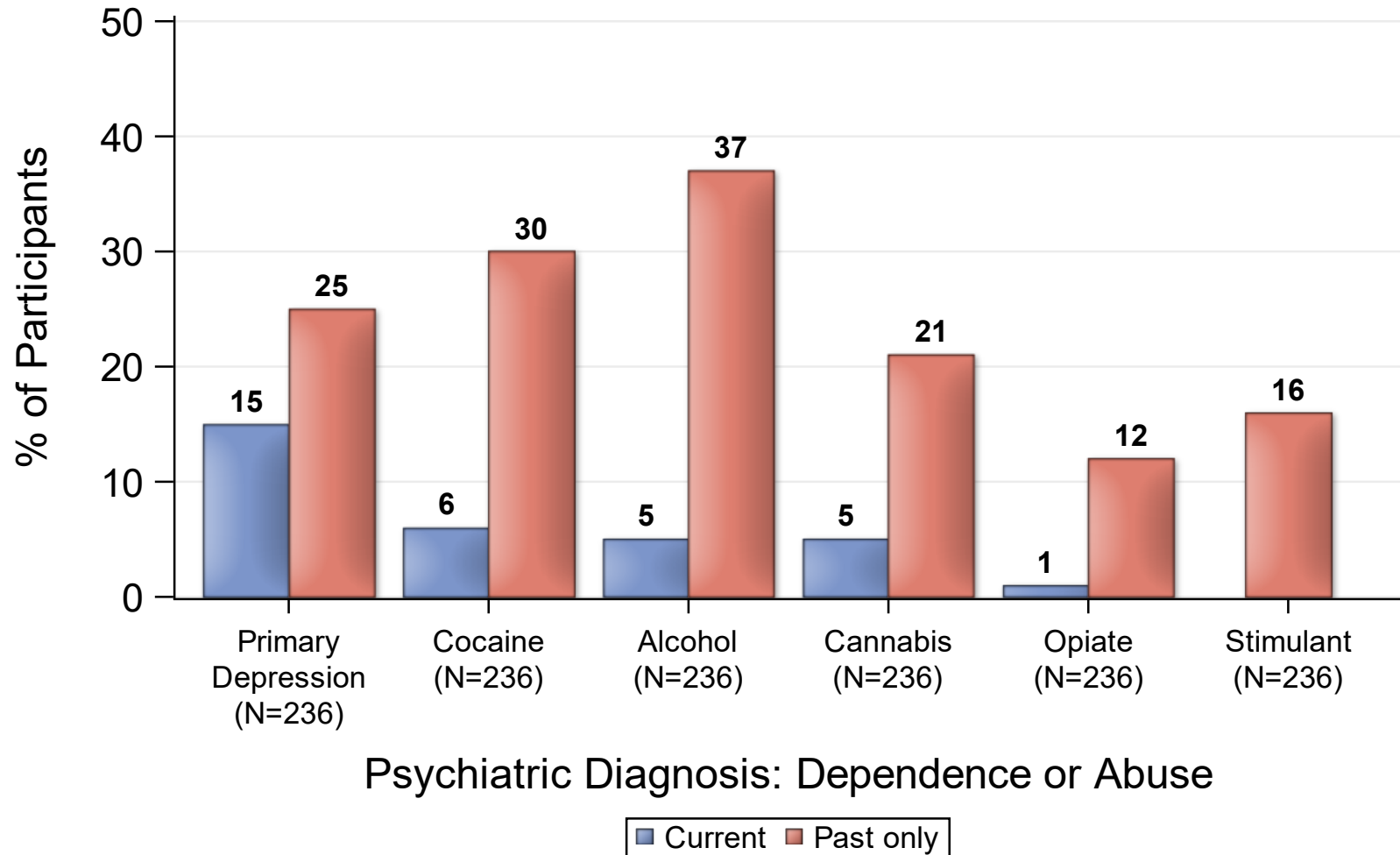
Current Psychiatric Diagnosis



71% are Normal/Test Not Administered

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

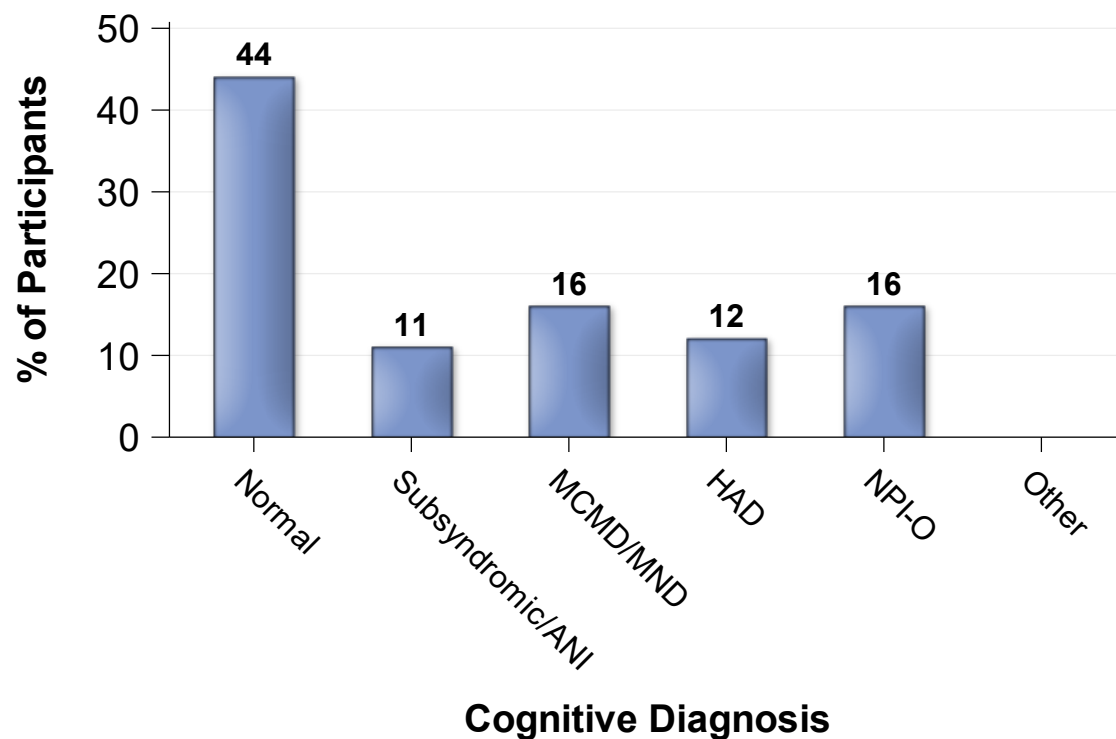
Baseline Psychiatric Diagnosis



26% are Normal/Test Not Administered

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

Current Cognitive Diagnosis (N=246)*



ANI = Asymptomatic Neurocognitive Impairment

MCMD = Minor Cognitive Motor Disorder

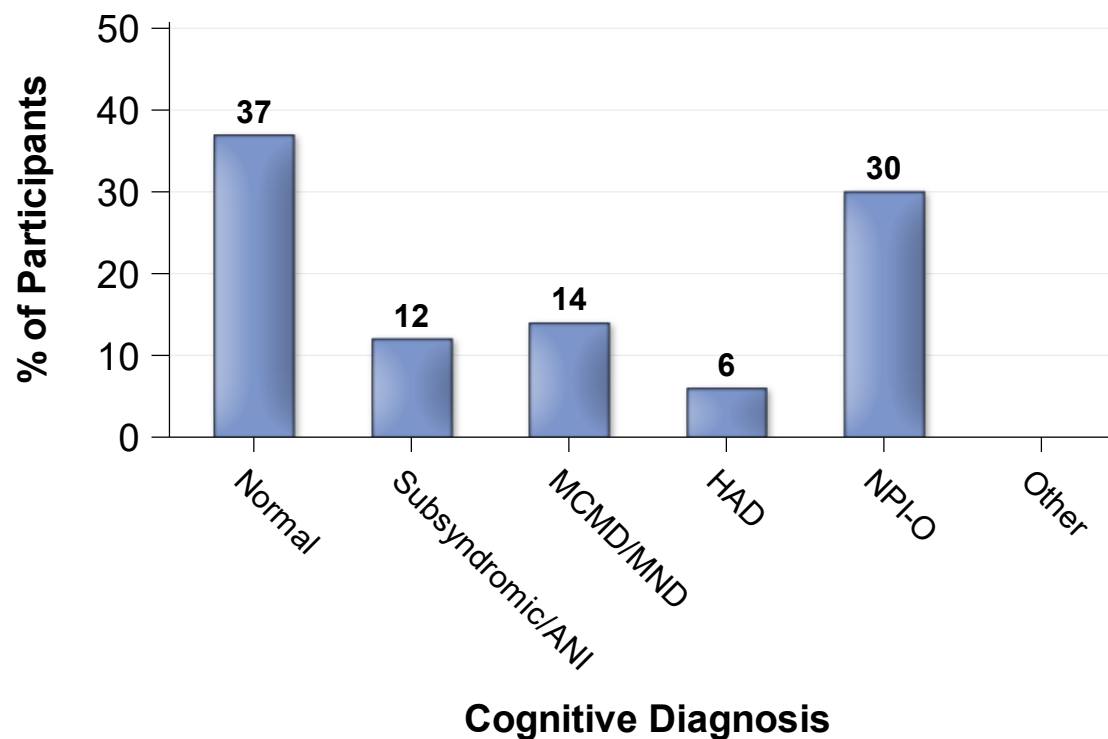
MND = Minor Neurocognitive Disorder

HAD = HIV-Associated Dementia

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

*Please note the totals listed above reflect only those cases in the active cohort who have ever been assigned a cognitive diagnosis.

Baseline Cognitive Diagnosis (N=251*)



ANI = Asymptomatic Neurocognitive Impairment

MCMD = Minor Cognitive Motor Disorder

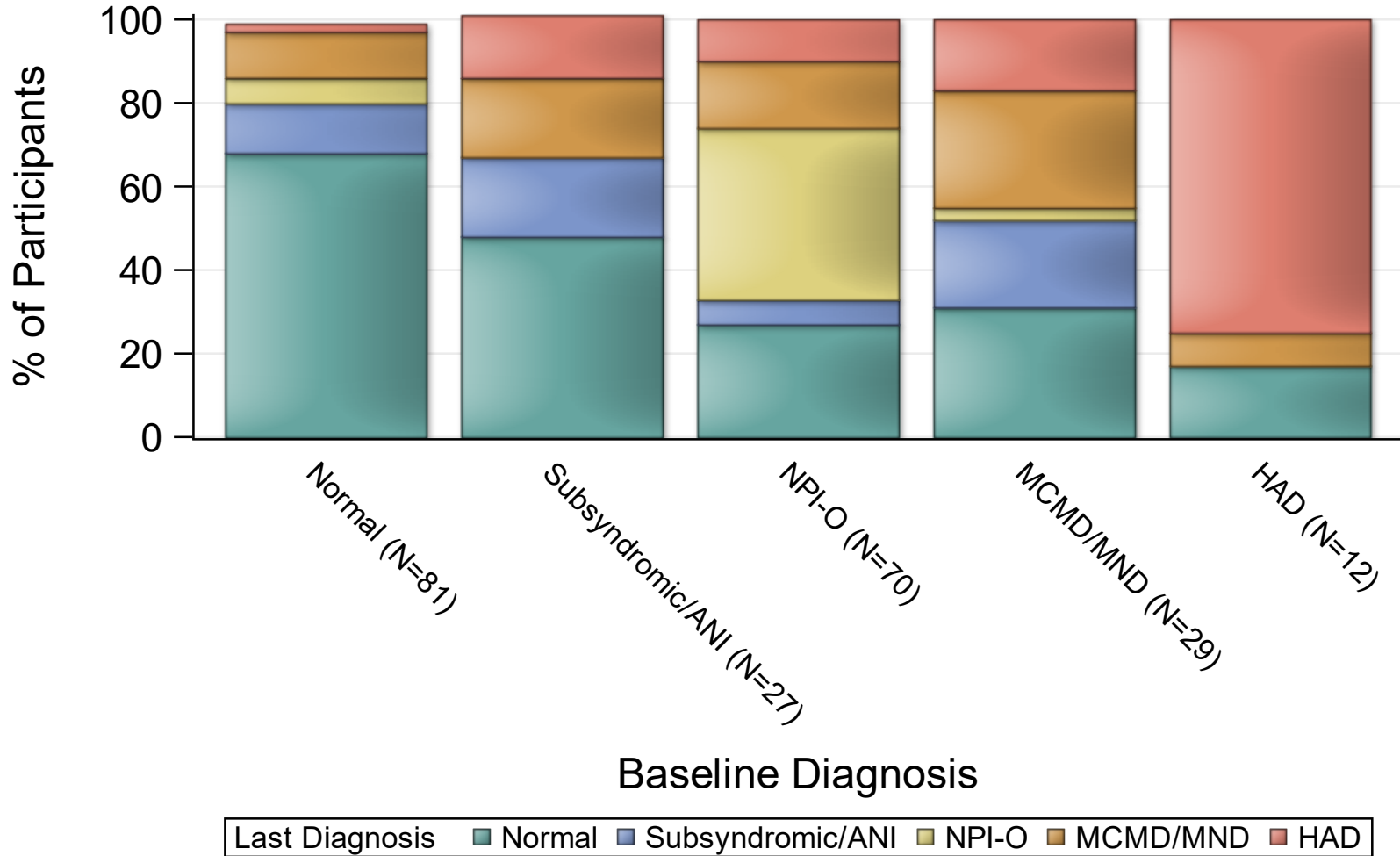
MND = Minor Neurocognitive Disorder

HAD = HIV-Associated Dementia

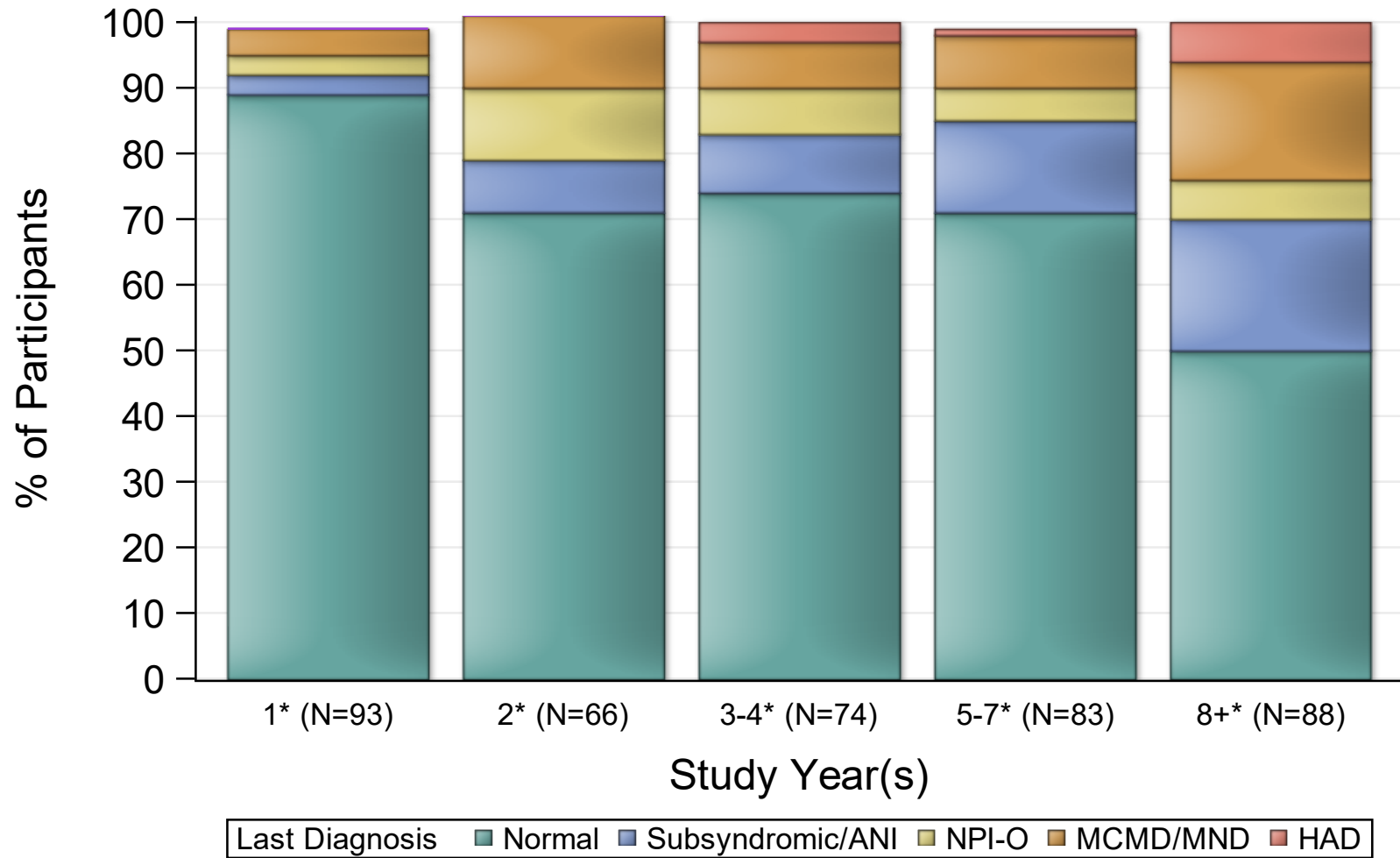
NPI-O = Neuropsychological Impairment - Other cause, not HIV

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

Change in Cognitive Diagnosis



Change in Cognitive Diagnosis Normal at Baseline

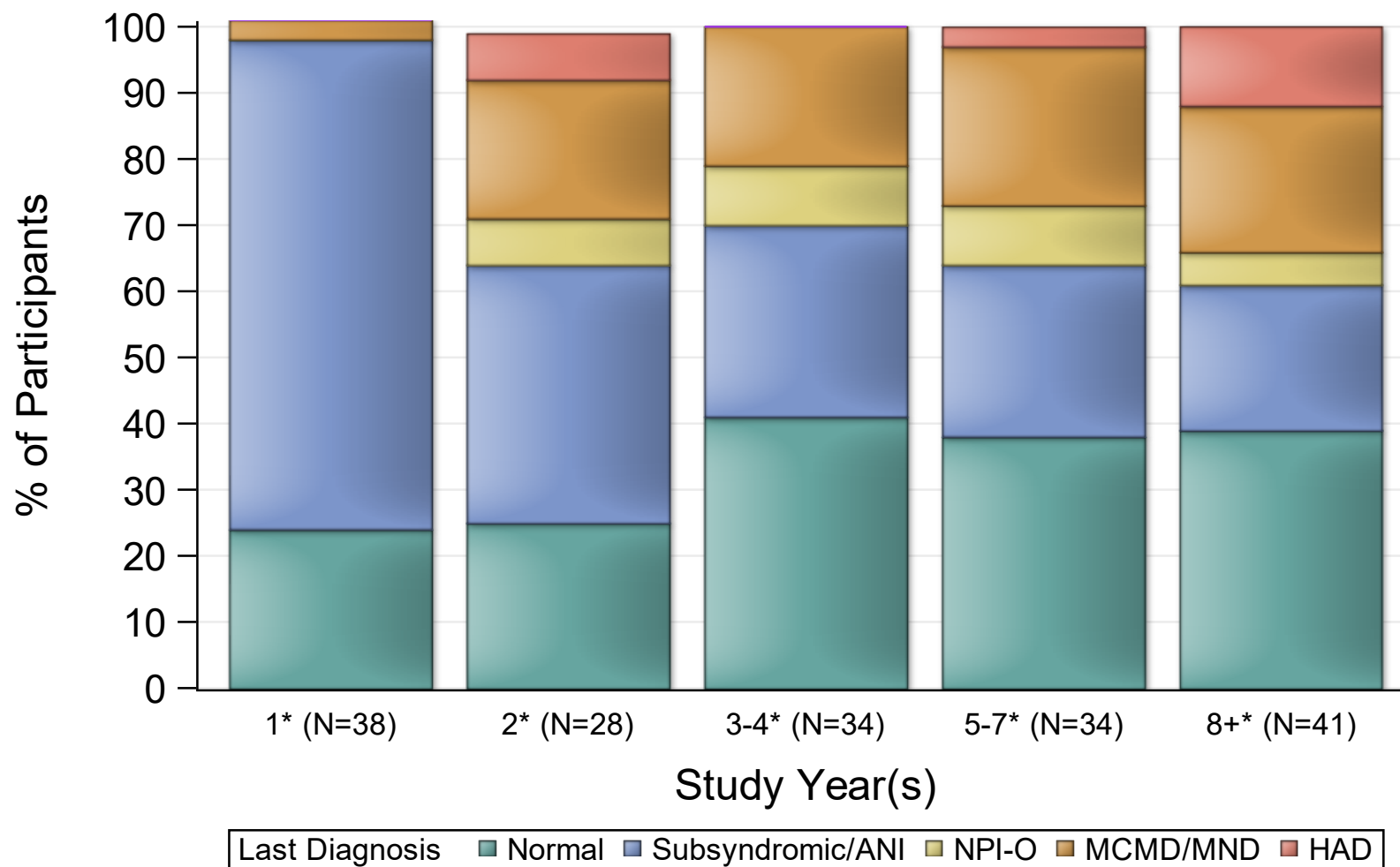


*Worst diagnosis in study year period shown.

Participants followed for two or more years contribute to all preceding groups.

Change in Cognitive Diagnosis

Subsyndromic/ANI at Baseline

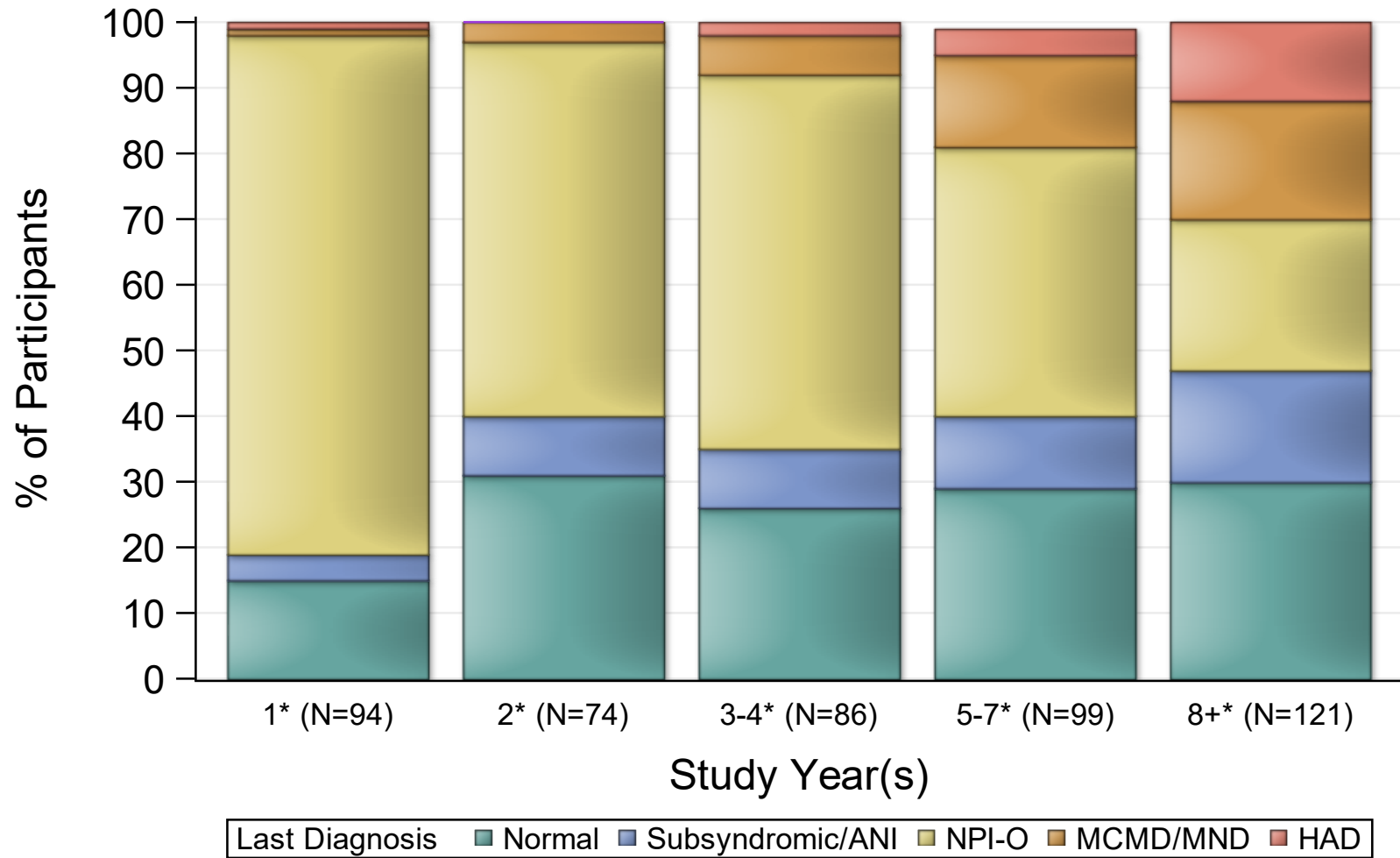


*Worst diagnosis in study year period shown.

Participants followed for two or more years contribute to all preceding groups.

Change in Cognitive Diagnosis

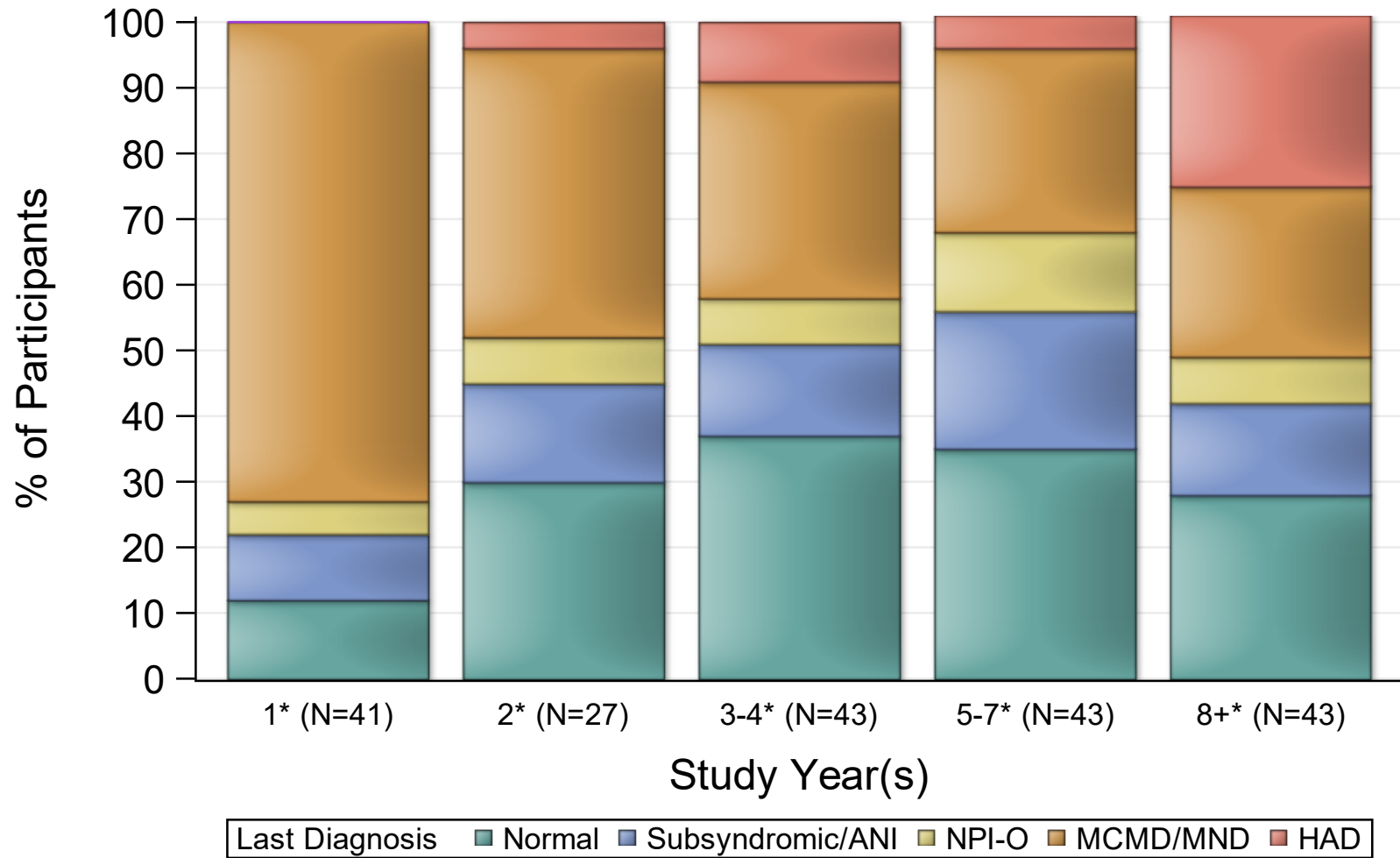
NPI-O at Baseline



*Worst diagnosis in study year period shown.

Participants followed for two or more years contribute to all preceding groups.

Change in Cognitive Diagnosis MCMD/MND at Baseline

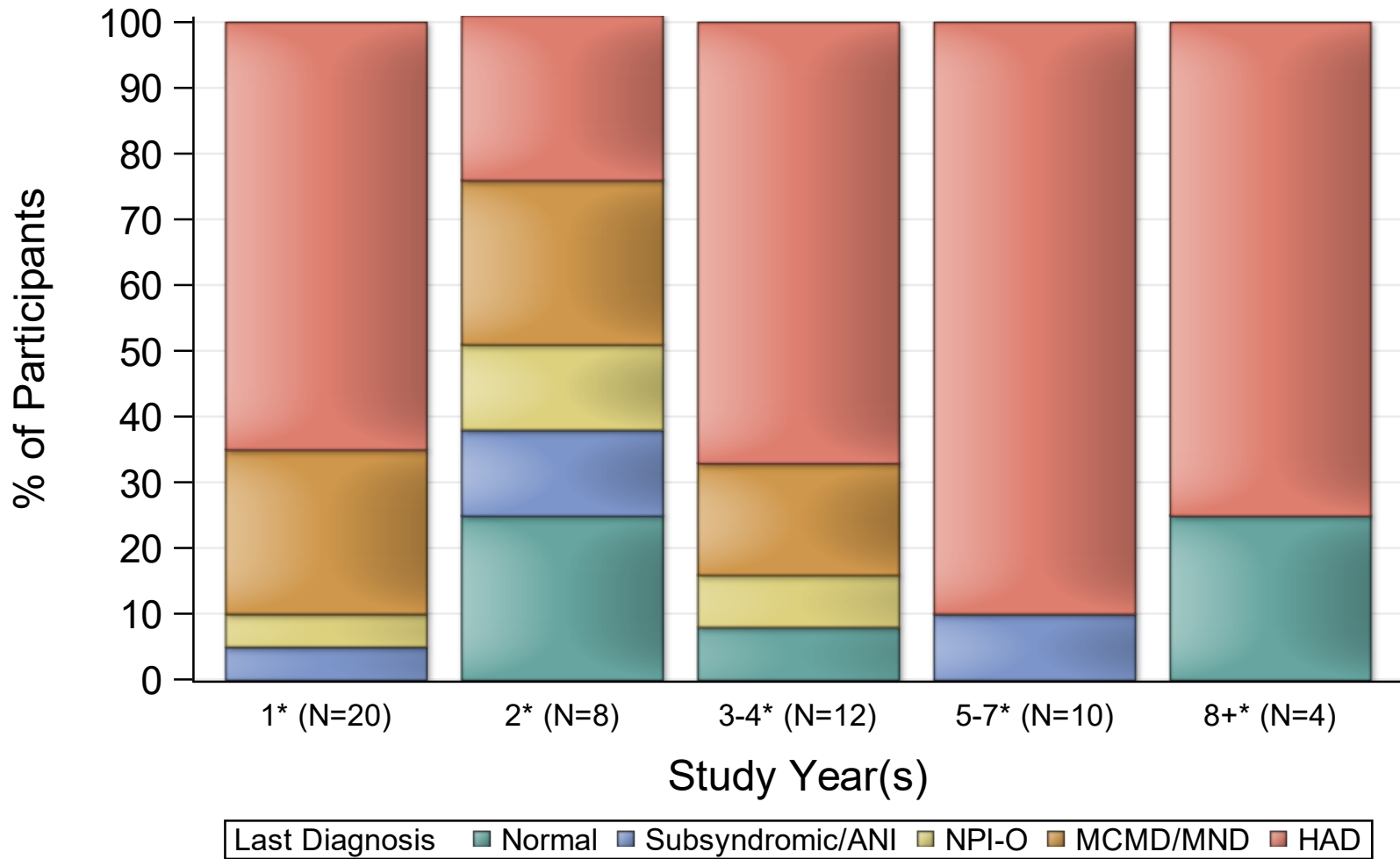


*Worst diagnosis in study year period shown.

Participants followed for two or more years contribute to all preceding groups.

Change in Cognitive Diagnosis

HAD at Baseline



*Worst diagnosis in study year period shown.

Participants followed for two or more years contribute to all preceding groups.

Current Neurologic Diagnoses

Clinical Myelopathy (N=167)

	<u>N</u>	<u>%</u>
HIV associated	4	2
Other	3	2
None	160	96

Neuropathy (N=167)

HIV associated DSP	114	68
None	53	32

Baseline Neurologic Diagnoses

Clinical Myelopathy (N=234)

	<u>N</u>	<u>%</u>
HIV associated	10	4
Other	4	2
None	220	94

Neuropathy (N=234)

HIV associated DSP	107	46
HIV/nucleoside	7	3
None	120	51

Participants Reporting Concomitant Medications

Medication	# of Pts (N=253)	%
Central Nervous System Agents	243	96
Cardiovascular Drugs	220	87
Vitamins	214	84.6
Gastrointestinal Drugs	201	79.4
Anti-infective Agents	191	75.5
Hormones and Synthetic Substitutes	159	62.8
Autonomic Drugs	152	60.1
Electrolytic, Caloric, and Water Balance	141	55.7
Skin and Mucous Membrane Agents	127	50.2
Miscellaneous Therapeutic Agents	120	47.4
Antihistamine Drugs	115	45.5
Eye, Ear, Nose, and Throat (EENT) Preparations	108	42.7
Blood Formation, Coagulation, and Thrombosis Agents	92	36.4
No medication use reported on at least one occasion	60	23.7
Respiratory Tract Agents	45	17.8
Local Anesthetics	38	15
Smooth Muscle Relaxants	34	13.4
Antineoplastic Agents	31	12.3
Pharmaceutical Aids	19	7.5
Enzymes	9	3.6

Ancillary Lab Measurements

Ancillary Lab	Total # records overall	% cohort with at least 1 measure	Total # cases with baseline measure	% cohort with baseline & one other measure
Miscellaneous Hematology				
Red blood cells	957	42	105	35
Mean Corpuscular Hemoglobin (MCH)	956	42	104	35
Mean Corpuscular Volume (MCV)	4367	99	249	89
Mean Corpuscular Hemoglobin Concentration (MCHC)	956	42	104	35
Blood Red cell Distribution Width (RDW)	811	41	83	27
Blood Rapid Plasma Reagin (RPR)	675	67	104	24
Blood Neutrophil Percent	4131	99	223	78
Blood Lymphocyte Percent	4306	99	250	89
Blood Monocyte Percent	4307	99	250	89
Blood Eosinophil Percent	4294	99	249	88
Blood Basophil Percent	4227	99	246	87
Blood Mean Platelet Volume (MPV)	266	19	26	9
Blood CD3 Percent	477	22	54	19
Blood CD3 Absolute	320	20	32	11
Miscellaneous Serology & virology				
Blood Hepatitis B Surface Antigens	320	58	129	18
Blood Hepatitis B Surface Antibodies	321	57	128	20
Blood Hepatitis B Core Antibodies	289	57	128	16
Blood Hepatitis B Viral Load	39	7	5	1
Blood Hepatitis C Antibodies (HCV)	1011	98	198	46
Blood Hepatitis C Viral Load	209	21	26	5
Miscellaneous Serology & virology				
COVID-19 Test Results (qualitative)	69	12	3	0

Ancillary Lab Measurements cont.

Ancillary Lab	Total # records overall	% cohort with at least 1 measure	Total # cases with baseline measure	% cohort with baseline & one other measure
Miscellaneous Blood Chemistries				
Glucose	4004	99	244	86
Hemoglobin A1c	1694	96	103	32
Sodium	3927	99	244	86
Calcium	3935	99	244	86
Chloride	3846	98	234	83
Potassium	3929	99	244	86
Total Protein	3827	99	244	86
Alkaline Phosphatase	3891	99	242	85
AST	3885	99	242	85
ALT	3876	99	240	85
Total Bilirubin	3889	99	244	86
Direct Bilirubin	745	41	84	27
Creatinine	3985	99	244	86
BUN	3973	99	243	86
CO2	3863	99	239	84
PT	1906	58	141	51
INR	1908	58	142	52
Urate	172	9	24	7
Triglycerides	2424	98	186	63
Cholesterol	2427	98	185	63
LDL	2137	95	154	53
HDL	2289	98	166	56
Phosphorus	752	41	85	27
LDH	308	17	35	12

Ancillary Lab Measurements cont.

Ancillary Lab	Total # records overall	% cohort with at least 1 measure	Total # cases with baseline measure	% cohort with baseline & one other measure
<u>Miscellaneous CSF values</u>				
CSF-VDRL Test	18	4	4	1
<u>Miscellaneous Urine values</u>				
Urinalysis: Glucose	1992	58	145	53
Urinalysis: Protein	1992	58	145	53
Urinalysis: pH	1991	58	145	53
Urinalysis: Specific Gravity	1990	58	144	53
Urinalysis: Ketones	1988	58	144	53
Urinalysis: Bilirubin	1986	58	143	52
Urine Toxicology; Methamphetamine	950	39	94	32
Urinalysis: Red Blood Cells	563	39	53	17
Urinalysis: White Blood Cells	567	39	53	17

Tissue Bank Cohort Overview

CNS Specimens Available

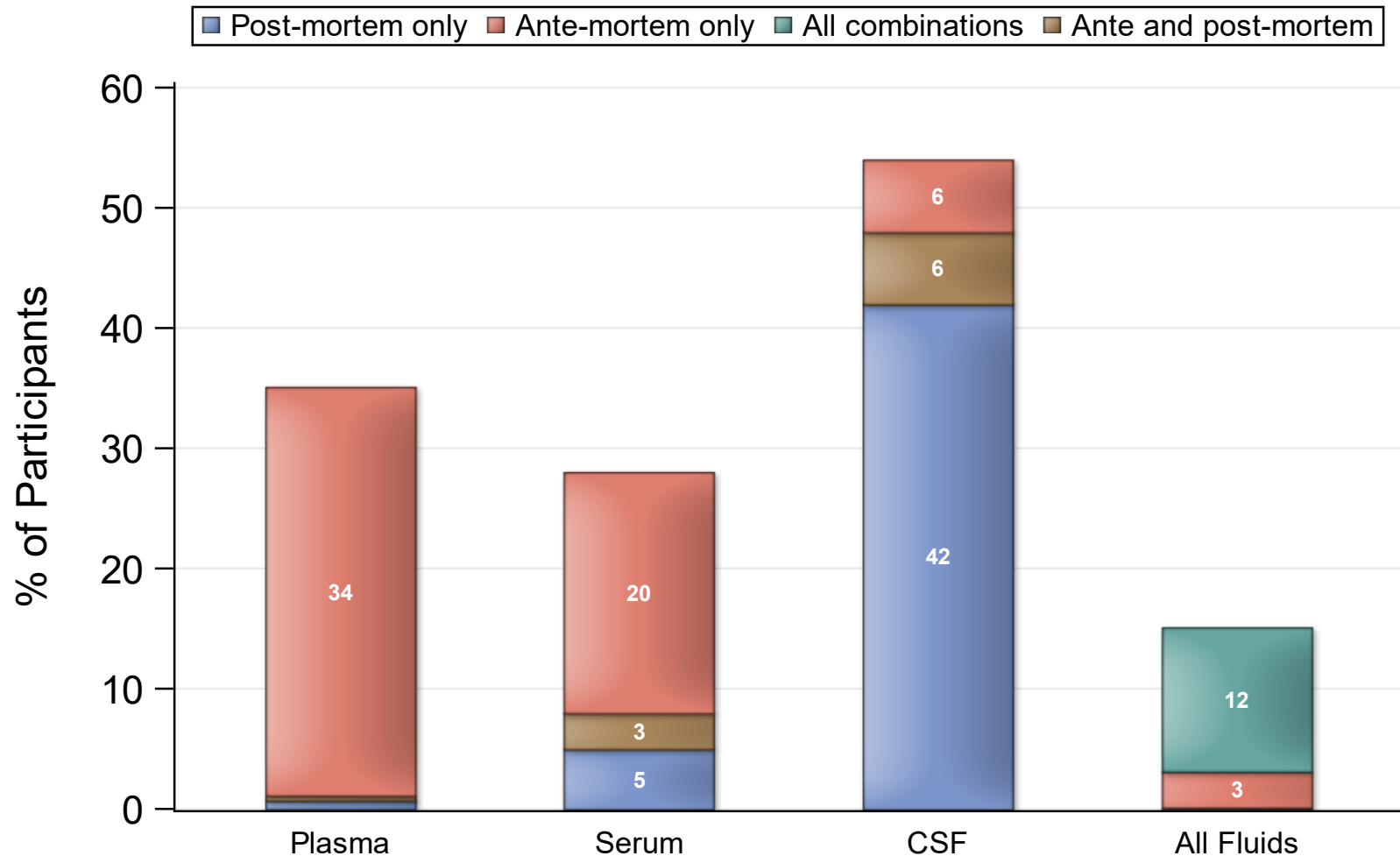
Type:	PWH	PWOH
Frozen Brain	1000	331
Spinal Cord	981	259
Fixed Brain	915	323
Dorsal Root Ganglia	808	216
Cerebellum*	558	126
Brain Stem*	544	126
Trigeminal Ganglia	543	77
Occipital Lobe*	299	104
Parietal Lobe*	298	104
Temporal Lobe*	298	104
Frontal Lobe*	296	104
Thalamus*	296	103
Basal Ganglia*	276	91
Hippocampus*	261	82

*Several of the smaller brain categories listed were approved by the Steering Committee on 27JUN2017 to be reported centrally, and thus are currently underreported in the central inventory as sites work towards retrospectively updating specimen records. It is expected that the central inventory, including availability of these specimens, will continue to be updated prospectively.

Peripheral Organ Specimens Available

Type:	PWH	PWOH
Liver	963	256
Spleen	939	246
Peripheral Nerve	856	225
Adipose Tissue	805	205
Heart	778	194
Muscle	747	204
Lymph Node	739	184
Bone Marrow	737	183
Pituitary Gland	694	120
Kidney	629	192
Lung	564	179
Bowel	338	97
Testes	181	76
Hair	149	10
Eye	38	2
Thymus	30	5

Available Fluids



*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 specimen available and fluids collected within 1 year of death. Percentage labels not shown are 2% or less.

Demographics*

<u>N</u>	<u>915</u>
<u>Age</u>	
Mean	50.8
SD	12.3
25th Percentile	42
Median	50
75th Percentile	59

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

Demographics cont.*

	<u>N</u>	<u>%</u>
<u>Gender</u>		
Male	719	79
Female	191	21
<u>Ethnicity</u>		
Hispanic origin	244	27
<u>Race</u>		
White	492	54
Black	297	33
Other	122	13

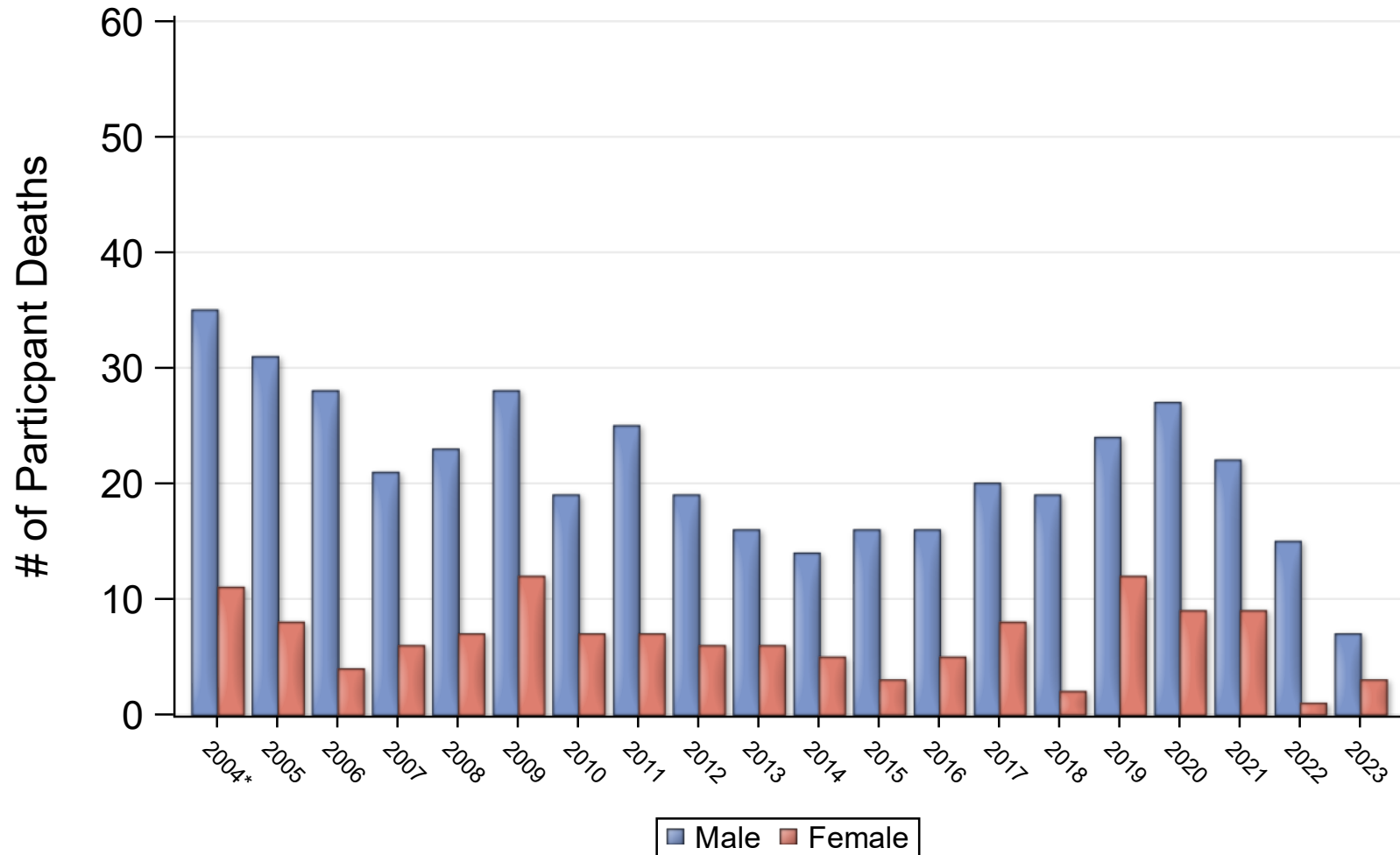
*Cases with a fixed brain specimen available.

Demographics cont.*

	<u>N</u>	<u>%</u>
<u>Furthest Education</u>		
8th grade or less	34	7
Some High School	92	20
High School Graduate	128	27
Some College/Associate's Degree	129	28
College Graduate	42	9
Advanced Degree work	42	9

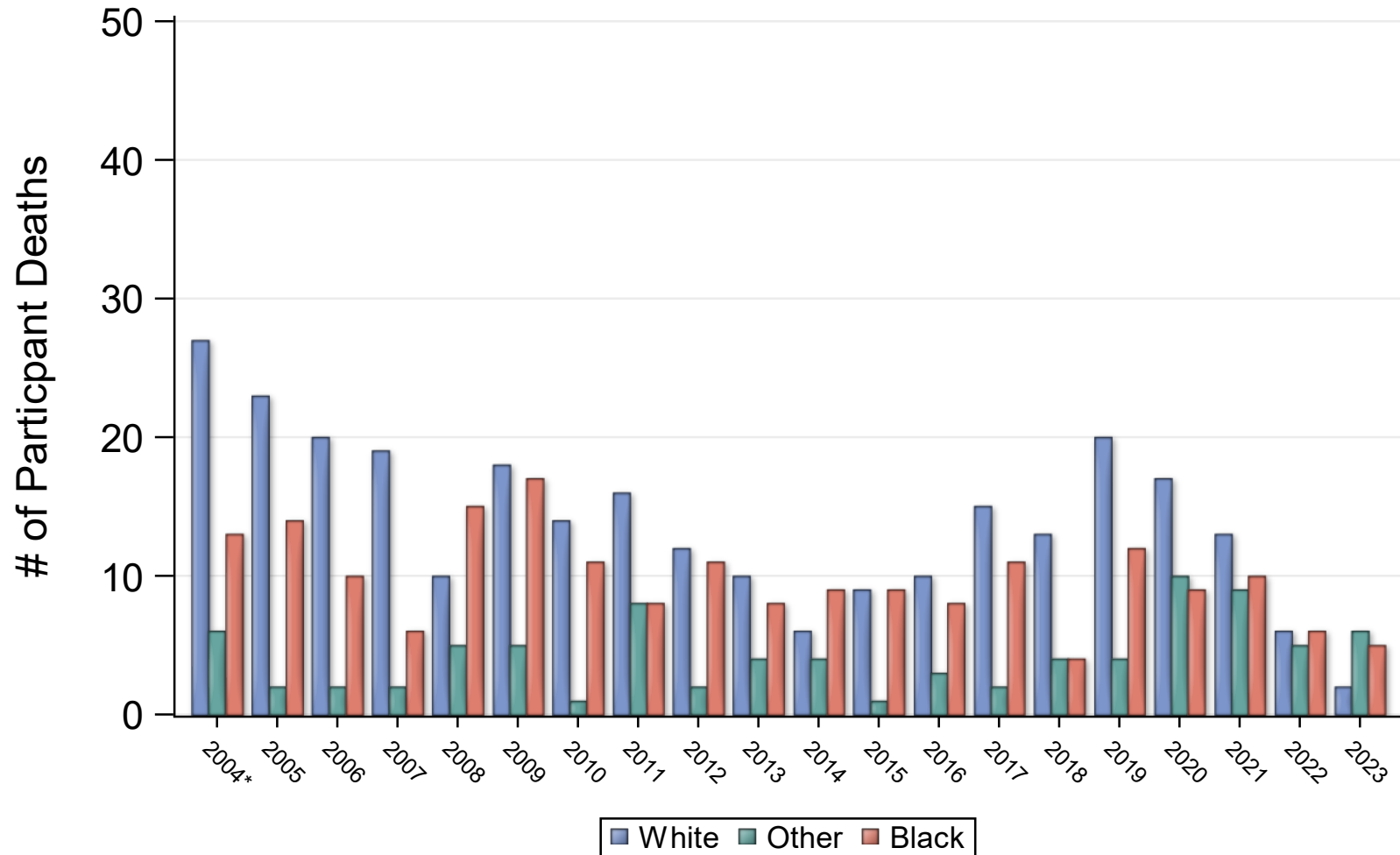
*Cases with a fixed brain specimen available.

cART Era Demographics - Gender



*278 males and 58 females prior to 2004. The NNTC did not collect data before 1998.

cART Era Demographics - Race



*209 White, 86 Black, and 41 Other prior to 2004. The NNTC did not collect data before 1998.

HIV Characteristics of autopsy cases*

	<u>N</u>	<u>%</u>
<u>Baseline HIV risk</u>		
IV drug use	273	30
Male to male sex	339	37
Heterosexual sex	192	21
Other	111	12
<u>On ART</u>		
at baseline	724	79
at last visit	731	80

*Cases with a fixed brain specimen available.

*HIV Characteristics at time of death**

CD4 Count (N=675)

25th Percentile	21
Median	104
75th Percentile	274

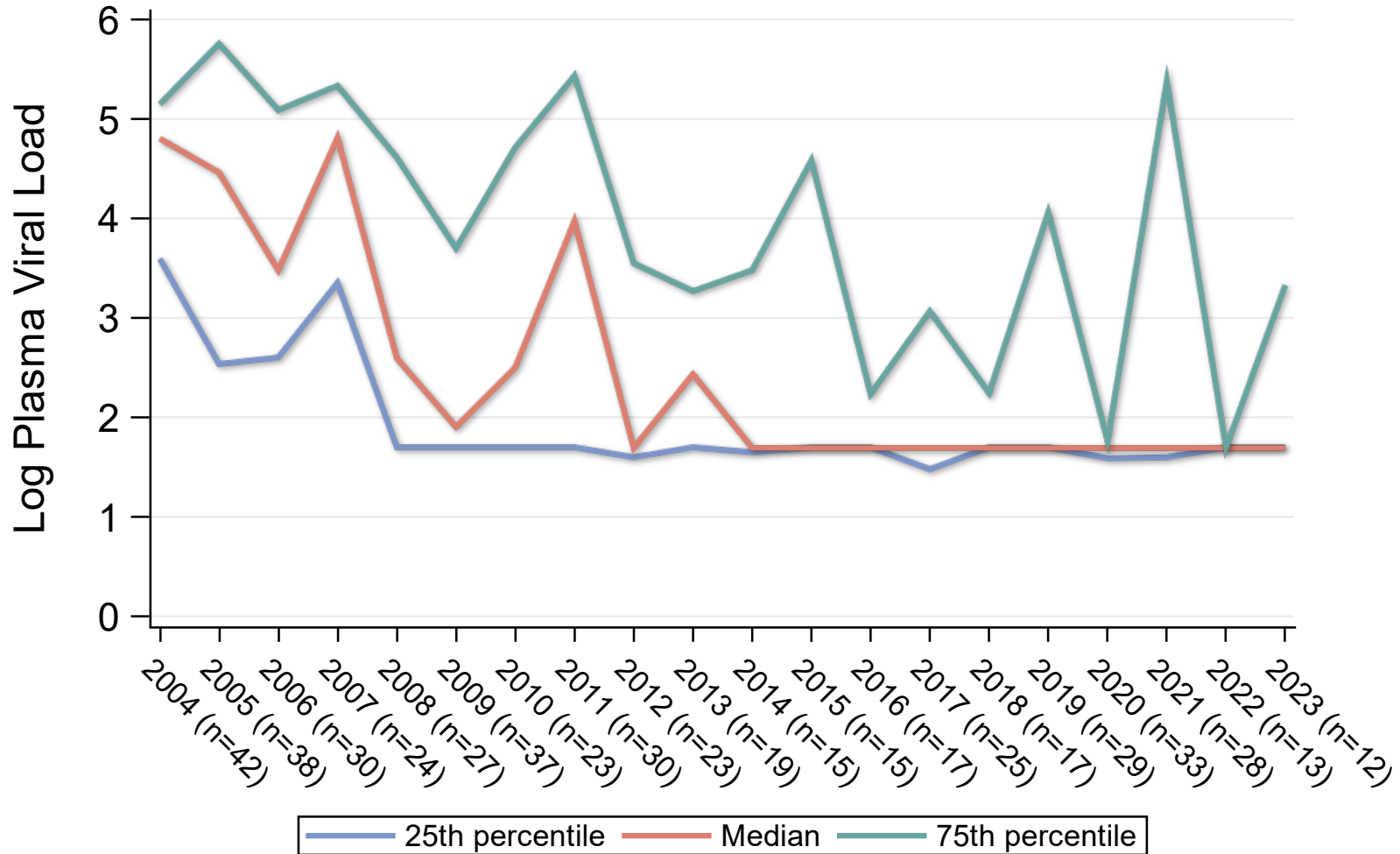
Log Plasma Viral Load** (N=609)

25th Percentile	1.70
Median	3.51
75th Percentile	5.11

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

**Among those with known ARV medication status. 13 participants had detectable VL values of 0 where a viral log could not otherwise be calculated.

cART Era Viral Load

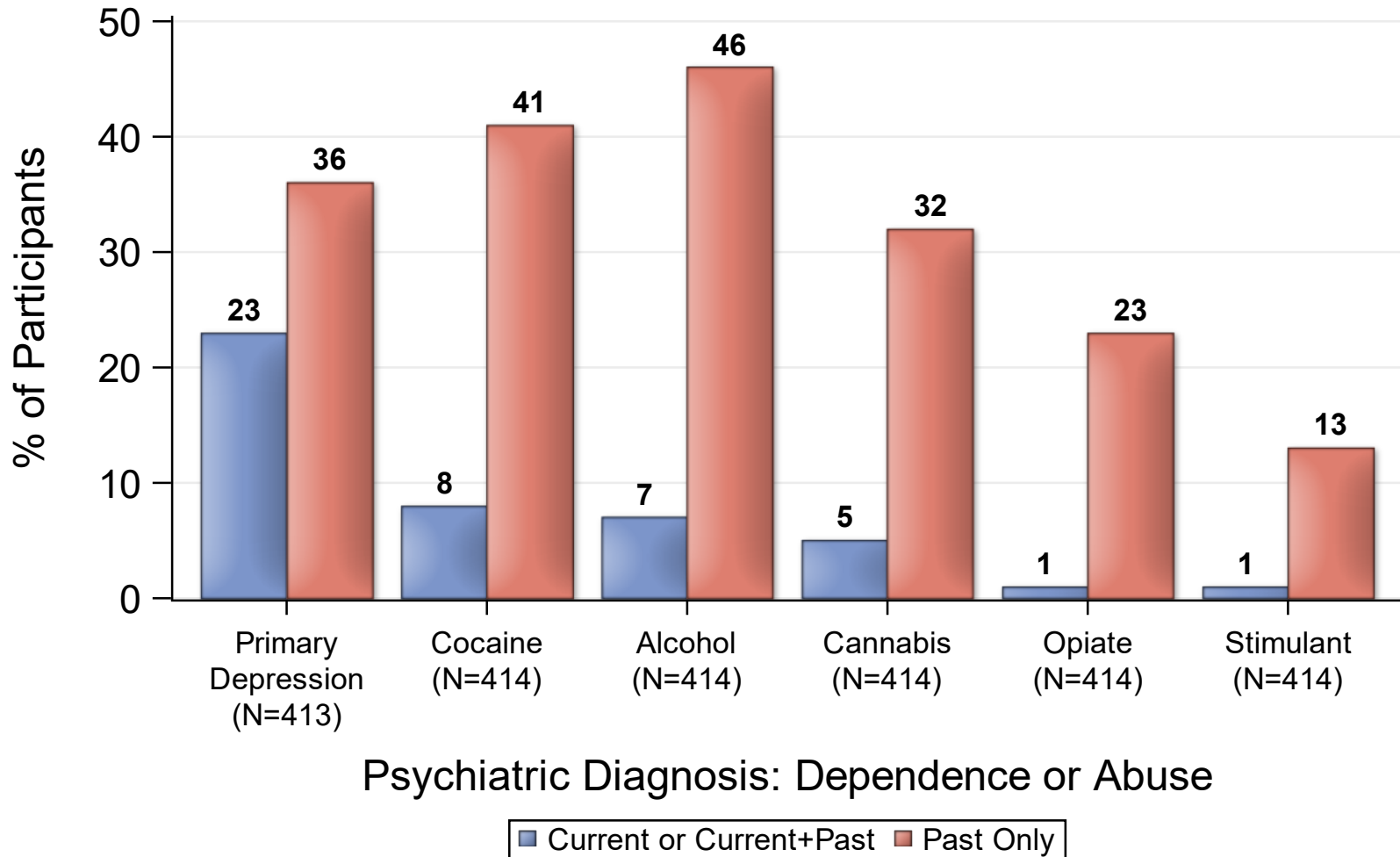


*Among those who have died during the cART era.

Pathological Conditions: Year of Autopsy

Type:	Year of Autopsy			Total Cases
	1998-2004	2005-2011	2012-present	
<i>Total Fixed Specimens</i>	400	226	289	915
Normal/minor neuropath changes	103 (26%)	72 (32%)	40 (14%)	215 (23%)
Other non-infectious pathology	74 (19%)	71 (31%)	98 (34%)	243 (27%)
Alzheimer's type 2 gliosis	71 (18%)	24 (11%)	30 (10%)	125 (14%)
Focal infarct	50 (13%)	38 (17%)	62 (22%)	150 (16%)
HIV encephalitis	60 (15%)	17 (8%)	4 (1%)	81 (9%)
Hypoxic/ischemic damage	32 (8%)	40 (18%)	58 (20%)	130 (14%)
Aseptic Leptomeningitis	28 (7%)	16 (7%)	30 (10%)	74 (8%)
Microglial nodule encephalitis	34 (9%)	7 (3%)	8 (3%)	49 (5%)
Hemorrhage-parenchymal	17 (4%)	10 (4%)	24 (8%)	51 (6%)
Progressive Multifocal Leukoencephalopathy	22 (6%)	12 (5%)	5 (2%)	39 (4%)
Cryptococcus	14 (4%)	8 (4%)	2 (1%)	24 (3%)
Primary CNS lymphoma	22 (6%)	5 (2%)	8 (3%)	35 (4%)
Other infections	18 (5%)	7 (3%)	18 (6%)	43 (5%)
Cytomegalovirus encephalitis	19 (5%)	3 (1%)	2 (1%)	24 (3%)

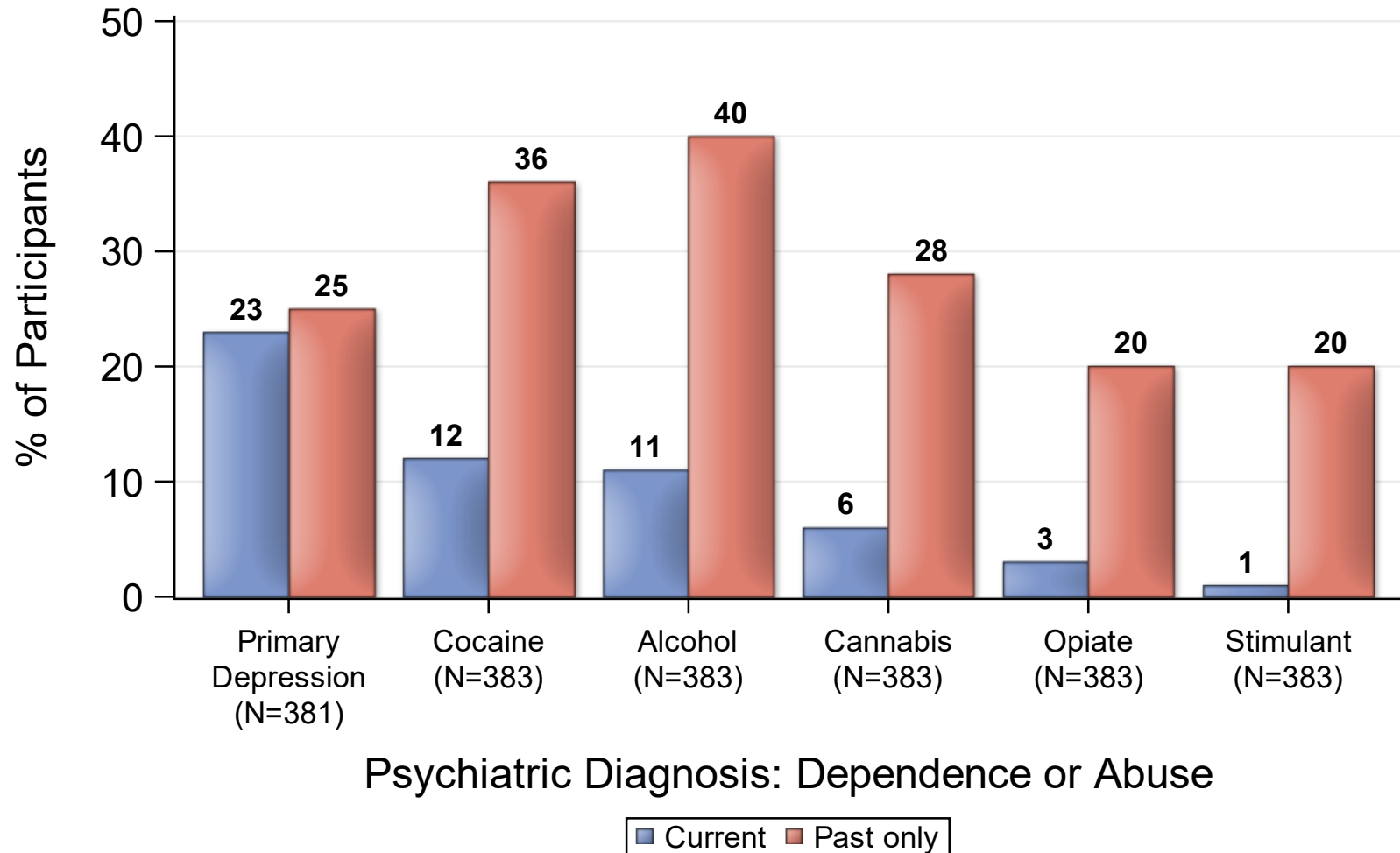
Last Psychiatric Diagnosis



46% are Normal/Test Not Administered

*Please note the totals listed above reflect only those cases who have a fixed brain specimen available and data from the PRISM/CIDI evaluation before death.

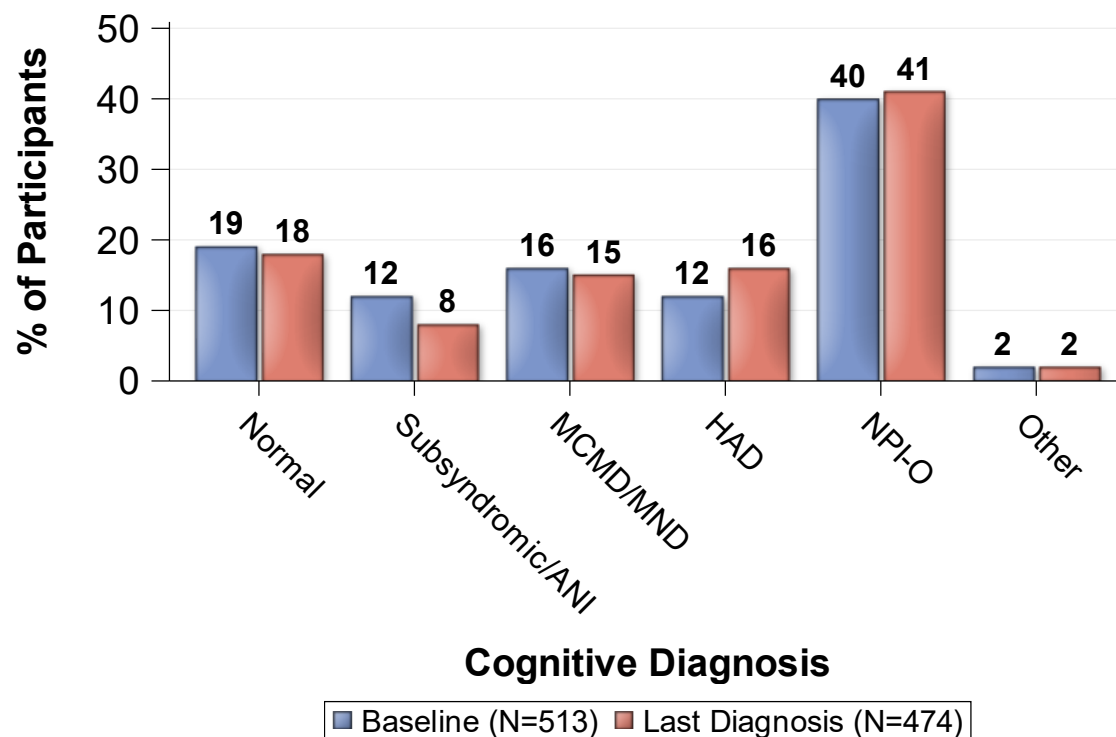
Baseline Psychiatric Diagnosis



16% are Normal/Test Not Administered

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

Cognitive Diagnosis



ANI = Asymptomatic Neurocognitive Impairment

MCMD = Minor Cognitive Motor Disorder

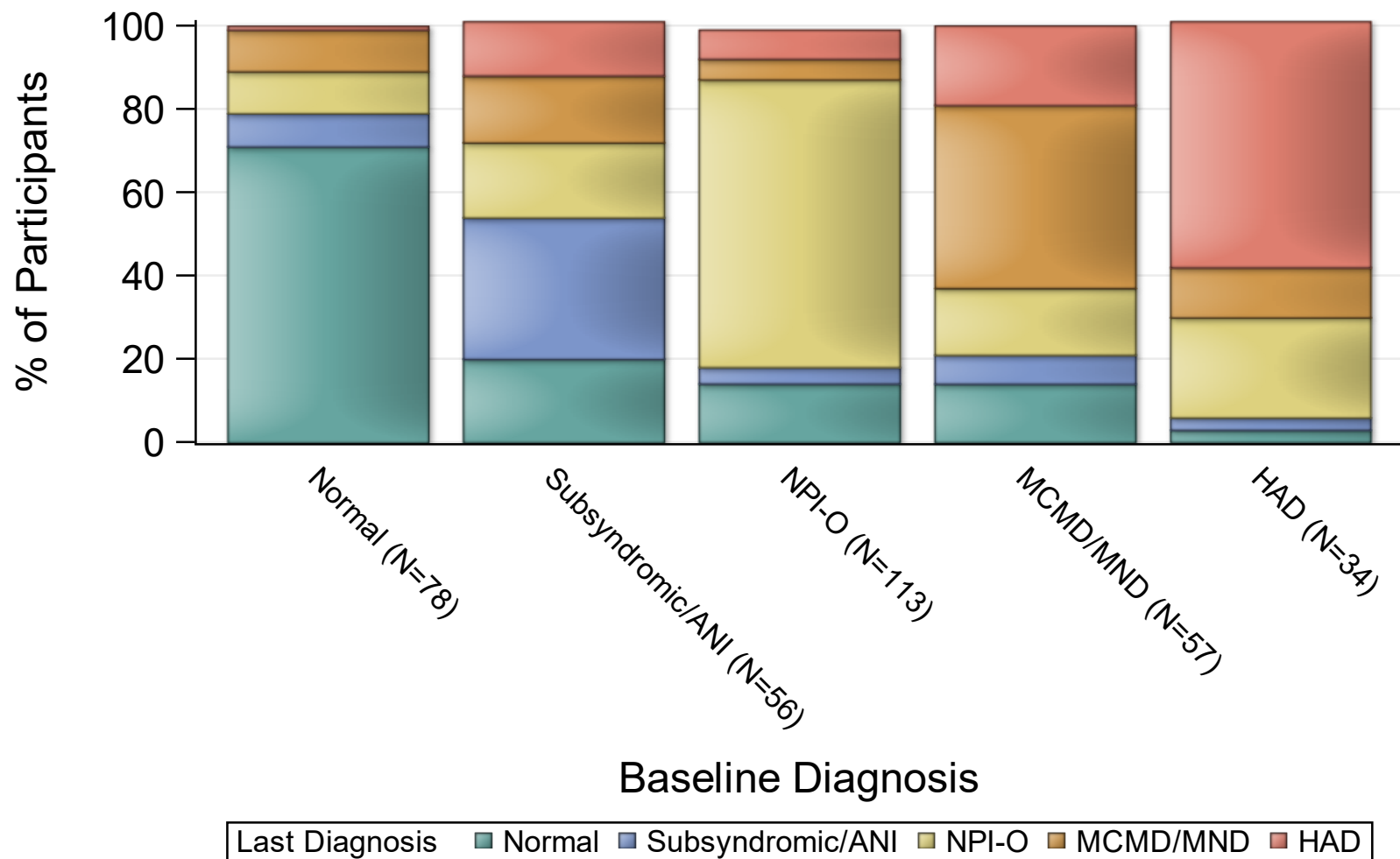
MND = Minor Neurocognitive Disorder

HAD = HIV-Associated Dementia

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

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

Change in Cognitive Diagnosis



Neurologic Diagnoses*

	<u>Last Dx</u>		<u>Baseline</u>	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
<u>Clinical Myelopathy</u>	<u>(N=453)</u>		<u>(N=515)</u>	
HIV associated	51	11	58	11
Other	9	2	12	2
None	393	87	445	86
<u>Neuropathy</u>	<u>(N=386)</u>		<u>(N=443)</u>	
HIV associated DSP	180	47	175	40
Nucleoside associated	4	1	3	1
HIV/nucleoside	46	12	62	14
None	156	40	203	46

*Cases with a fixed brain specimen available.

Participants Reporting Concomitant Medications

Medication	# of Pts (N=685)	%
Central Nervous System Agents	589	86
Anti-infective Agents	532	77.7
Gastrointestinal Drugs	463	67.6
Cardiovascular Drugs	355	51.8
Vitamins	332	48.5
Hormones and Synthetic Substitutes	331	48.3
Electrolytic, Caloric, and Water Balance	290	42.3
Autonomic Drugs	267	39
Blood Formation, Coagulation, and Thrombosis Agents	230	33.6
Skin and Mucous Membrane Agents	151	22
Antihistamine Drugs	145	21.2
Miscellaneous Therapeutic Agents	136	19.9
Antineoplastic Agents	121	17.7
Eye, Ear, Nose, and Throat (EENT) Preparations	94	13.7
Respiratory Tract Agents	67	9.8
Local Anesthetics	42	6.1
Pharmaceutical Aids	26	3.8
Smooth Muscle Relaxants	24	3.5
No medication use reported on at least one occasion	20	2.9
Blood Derivatives	18	2.6

Ancillary Lab Measurements

Ancillary Lab	Total # records overall	% cohort with at least 1 measure	Total # cases with baseline measure	% cohort with baseline & one other measure
<u>Miscellaneous Hematology</u>				
Red blood cells	2215	21	172	9
Mean Corpuscular Hemoglobin (MCH)	2207	21	173	9
Mean Corpuscular Volume (MCV)	4838	58	507	23
Mean Corpuscular Hemoglobin Concentration (MCHC)	2202	21	173	9
Blood Red cell Distribution Width (RDW)	2066	14	100	6
Blood Rapid Plasma Reagin (RPR)	772	34	240	6
Blood Neutrophil Percent	4447	49	420	20
Blood Lymphocyte Percent	4713	56	490	23
Blood Monocyte Percent	4587	56	489	23
Blood Eosinophil Percent	4557	56	488	22
Blood Basophil Percent	4546	56	484	22
Blood Mean Platelet Volume (MPV)	1588	10	74	5
Blood CD3 Percent	217	11	86	4
Blood CD3 Absolute	70	3	12	1
<u>Miscellaneous Serology & virology</u>				
Blood Hepatitis B Surface Antigens	595	39	313	6
Blood Hepatitis B Surface Antibodies	491	32	252	5
Blood Hepatitis B Core Antibodies	437	30	233	4
Blood Hepatitis B Viral Load	55	3	20	0
Blood Hepatitis C Antibodies (HCV)	942	65	455	9
Blood Hepatitis C Viral Load	310	22	123	2
<u>Miscellaneous Serology & virology</u>				
COVID-19 Test Results (qualitative)	66	2	3	0

Ancillary Lab Measurements cont.

Ancillary Lab	Total # records overall	% cohort with at least 1 measure	Total # cases with baseline measure	% cohort with baseline & one other measure
Miscellaneous Blood Chemistries				
Glucose	4705	60	512	23
Hemoglobin A1c	607	19	94	3
Sodium	4278	61	518	23
Calcium	4052	58	498	22
Chloride	4084	58	481	21
Potassium	4184	58	484	21
Total Protein	3010	55	451	19
Alkaline Phosphatase	3119	56	479	21
AST	3037	54	452	19
ALT	3118	55	462	19
Total Bilirubin	3305	60	509	23
Direct Bilirubin	513	14	102	4
Creatinine	5446	74	623	27
BUN	4249	61	520	23
CO2	4226	56	473	20
PT	1568	37	283	12
INR	1547	35	266	12
Urate	145	8	62	2
Triglycerides	1266	38	255	9
Cholesterol	1284	37	254	10
LDL	981	27	163	6
HDL	1048	29	176	7
Phosphorus	1054	16	121	5
LDH	326	12	90	3
TSH	249	12	73	2
T4	24	2	6	0

Ancillary Lab Measurements cont.

Ancillary Lab	Total # records overall	% cohort with at least 1 measure	Total # cases with baseline measure	% cohort with baseline & one other measure
<u>Miscellaneous CSF values</u>				
CSF-VDRL Test	230	8	57	3
<u>Miscellaneous Urine values</u>				
Urinalysis: Glucose	1370	36	295	13
Urinalysis: Protein	1396	36	299	13
Urinalysis: pH	1377	36	297	13
Urinalysis: Specific Gravity	1377	36	298	13
Urinalysis: Ketones	1369	36	296	13
Urinalysis: Bilirubin	1371	36	294	13
Urine Toxicology; Methamphetamine	595	16	121	8
Urinalysis: Red Blood Cells	925	30	217	8
Urinalysis: White Blood Cells	916	30	214	8