

# NNTC Public Reports

The data presented in the following report reflects the NNTC central database as of June 4, 2010.

## *Usage Statement*

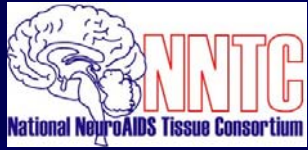
*Distribution of the data contained in this report through publication or presentation should be reported to the Data Coordinating Center. Reporting usage of the NNTC resources helps to ensure continuation of this valuable resource!*

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

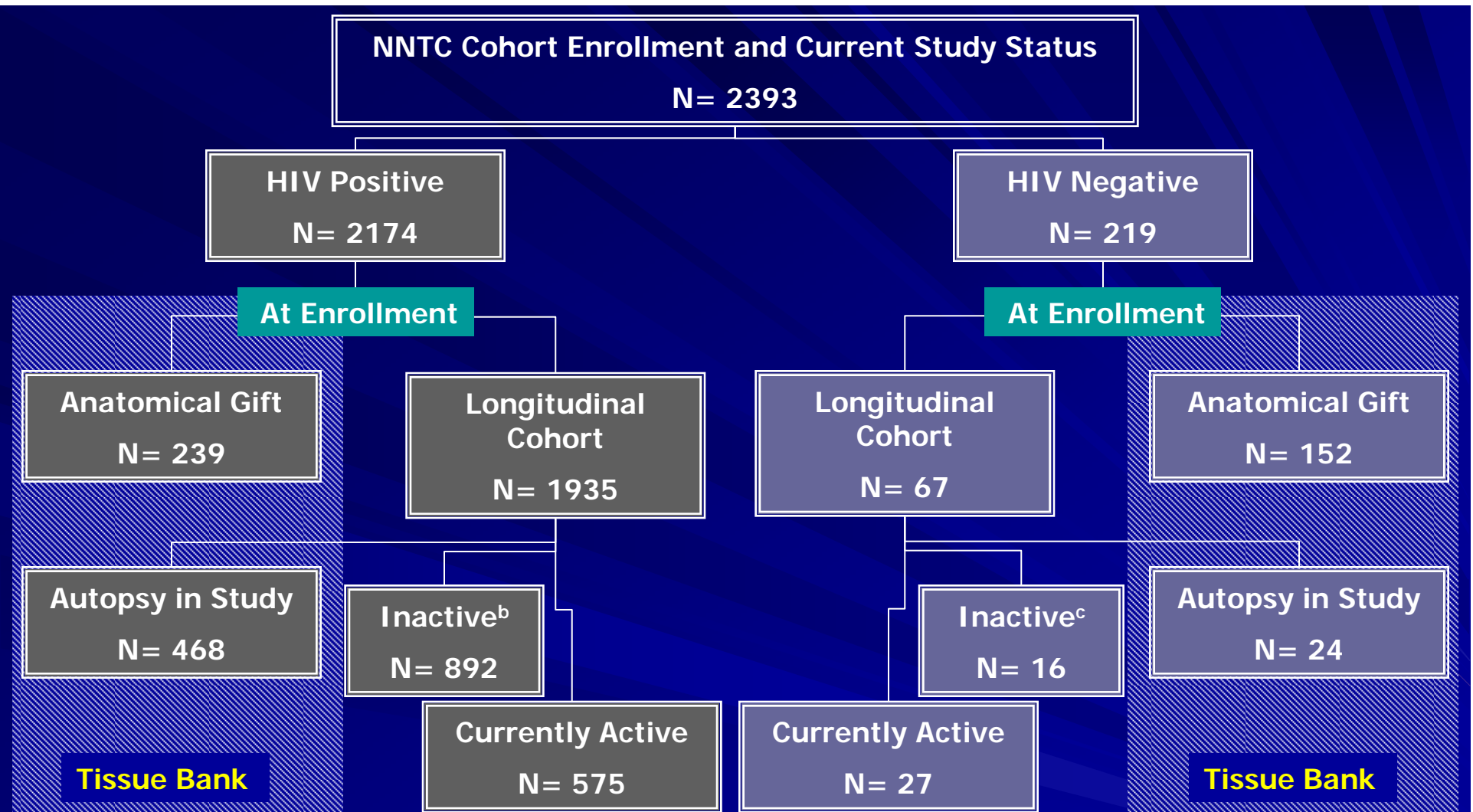
[nntc@emmes.com](mailto:nntc@emmes.com)

[1-866-668-2272](tel:1-866-668-2272)



# 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**



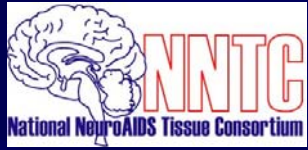
Longitudinal Cohort: Participants enrolled with measurable time in study.

Tissue Bank: Participants deceased with autopsy.

a. Total does not include 84 patients with unknown HIV or study status or who were lost to follow-up/administratively censored or deceased without autopsy prior to enrollment.

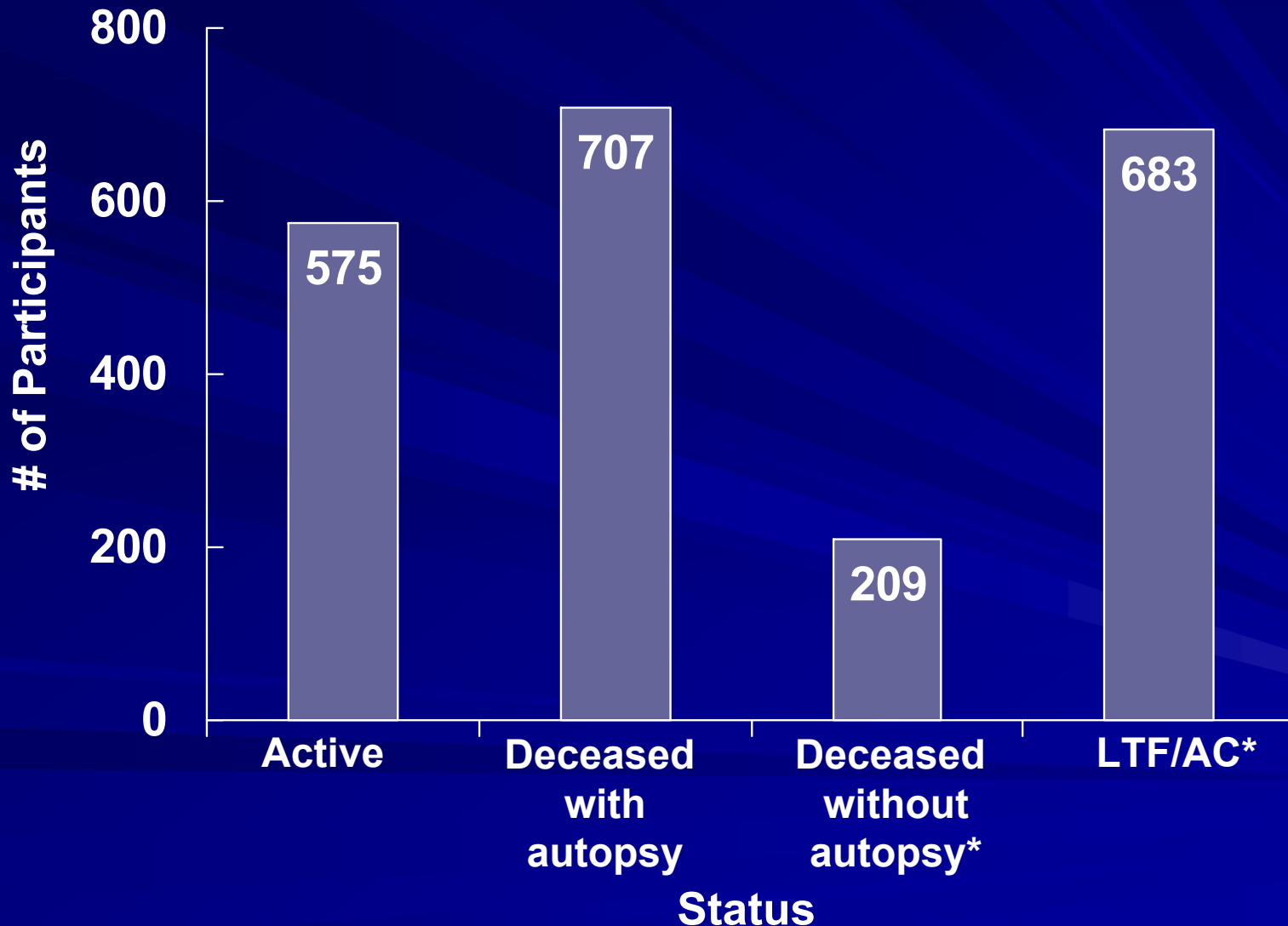
b. HIV+ inactive cases are either lost to follow-up/administratively censored (N=683) or deceased without autopsy (N=209).

c. HIV- inactive cases are either lost to follow-up/administratively censored (N=9) or deceased without autopsy (N=7)

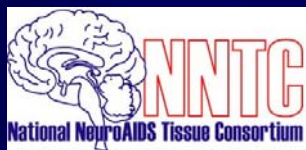


# Cohort Overview: HIV+

## Cohort Status (N=2174)

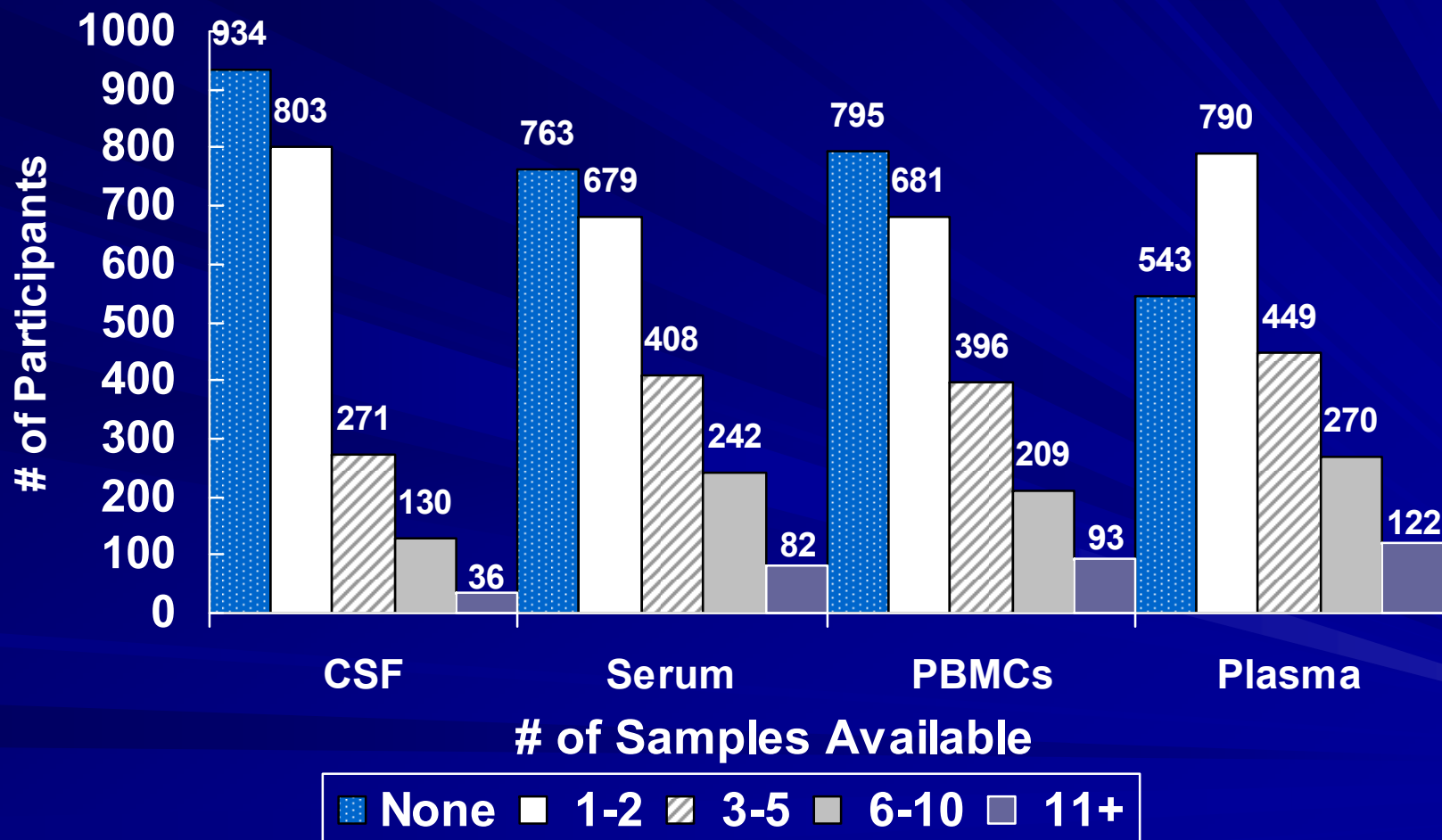


\*Group #'s reflect only those lost to follow-up (LTF) or administratively censored (AC) on study

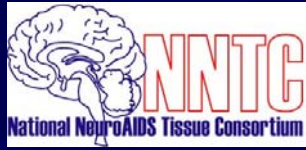


# Cohort Overview: HIV+

## Serial Fluid Sample Inventory

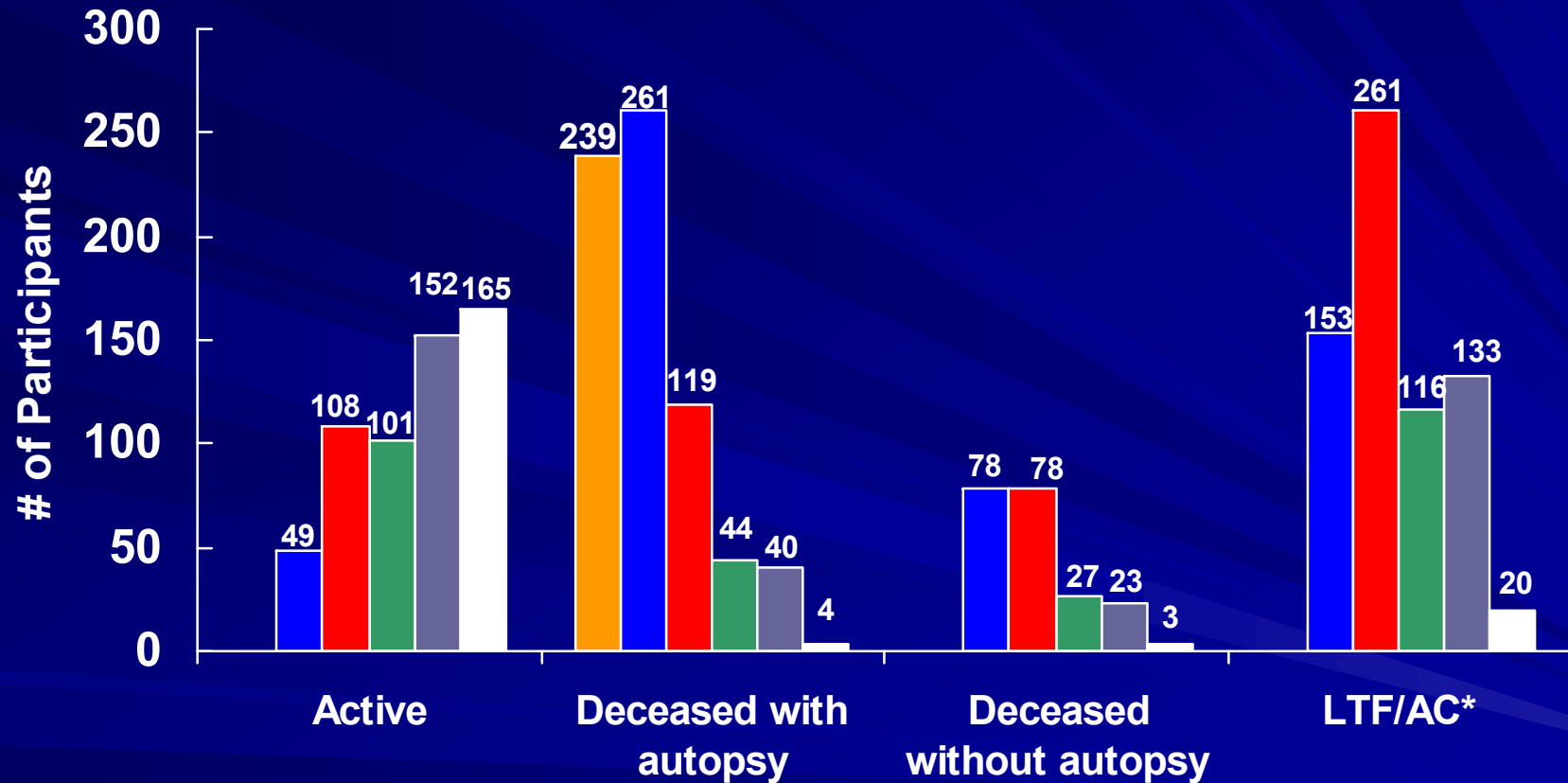


\*Inventory numbers include any post-mortem collection

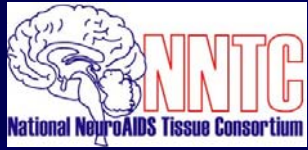


# Cohort Overview: HIV+

## Length of Study Participation

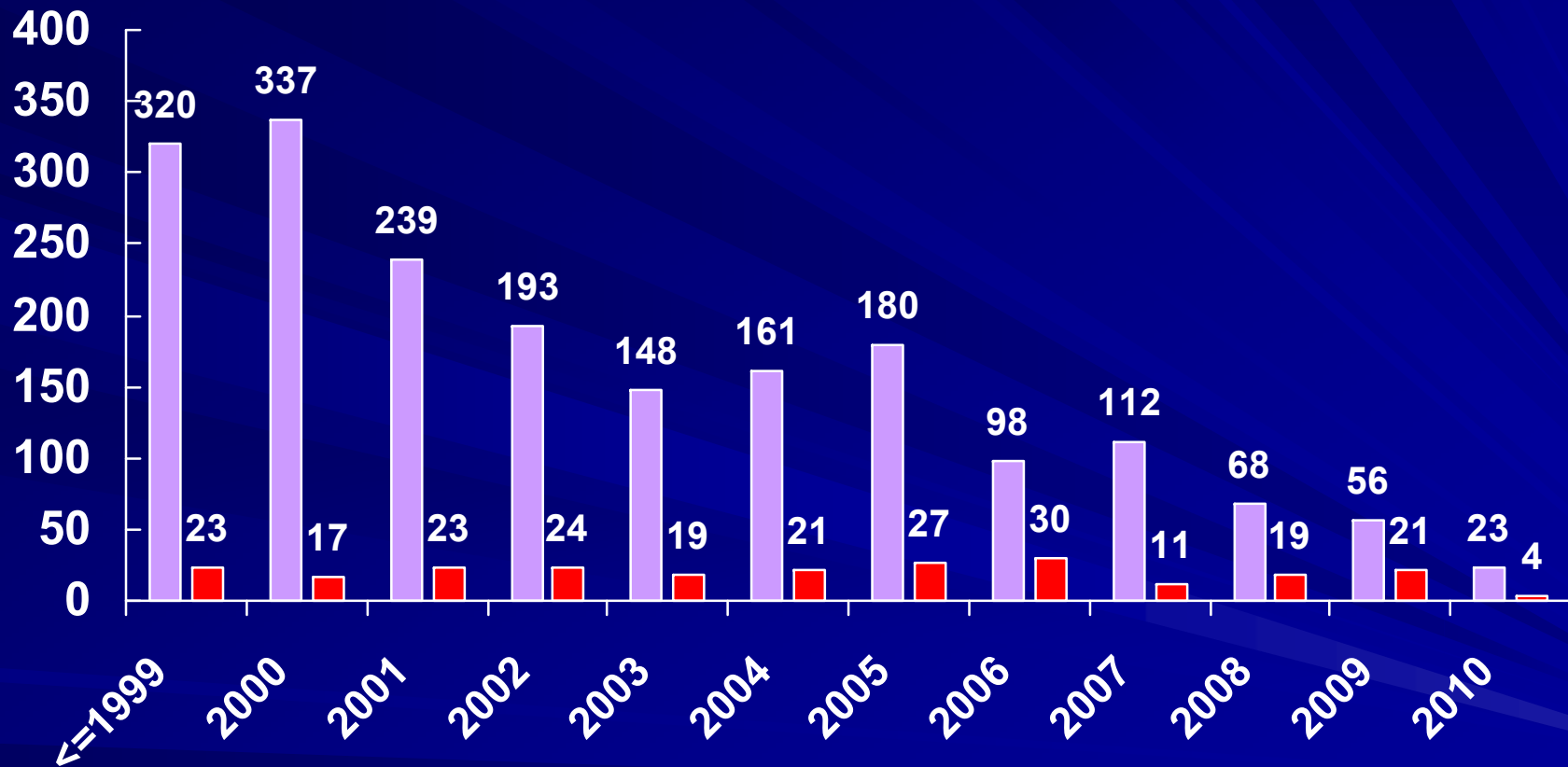


\*LTF= Lost to follow-up (LTF); AC= Administratively censored

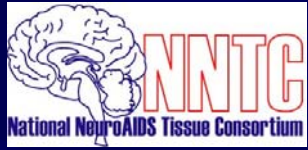


# Cohort Overview: HIV+

## Participants Enrolled by Year

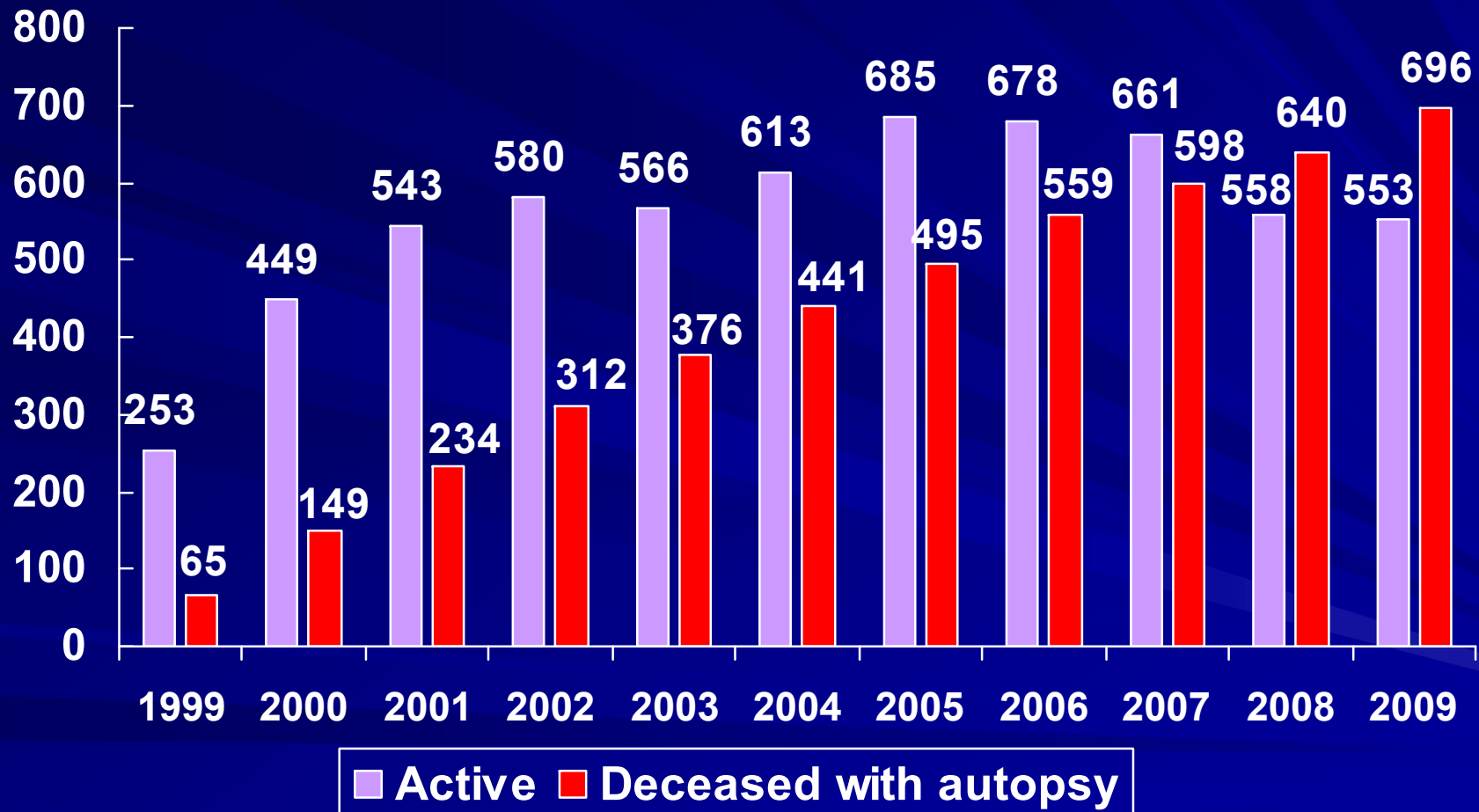


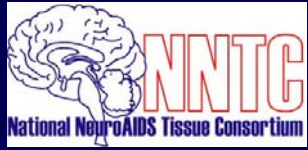
■ enrolled with follow-up ■ enrolled deceased with autopsy



# Cohort Overview: HIV+

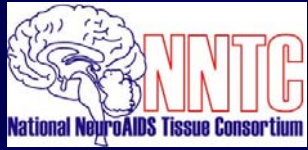
## Cohort Status Over Time





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# Longitudinal Cohort Overview



# Longitudinal Cohort: HIV+

## *Baseline Demographics*

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### Characteristics:

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**N** **1935**

### Age

**Mean** **43.2**

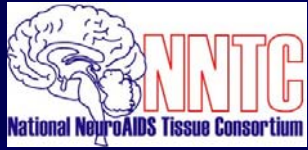
**SD** **8.6**

**25<sup>th</sup> Percentile** **37**

**Median** **42**

**75<sup>th</sup> Percentile** **49**

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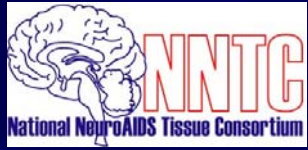


# Longitudinal Cohort: HIV+

## *Demographics*

### Characteristics:

|                  | <u>N</u> | <u>%</u> |
|------------------|----------|----------|
| <b>Gender</b>    |          |          |
| Male             | 1578     | 82       |
| Female           | 357      | 18       |
| <b>Ethnicity</b> |          |          |
| Hispanic origin  | 523      | 27       |
| <b>Race</b>      |          |          |
| White            | 1103     | 57       |
| Black            | 625      | 32       |
| Other            | 207      | 11       |



# Longitudinal Cohort: HIV+

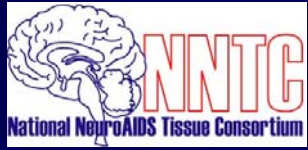
## *Baseline HIV Characteristics*

### Characteristics:

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|                    | <u>N</u> | <u>%</u> |
|--------------------|----------|----------|
| <b>HIV risk</b>    |          |          |
| IV drug use        | 486      | 25       |
| Male to male sex   | 873      | 45       |
| Heterosexual sex   | 375      | 19       |
| Other              | 201      | 10       |
| <br>               |          |          |
| <b>ARV med use</b> | 1472     | 76       |

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# Longitudinal Cohort: HIV+

## *Baseline HIV Characteristics*

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### Characteristics:

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#### CD4 count (N=1714)

|                                   |            |
|-----------------------------------|------------|
| <b>25<sup>th</sup> Percentile</b> | <b>34</b>  |
| <b>Median</b>                     | <b>123</b> |
| <b>75<sup>th</sup> Percentile</b> | <b>279</b> |

#### Log Plasma viral load (N=1599)

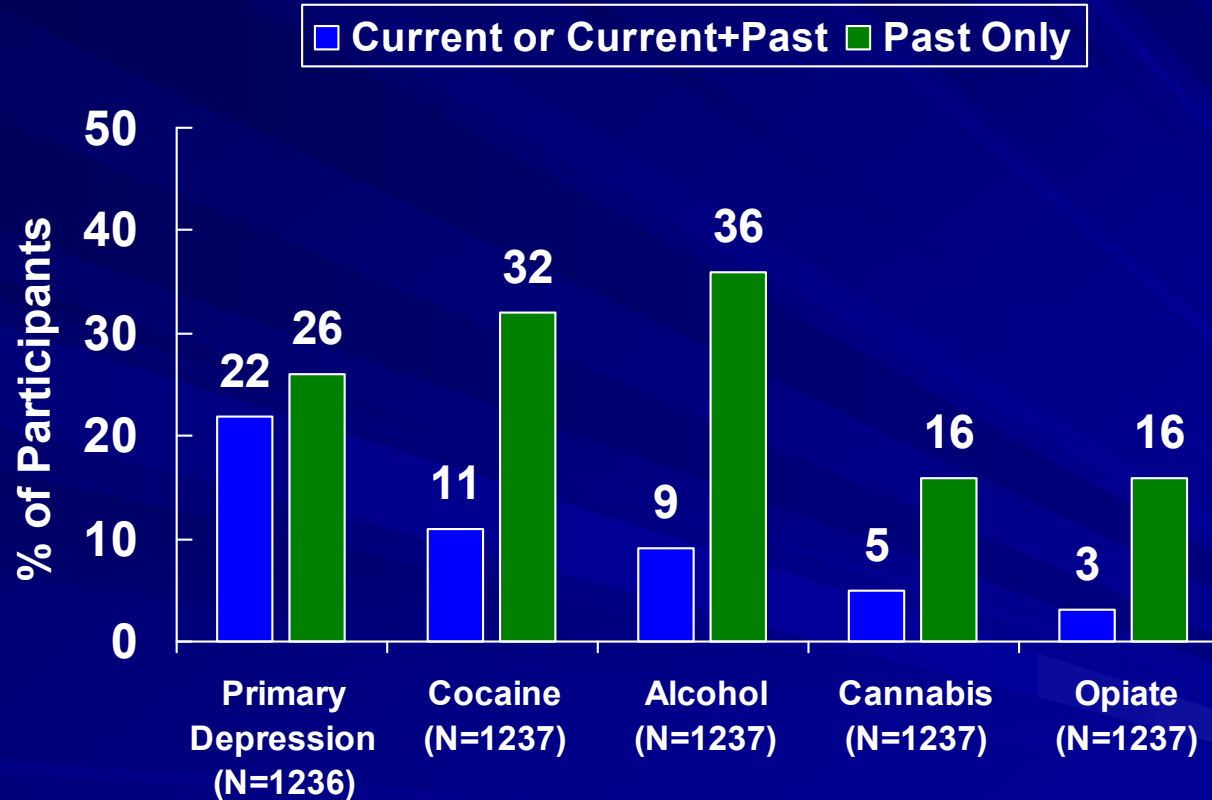
|                                   |            |
|-----------------------------------|------------|
| <b>25<sup>th</sup> Percentile</b> | <b>2.6</b> |
| <b>Median</b>                     | <b>3.3</b> |
| <b>75<sup>th</sup> Percentile</b> | <b>4.8</b> |

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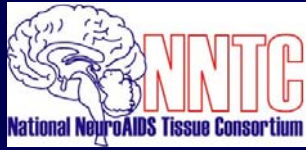
# Longitudinal Cohort: HIV+

## Baseline Psychiatric Diagnoses



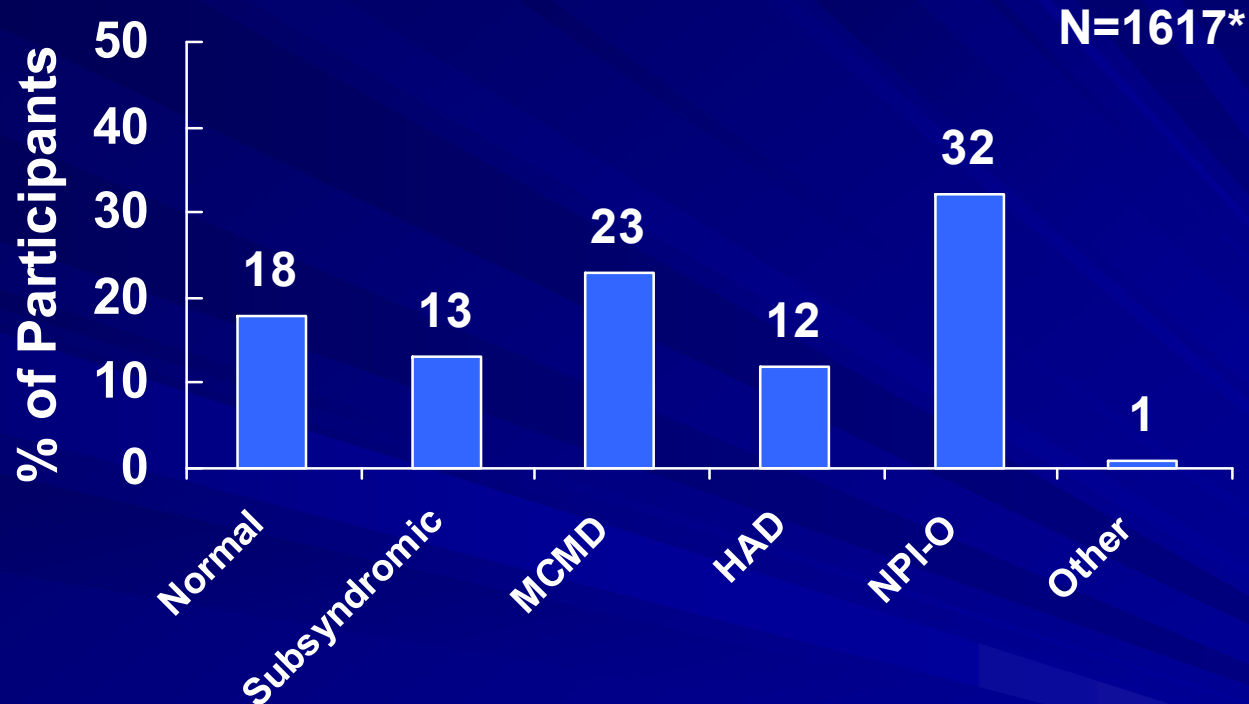
### Psychiatric Diagnosis: Dependence

\*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



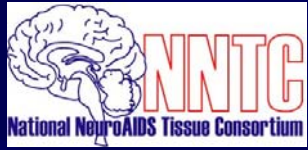
### Cognitive Diagnosis

MCMD = Minor Cognitive Motor Disorder

HAD = HIV – Associated Dementia

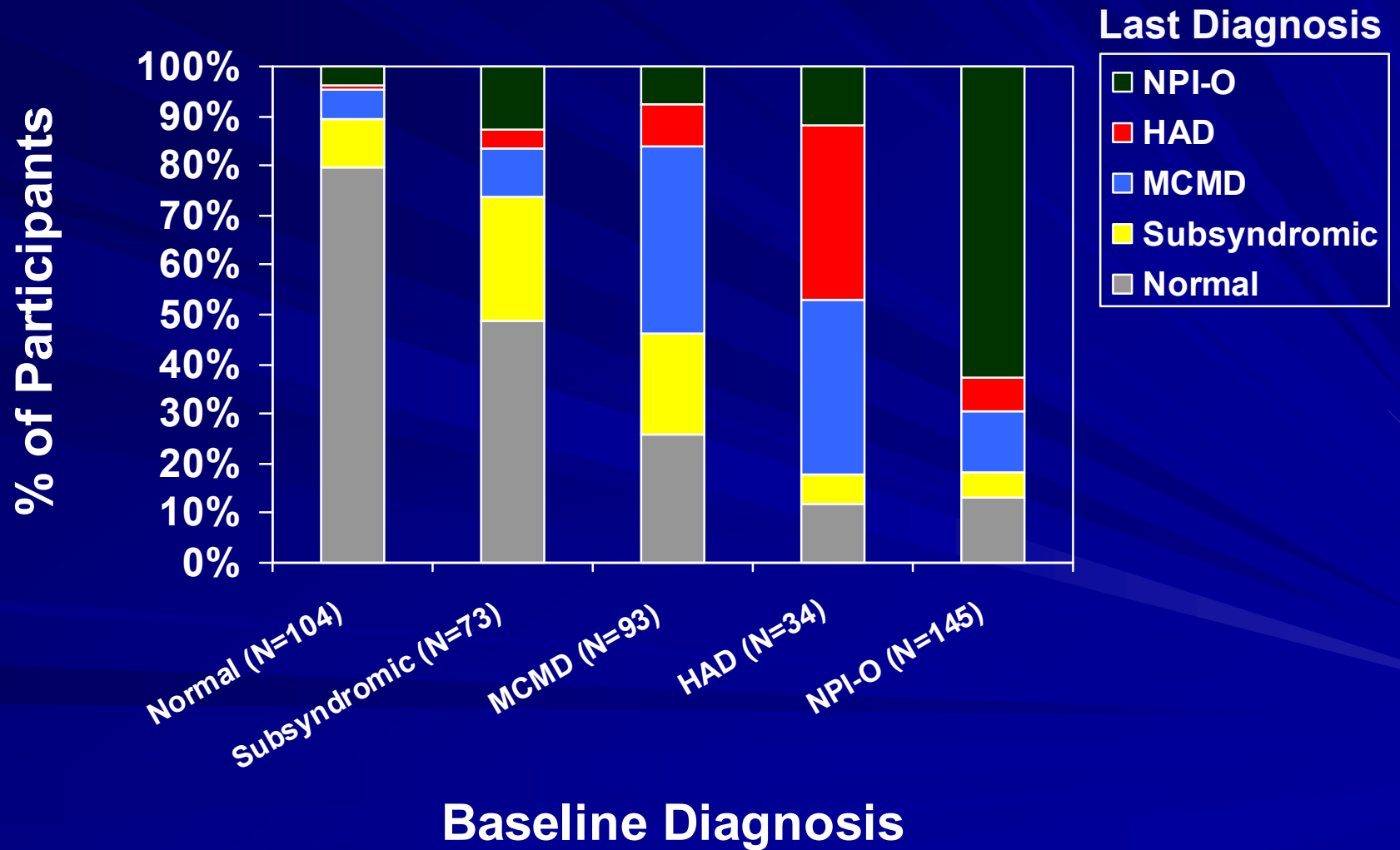
NPI-O = Neuropsychological Impairment- Other cause, not HIV

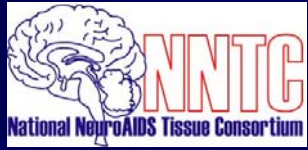
\*Please note the totals listed above reflect only those cases in the longitudinal cohort who were assigned a cognitive dx at baseline.



# Longitudinal Cohort : HIV+

## Change in Cognitive Diagnosis



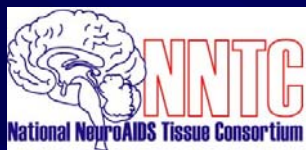


# Longitudinal Cohort: HIV+

## *Baseline Neurologic Diagnoses*

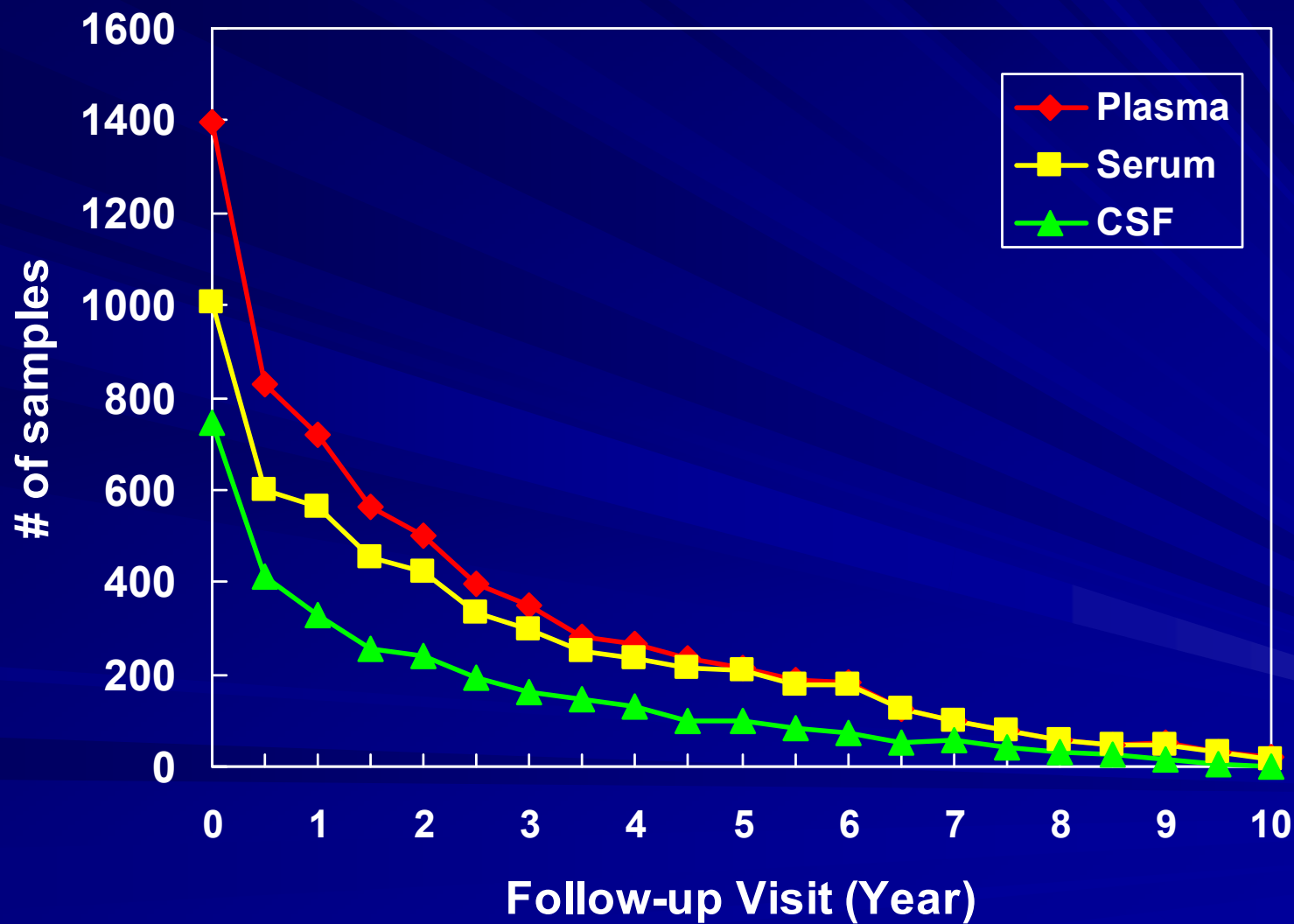
### Condition:

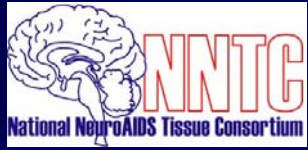
|                                     | <u>N</u> | <u>%</u> |
|-------------------------------------|----------|----------|
| <b>Clinical Myelopathy (N=1635)</b> |          |          |
| HIV associated                      | 159      | 10       |
| Other                               | 27       | 2        |
| None                                | 1449     | 89       |
| <b>Neuropathy (N=1538)</b>          |          |          |
| HIV associated DSP                  | 478      | 31       |
| Nucleoside-associated               | 10       | 1        |
| HIV / nucleoside                    | 196      | 13       |
| None                                | 854      | 56       |



# Longitudinal Cohort: HIV+

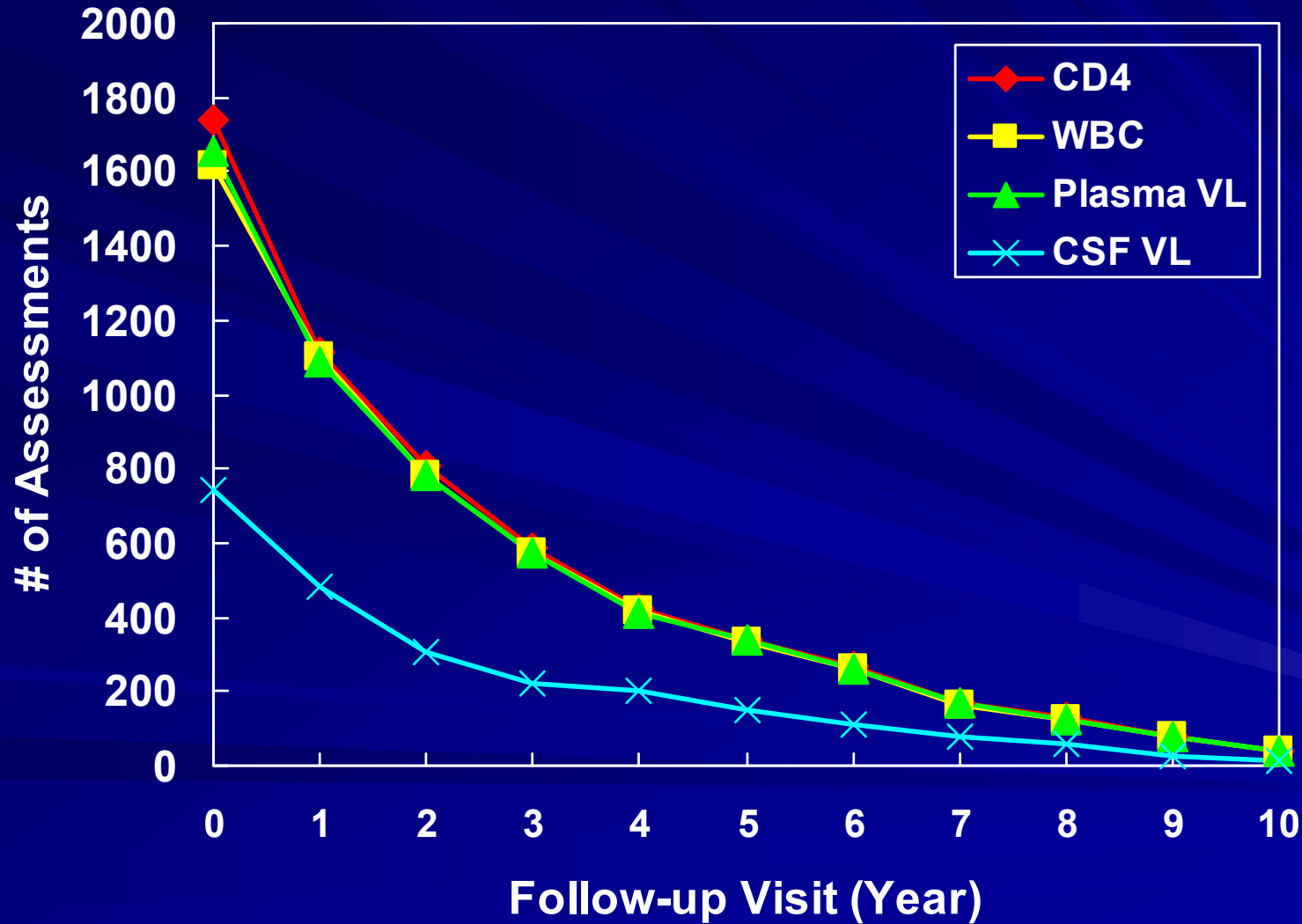
## Total Fluid Samples Available

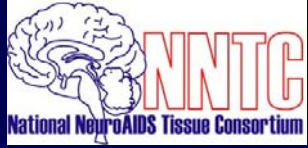




# Longitudinal Cohort: HIV+

## Total Assessments Completed





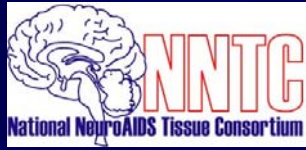
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# Tissue Bank Cohort Overview



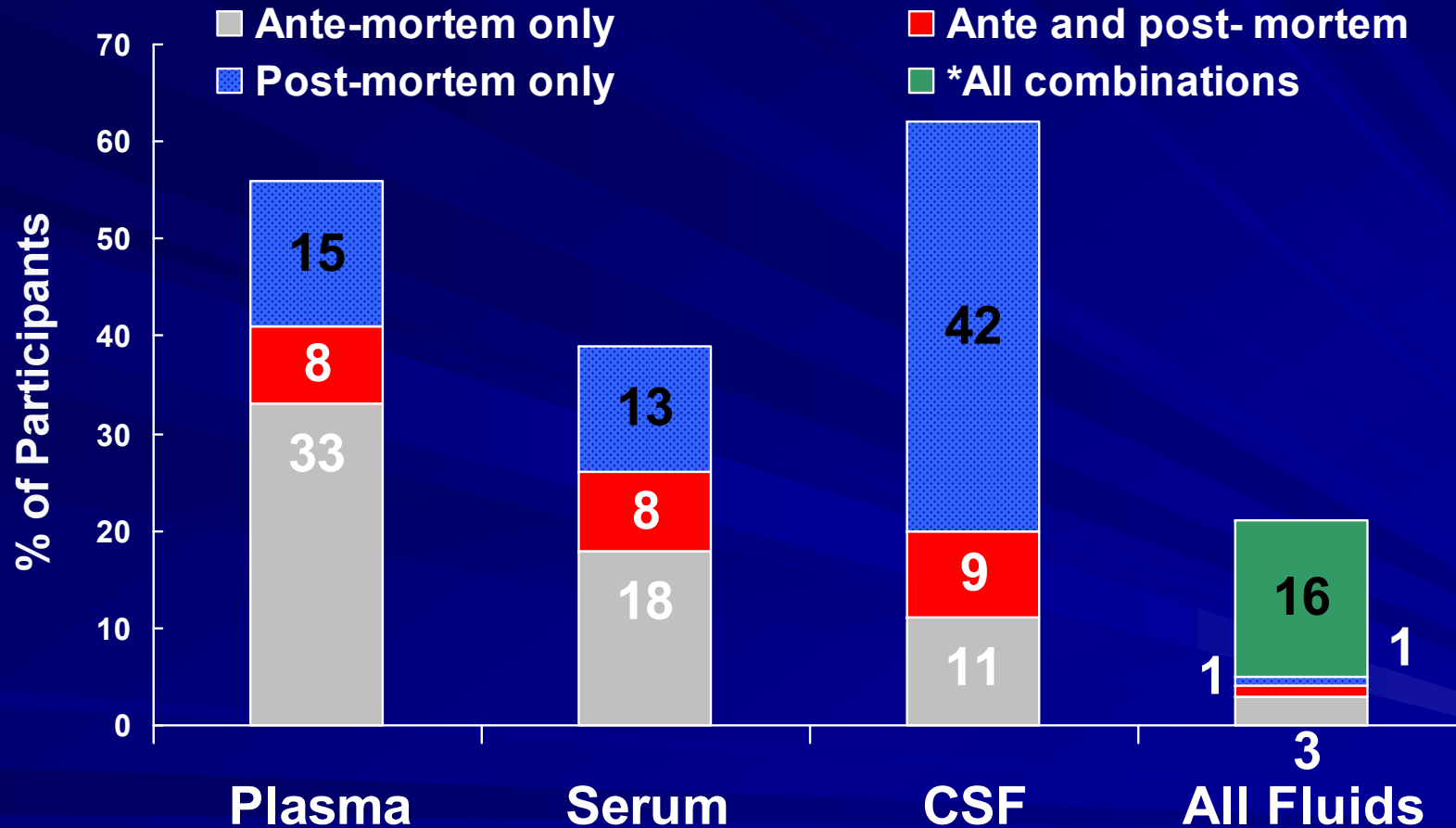
# Tissue Bank: HIV+ and HIV- CNS Specimens Available

| <b>Type:</b>        | <b>HIV+</b> | <b>HIV-</b> |
|---------------------|-------------|-------------|
| Fixed brain         | 630         | 158         |
| Frozen brain        | 646         | 158         |
| Spinal cord         | 664         | 135         |
| Liver               | 619         | 128         |
| Spleen              | 604         | 120         |
| Peripheral Nerve    | 566         | 107         |
| Dorsal Root Ganglia | 533         | 112         |
| Lymph node          | 509         | 83          |
| Bone Marrow         | 502         | 84          |
| Heart               | 422         | 66          |
| Kidney              | 299         | 71          |
| Lung                | 272         | 62          |
| Eye                 | 36          | 2           |



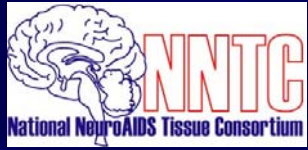
# Tissue Bank: HIV+

## Fluids Available (%)\*



\*All-combinations (i.e., 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

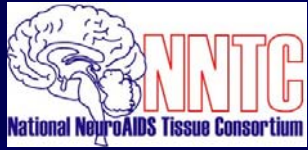


# Tissue Bank: HIV+

## Demographics\*

| <b>Characteristic:</b>            | <b>At Time of Death</b> |
|-----------------------------------|-------------------------|
| <b>N</b>                          | <b>630</b>              |
| <b>Age</b>                        |                         |
| <b>Mean</b>                       | <b>46.3</b>             |
| <b>SD</b>                         | <b>9.9</b>              |
| <b>25<sup>th</sup> Percentile</b> | <b>39</b>               |
| <b>Median</b>                     | <b>45</b>               |
| <b>75<sup>th</sup> Percentile</b> | <b>53</b>               |

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



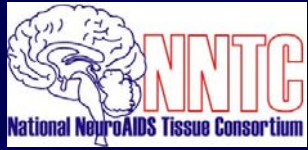
# Tissue Bank: HIV+

## *Demographics\**

### Characteristics:

|                  | <u>N</u> | <u>%</u> |
|------------------|----------|----------|
| <b>Gender</b>    |          |          |
| Male             | 517      | 82       |
| Female           | 113      | 18       |
| <b>Ethnicity</b> |          |          |
| Hispanic origin  | 183      | 29       |
| <b>Race</b>      |          |          |
| White            | 390      | 62       |
| Black            | 175      | 28       |
| Other            | 65       | 10       |

\*Cases with a fixed brain specimen available



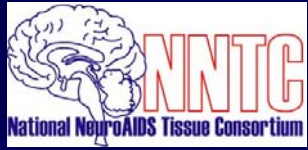
# Tissue Bank: HIV+

## *HIV Characteristics of autopsy cases\**

### Characteristics:

|                                 | <u>N</u> | <u>%</u> |
|---------------------------------|----------|----------|
| <b>Baseline HIV risk</b>        |          |          |
| IV drug use                     | 179      | 28       |
| Male to male sex                | 255      | 40       |
| Heterosexual sex                | 93       | 15       |
| Other                           | 103      | 16       |
| <br>                            |          |          |
| <b>ARV med use: at baseline</b> | 304      | 48       |
| at last visit                   | 352      | 56       |

**\*Cases with a fixed brain specimen available**



# Tissue Bank: HIV+

## *HIV Characteristics at time of death\**

| <b>Characteristic</b> | <b>At time of death</b> |
|-----------------------|-------------------------|
|-----------------------|-------------------------|

|                          |  |
|--------------------------|--|
| <b>CD4 count (N=502)</b> |  |
|--------------------------|--|

|                                   |           |
|-----------------------------------|-----------|
| <b>25<sup>th</sup> Percentile</b> | <b>12</b> |
|-----------------------------------|-----------|

|               |           |
|---------------|-----------|
| <b>Median</b> | <b>66</b> |
|---------------|-----------|

|                                   |            |
|-----------------------------------|------------|
| <b>75<sup>th</sup> Percentile</b> | <b>191</b> |
|-----------------------------------|------------|

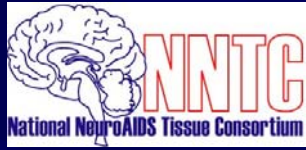
|                                      |  |
|--------------------------------------|--|
| <b>Log plasma viral load (N=456)</b> |  |
|--------------------------------------|--|

|                                   |            |
|-----------------------------------|------------|
| <b>25<sup>th</sup> Percentile</b> | <b>2.6</b> |
|-----------------------------------|------------|

|               |            |
|---------------|------------|
| <b>Median</b> | <b>4.3</b> |
|---------------|------------|

|                                   |            |
|-----------------------------------|------------|
| <b>75<sup>th</sup> Percentile</b> | <b>5.3</b> |
|-----------------------------------|------------|

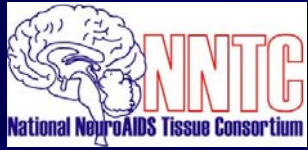
**\* Cases with a fixed brain specimen available in addition to both a baseline measurement and a measurement within 1 yr of death.**



# Tissue Bank: HIV+

## Pathological Conditions: Year of Autopsy

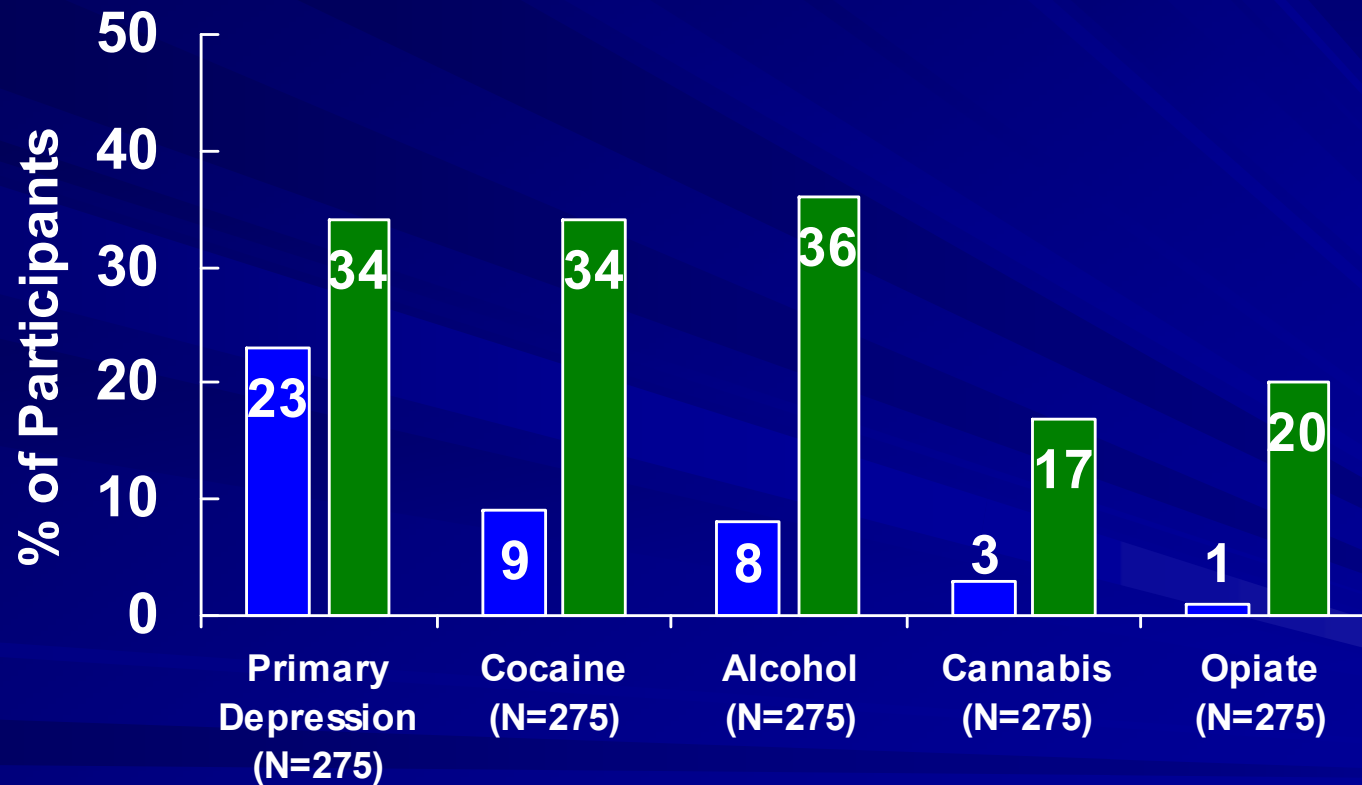
| TYPE:                                      | Year of Autopsy |           |              | Total Cases |
|--------------------------------------------|-----------------|-----------|--------------|-------------|
|                                            | 1998-2000       | 2001-2005 | 2006-present |             |
| <i>Total Fixed Specimens:</i>              | 144             | 304       | 180          | 628         |
| Normal/minor neuropath changes             | 34 (24%)        | 101 (33%) | 66 (37%)     | 201 (32%)   |
| Other non-infectious pathology             | 34 (24%)        | 56 (18%)  | 37 (21%)     | 127 (20%)   |
| Alzheimer's type 2 gliosis                 | 28 (19%)        | 46 (15%)  | 12 (7%)      | 86 (14%)    |
| HIV encephalitis                           | 24 (17%)        | 31 (10%)  | 17 (9%)      | 72 (11%)    |
| Focal infarct                              | 13 (9%)         | 38 (13%)  | 17 (9%)      | 68 (11%)    |
| Hypoxic/ischemic damage                    | 14 (10%)        | 16 (5%)   | 17 (9%)      | 47 (7%)     |
| Aseptic Leptomeningitis                    | 11 (8%)         | 14 (5%)   | 11 (6%)      | 36 (6%)     |
| Microglial nodule encephalitis             | 14 (10%)        | 17 (6%)   | 8 (4%)       | 39 (6%)     |
| Hemorrhage-parenchymal                     | 7 (5%)          | 12 (4%)   | 12 (7%)      | 31 (5%)     |
| Primary CNS lymphoma                       | 11 (8%)         | 12 (4%)   | 5 (3%)       | 28 (4%)     |
| Other infections                           | 9 (6%)          | 14 (5%)   | 4 (2%)       | 27 (4%)     |
| Progressive Multifocal Leucoencephalopathy | 3 (2%)          | 17 (6%)   | 9 (5%)       | 29 (5%)     |
| Cytomegalovirus encephalitis               | 7 (5%)          | 14 (5%)   | 3 (2%)       | 24 (4%)     |
| Cryptococcus                               | 6 (4%)          | 9 (3%)    | 9 (5%)       | 24 (4%)     |



# Tissue Bank: HIV+

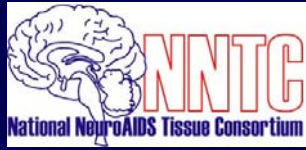
## Last Psychiatric Diagnosis

■ Current or Current+Past ■ Past Only



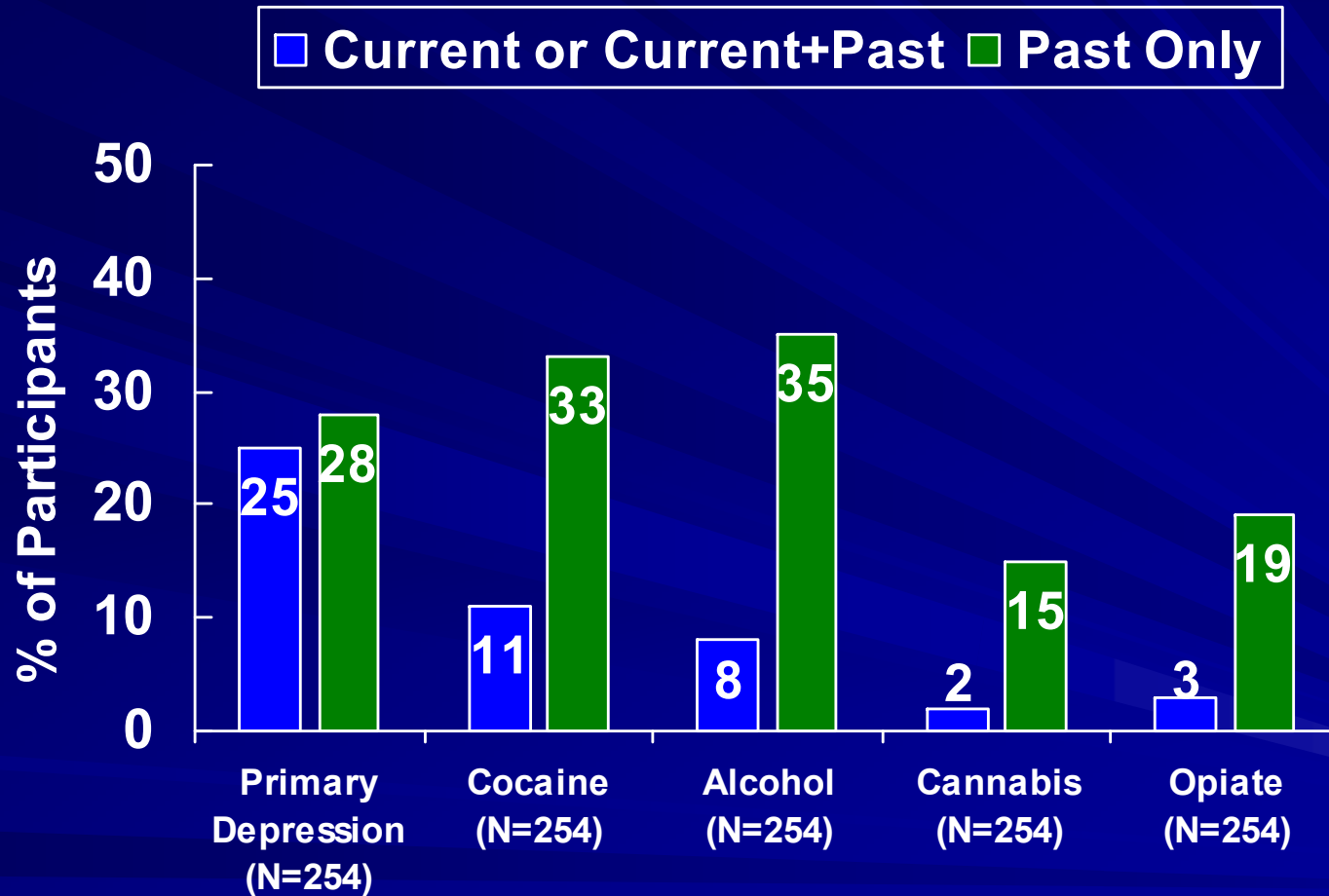
### Psychiatric Diagnosis: Dependence

\*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. 06-04-2010



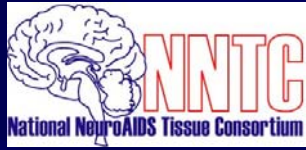
# Tissue Bank: HIV+

## Baseline Psychiatric Diagnosis



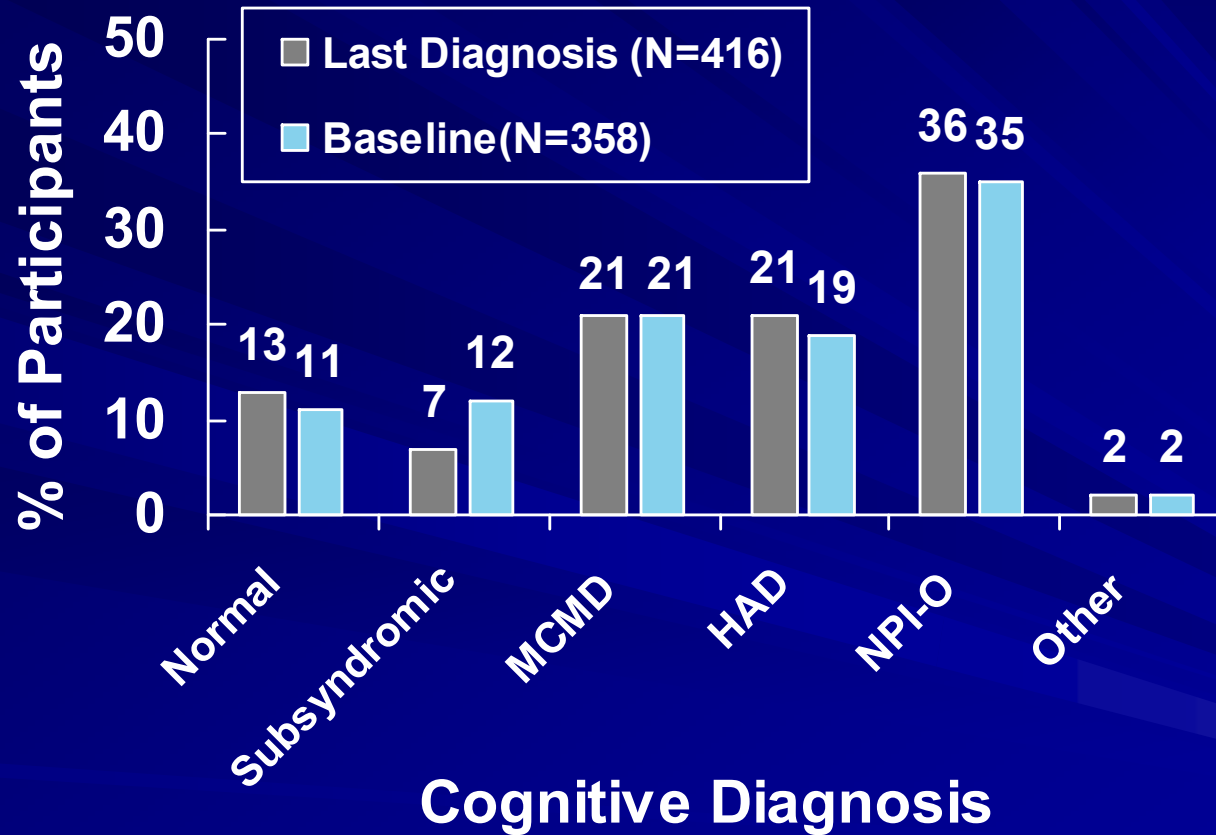
### Psychiatric Diagnosis: Dependence

\*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. 06-04-2010



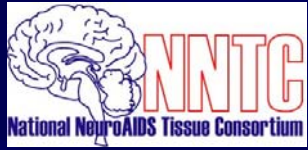
# Tissue Bank: HIV+

## Cognitive Diagnosis (%)



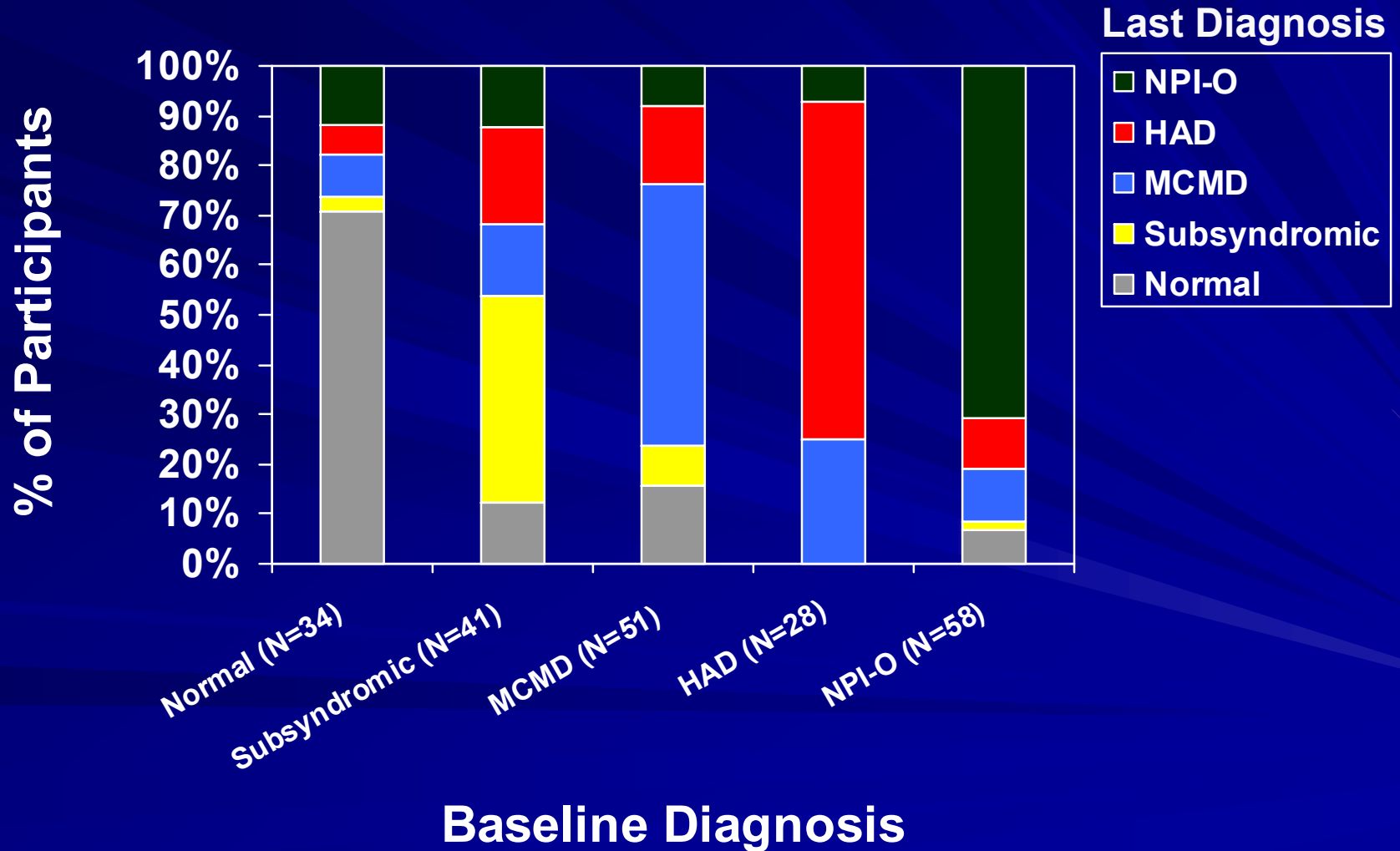
MCMD = Minor Cognitive Motor Disorder  
HAD = HIV – Associated Dementia  
NPI-O = Neurological Impairment- Other cause, not HIV

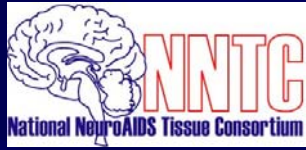
\*Please note the totals listed above reflect only those cases who have a fixed brain sample available.



# 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> |
| <b>Clinical Myelopathy</b> | N=387    |          | N=360    |          |
| HIV associated             | 52       | 13       | 48       | 13       |
| Other                      | 10       | 3        | 8        | 2        |
| None                       | 325      | 84       | 304      | 84       |
| <b>Neuropathy</b>          | N=332    |          | N=315    |          |
| HIV associated DSP         | 132      | 39       | 109      | 35       |
| Nucleoside-associated      | 4        | 1        | 2        | 1        |
| HIV / nucleoside           | 55       | 17       | 50       | 16       |
| None                       | 141      | 42       | 154      | 49       |

\*Cases with a fixed brain specimen available