DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Centers for Disease Control

Memorandum

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From Jane Getchell
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Subject Comparison of Sensitivity & Specificity of Western Blot and ELISA

To Dr. James W. Curran
Director, AIDS Activity

SPECIFICITY OF WESTERN BLOT AND ELISA

True Negatives are:

SLE	10
RA	10
CDC Controls	50
Normal Donors	58
Total	128

Negative by WB: 124

Negative by ELISA: 123

Specificity of WB = $\frac{124}{128}$ = 96.9%

Specificity of ELISA = $\frac{114}{119}$ = 95.8%

3 random normal donors + by both tests
1 random normal donors + by WB only
1 random normal donors + by ELISA only

Actually, both are remarkable serologic tests.
But this will continue to cause problems.
Was there unexplained?

WW 1-28-85

SENSITIVITY OF WESTERN BLOT AND ELISA

True Positives are:

		Neg by WB
Hemophiliacs with OI	18	4
TA/AIDS with OI or PCP	12	1
TA/AIDS high risk donors with LAS	7	
Homosexuals with PCP	18	3
Homosexuals with KS	27	4
Homosexuals with OI	6	1
Homosexuals with LAS	69	7
IV Drugs Users with OI, KS or PCP	11	1
Haitians with OI	4	
Total	172	21

Positive by WB: 151

$$\text{Sensitivity} = \frac{151}{172} = 87.8\%$$

Positive by ELISA 141 of 154

Sensitivity = 90.6%

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