

Validations of New DBS Assays

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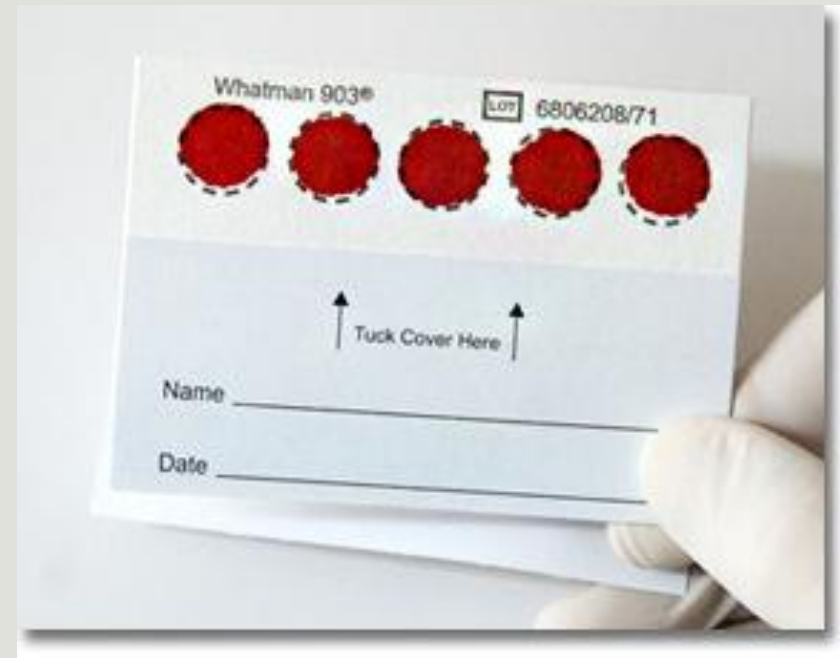
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Dried Blood Spot Assays

- IL 6
- Vitamin D
- EBV
- CMV
- Link between EBV and CMV



Procedures

Blood collected in Los Angeles from a volunteer sample of about 90 people

- venous blood collected and DBS made at the same time
- Shipped frozen to Seattle, Washington

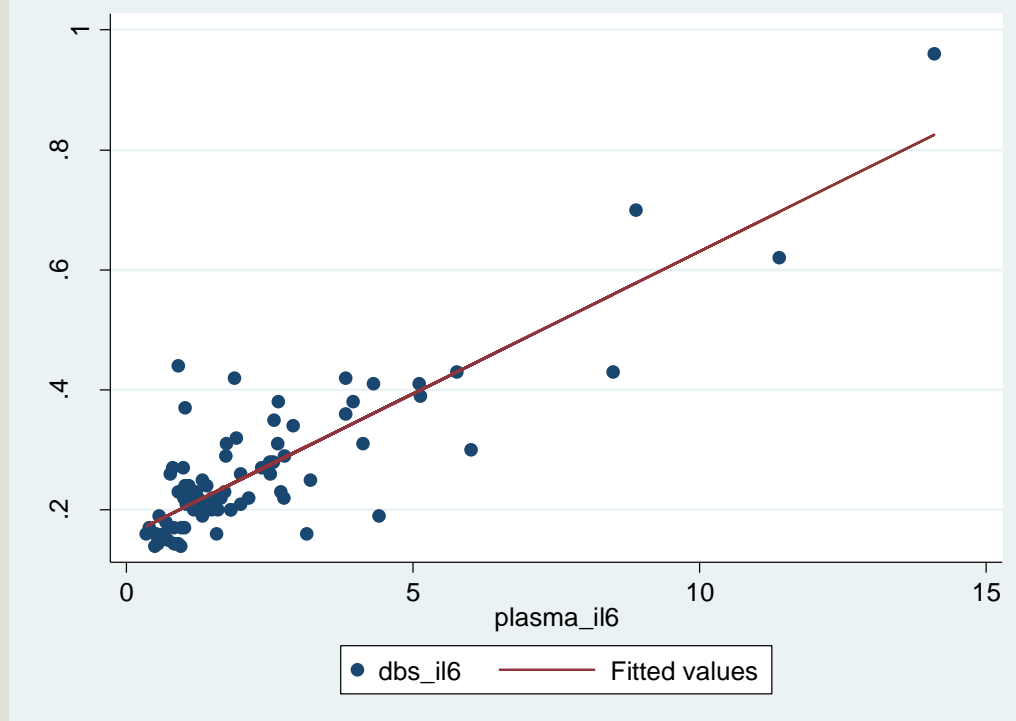
Assays done at the University of Washington lab.

Compare the assay values

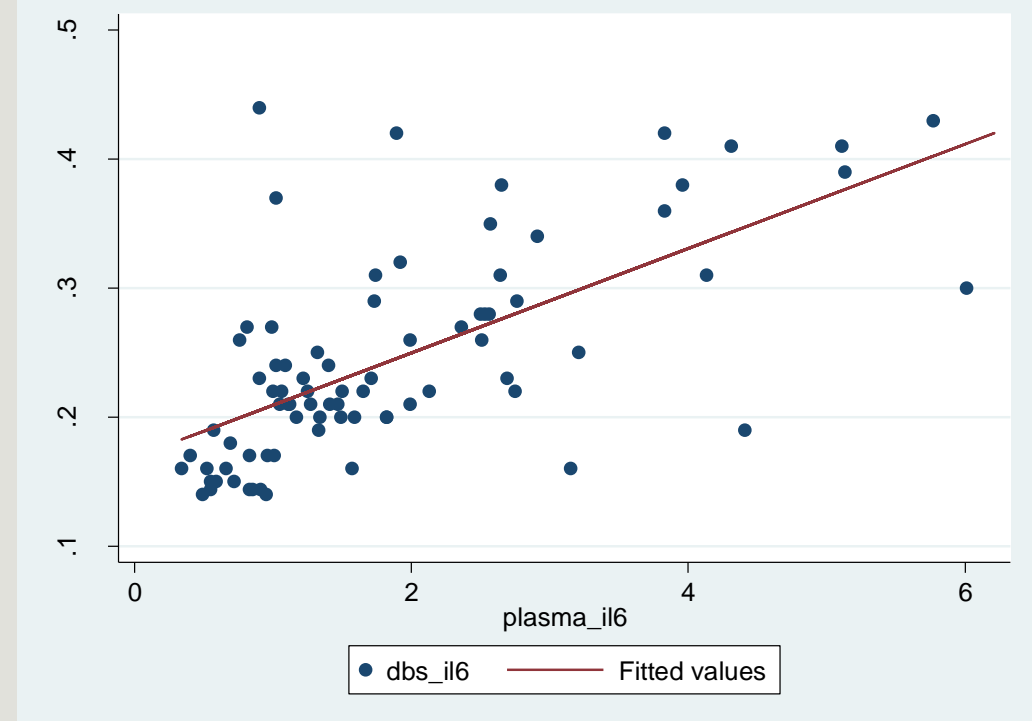
IL-6 – Cytokine – Inflammatory marker

Moderately strong relationship Plasma and DBS

Correlation Coefficient - DBS and Plasma – 0.74

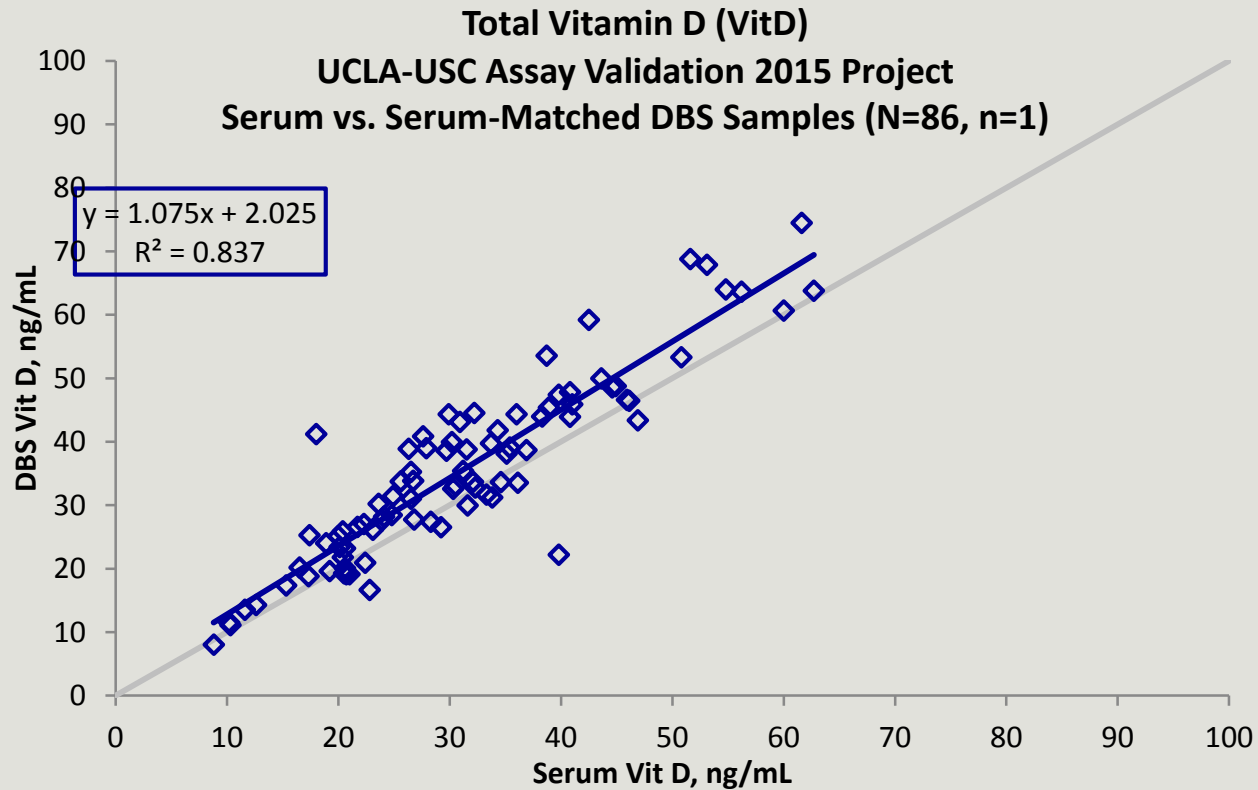


4 Plasma values >8 elim-Correlation Coefficient 0.43



Total Vitamin D – Strong relationship between Serum vs. DBS

Correlation coefficient - .84



First Determine Positivity to – EBV and CMV

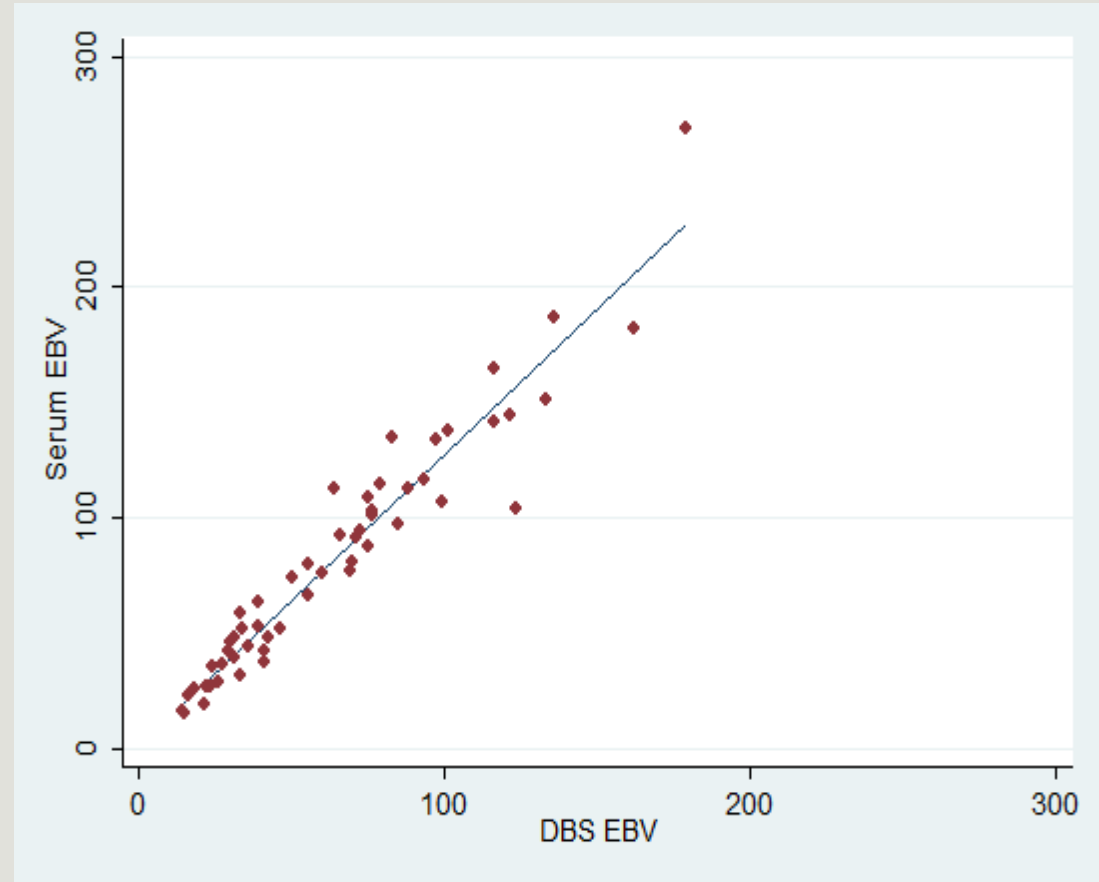
Only look at antibody level among
Positive Cases for CMV and EBV

EBV 92% positive in DBS

CMV 69% positive in DBS

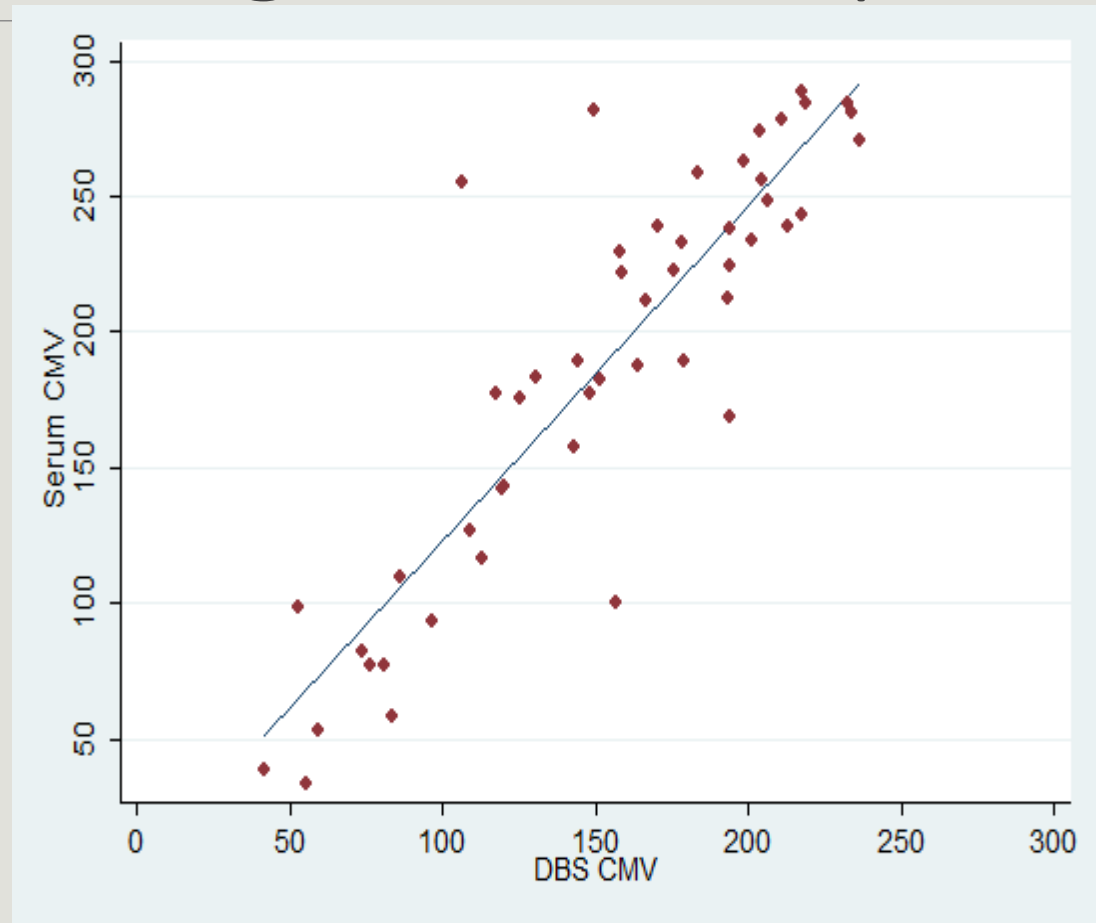
EBV antibody level versus Serum level among positive cases – Strong relationship

Correlation Coeff = 0.94 (p<.0001)



CMV antibody level versus serum level among positives – Strong relationship

Correlation Coeff = 0.89 (p<.0001)

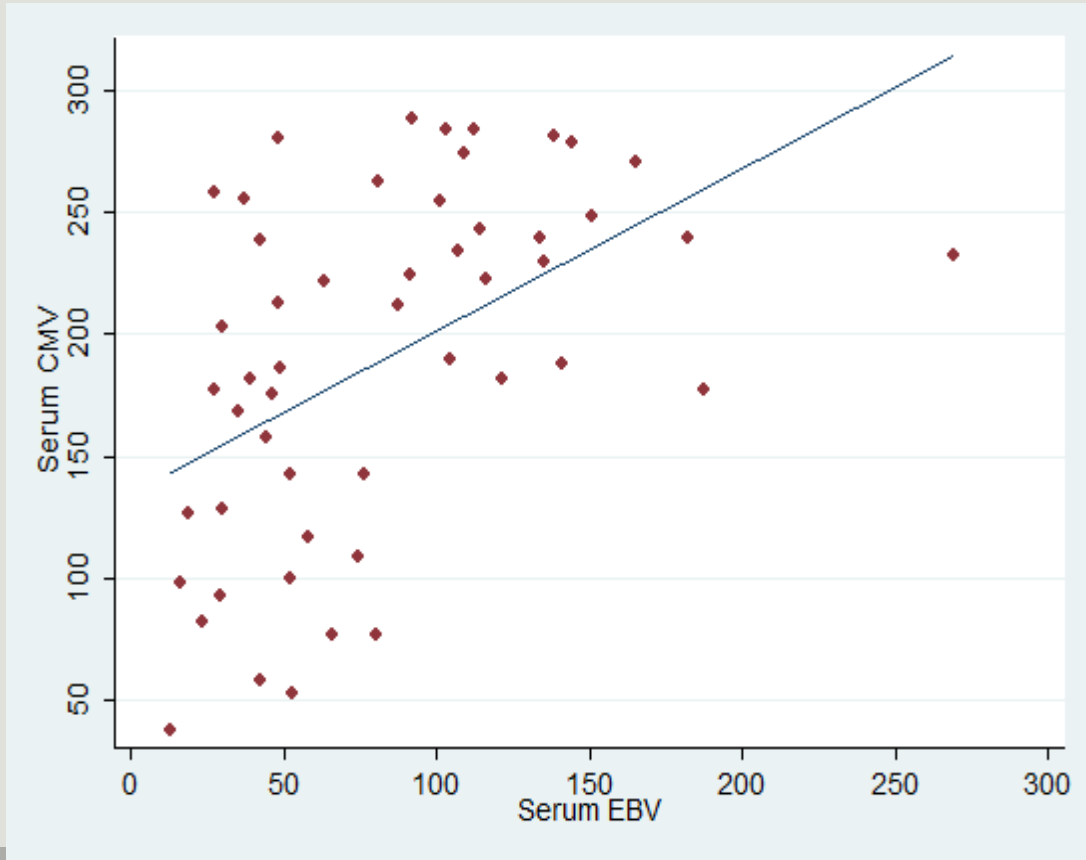


EBV and CMV antibodies – Serum and DBS

Weak relationship to each other in both Serum and DBS

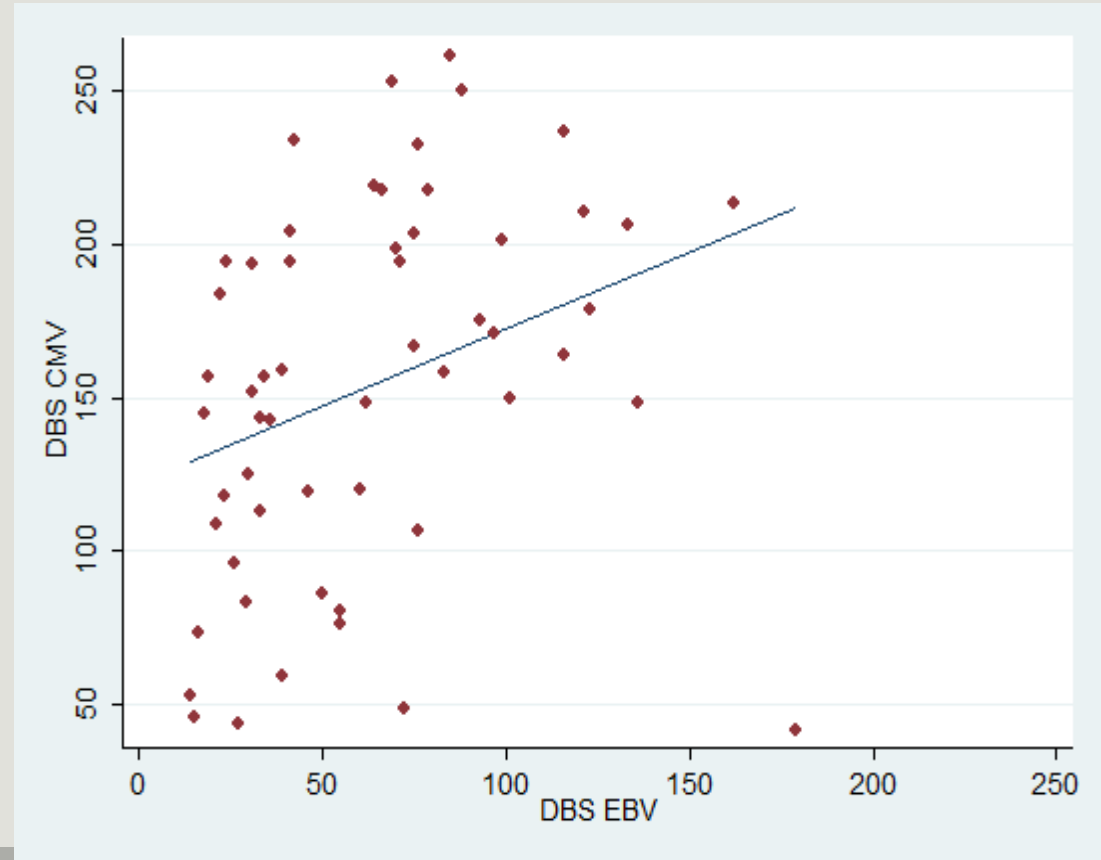
Serum

Correlation Coefficient=0.49



DBS

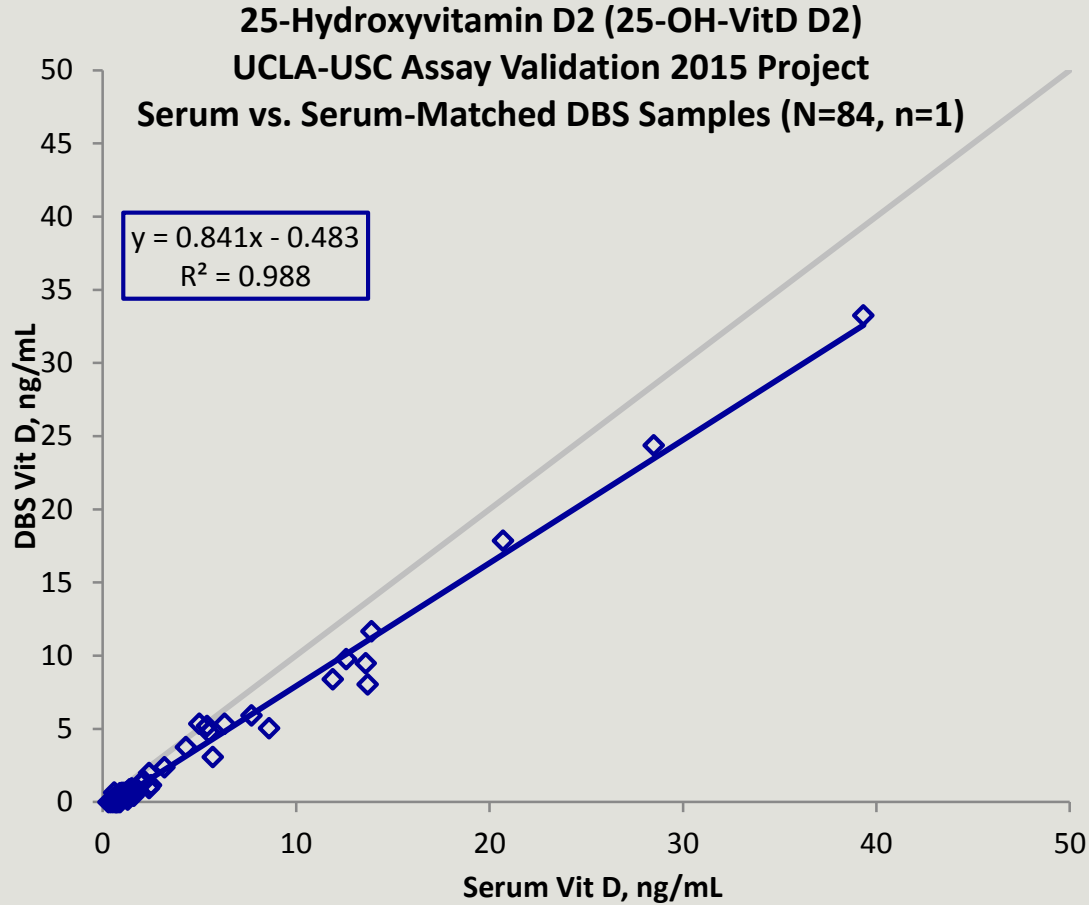
Correlation Coefficient=0.33



- Options for DBS assay have increased
- More evidence that not all assays are equally reliable and valid in DBS
- Antibodies to EBV and CMV not very strongly related

Vitamin D – Two Components measures of Total Vitamin D versus DBS

Correlation Coefficient - .99



Correlation Coefficient - .88

