The Effects of Fluorescent Light on Serum Vitamin D 25-OH Level in Adults with Cystic Fibrosis
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Background
- Adequate intake of vitamin D in our daily diet is important for the absorption of calcium and the maintenance of bone health [Institute of Medicine (IOM) Report Brief, Nov 2010]
- According to the Cystic Fibrosis (CF) Foundation people with CF are prone to lung infections with inflammation which may lead to bone loss
- CF patients diagnosed with pancreatic insufficiency experience deficiency in absorbing fat soluble vitamins and nutrients

Methods
- Experimental pilot study
- Data collected during the Summer and early Fall 2012
- Sample Selection – will be 20 patients

Inclusion Criteria
- Patients with CF diagnosis
- 18 years of age and older
- Receiving their CF care at Vanderbilt
- Due for an annual vitamin D 25 OH level check or post vitamin D high dose replacement therapy

Exclusion Criteria
- Patients not diagnosed with CF
- CF patients who do not get their care at Vanderbilt Adult Cystic Fibrosis Center
- Patients that are not due for annual vitamin D 25 OH level check or recheck post repletion

- Identical sets of serum vitamin D 25 OH level were measured
- One sample was protected from fluorescent light and the other was not
- The sets were then analyzed in the lab for differences in levels of serum vitamin D 25 OH

Preliminary Results
- Data collected on 15 patients
- The Wilcoxon Signed Rank Test used to analyze the data
- No statistically significant differences in the values of serum vitamin D 25 OH between the protected and unprotected samples

N = 15, P value = .05

Implications
- There is no immediate need to change practice based on these results
- Findings are consistent with the way vitamin D 25 OH level is collected from our Cystic Fibrosis patients at present
- Recommend that further studies be conducted at other CF care centers throughout the US during different seasons

Acknowledgements
Vanderbilt University Adult Cystic Fibrosis Clinic; Nancy Wells, DNSc, RN, FAAN; James Barnett, PH.D,MSN,RN; Donna Ruth, MSN, RN; Vicki Sandlin, MSN, RN; Kerry Harville, BS.