

**“A STUDY OF ALTERNATE BIOMARKERS IN HIV DISEASE AND EVALUATING THEIR EFFICACY IN PREDICTING T CD4+ CELL COUNTS AND DISEASE PROGRESSION IN RESOURCE POOR SETTINGS IN HIGHLY ACTIVE ANTIRETROVIRAL THERAPY (HAART) ERA”**

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Human Immunodeficiency Virus (HIV), the causative agent in AIDS has been a challenge to medical fraternity from the time since it was first discovered in 1983. Traditionally HIV disease and progression, initiation of HAART and response to therapy is monitored by assessing in regular intervals (6 months) the T CD4+ cell counts and plasma HIV/RNA viral load. Resource poor, low and low middle income group countries still have no finances to acquire infrastructure and scientific technology to perform such tests. Very few studies are available that have demonstrated the role of alternate biomarkers that can be used to predict CD4 cell counts and thereby monitor HIV disease progression and HAART. The study was carried out at Apollo Health City, a tertiary care hospital between June 2011 to May 2012, which included 250 HIV sero-positive and antiretroviral therapy naive individuals attending Integrated Counseling and Testing Centre (ICTC) situated at Area hospital Siddipet. Absolute TCD4+cell counts, CD8+T-cell counts were measured using flow cytometer. (MMWR Recommendations and Reports, 1992) TLC; HB%, AEC and ESR were estimated using conventional hematological methods. CRP was evaluated by latex agglutination test (Immuno CRP Latex Agglutination Test). The cut-off for T CD4 + cell counts is taken as < 200 cell/mm<sup>3</sup> and < 350

cell/mm<sup>3</sup>. The other variables with different cut-off values including ESR (>20 mm), AEC (>350 and > 550 cell/mm<sup>3</sup>), TLC (< 2500 cell/mm<sup>3</sup> and <1800 cell/mm<sup>3</sup>), HB (<10) and CRP (>1.2) were included based on the WHO criteria and the published literature.