THE ASSOCIATION OF BLOOD CELLS AND CAROTID INTIMA-MEDIA THICKNESS OF 2769 ASYMPTOMATIC SUBJECTS OF TAIWAN

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Background and aims: Reports concerning carotid intima-media thickness (CIMT) and linear correlation to blood cells previously are not well established, especially not in left from right side of healthy men and women in Taiwan motivates this investigation.

Methods: 2769 asymptomatic persons, age 35-75 were separated into four groups: men's Lt, men's Rt, women's Lt, women's Rt for analysis of CIMT vs. 8 factors from CBC results. All data analyzed after been calculated as grouping of same year of age.

Results: The power of regression equation of CIMT to CBC factors for men's Lt is 79.4%; men's Rt 77.3%; women's Lt =70.5%; women's Rt 72.3%. Those factors and their cut points of group in same directions are: RBC, 6.0*106/ul of men's Lt and Rt; RBC, 4.4*106/ul of men's Rt; Hct, 50% of men's Lt and Rt; Hct, 39% of men's Lt and Rt ; and in reverse directions are: Hgb, 12.0g/dl of women's Lt and Rt; MCV, 70fl of men's Lt; PLT, 140*103/ul of men's Lt; Hct, 36% of women's Lt; MCH, 25.4pg of men's Lt and Rt; MCH, 25.4pg of women's Lt; MCHC, 31.0 g/dl of women's Lt;

Conclusions: There is good explanation of regression equation of all 4 groups. Overall, WBC showed no difference of all four groups in all cut points and PLT in lower limit cut point had significant reverse effect in men's Lt CIMT. While most significant factors cut points are existing among all of RBC's multiple indexes as RBC, Hct, Hb, MCV, MCH and MCHC.