

## Concordance between reticulocyte hemoglobin equivalent and reticulocyte hemoglobin content in ckd patients undergoing hemodialysis

Riadi Wirawan, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=9999920575048&lokasi=lokal>

---

### Abstrak

**Aim:** to evaluate the correlation and the concordance between reticulocyte hemoglobin equivalent (RET-He) and reticulocyte hemoglobin content (CHr) as well as to obtain the cut-off value of RET-He as the target of iron supplementation in chronic kidney disease (CKD) patients undergoing hemodialysis.

**Methods:** a cross-sectional study was performed using K3EDTA-anticoagulated peripheral blood samples collected from 106 CKD patients undergoing routine hemodialysis. The samples were then analyzed using both Sysmex XN-2000 and Siemens ADVIA 2120i for RET-He and CHr analysis.

**Results:** a very strong correlation ( $r=0.91$ ;  $p<0.0001$ ) and a good concordance were found between RET-He and CHr with mean bias of 0.5 pg. The diagnostic concordance was 96.23%. The cut-off value of RET-He 29.2 pg was obtained from the receiver operating characteristic (ROC) curve with CHr as the gold standard. At this cut-off point, the sensitivity and specificity to assess the target of iron supplementation in CKD patients undergoing hemodialysis were 95.5% and 94%, respectively. **Conclusion:** the study shows a good correlation and concordance between RET-He and CHr in CKD patients undergoing hemodialysis.

.....**Tujuan:** mendapatkan korelasi dan kesesuaian antara nilai reticulocyte hemoglobin equivalent (RET-He) dan reticulocyte hemoglobin content (CHr), serta nilai cut-off RET-He sebagai target terapi suplementasi besi pada pasien dengan penyakit ginjal kronik (PGK) yang menjalani hemodialisis.

**Metode:** penelitian ini menggunakan desain potong lintang terhadap 106 pasien PGK dengan hemodialisis rutin yang dilakukan pengambilan darah K3EDTA untuk pemeriksaan RET-He dengan Sysmex XN-2000 dan CHr dengan Siemens ADVIA 2120i. **Hasil:** didapatkan korelasi sangat kuat ( $r=0,91$ ;  $p<0,0001$ ) dan kesesuaian yang baik antara nilai RET-He dan CHr dengan perbedaan rerata 0,5 pg. Sebanyak 96,23% data berada dalam batas kesesuaian. Nilai cut-off RET-He 29,2 pg didapatkan dari analisis kurva receiver operating characteristic (ROC) dengan CHr sebagai standar baku emas. Nilai cut-off RET-He 29,2 pg memiliki sensitivitas 95,5% dan spesifisitas 94%.

**Kesimpulan:** penelitian ini menunjukkan korelasi dan kesesuaian yang baik antara RET-He dan CHr pada pasien PGK dengan hemodialisis