**Estimated Fetal Weight R Script Code**

###### BEGINNING OF SCRIPT ##########

 #new IG centiles for hadlock EFW (from  <https://doi.org/10.1002/uog.22000> )

Mu = function(t) -2.42272 + 1.86478\*t^0.5 - 1.93299e-5 \* t^3  
Nu = function(t) 9.43643 + 9.41579\*(t/10)^-2  - 83.54220 \* log(t/10)\*(t/10)^-2  
Sigma = function(t) 0.0193557  + 0.0310716 \* (t/10)^-2 - 0.0657587 \* log(t/10)\*(t/10)^-2  
  
Q = function(Z,t)  exp(Mu(t)\*((Z\*Sigma(t)\*Nu(t)+1)^(1/Nu(t))) )  
IG2\_Z = function(W,t)  (1/(Sigma(t)\*Nu(t)))\*((log(W)/Mu(t))^Nu(t) - 1)  
  
#########    user examples   ###############  
  
# get Z-score for given weight in grams and exact age in weeks (decimal)  
# example : weight=2000g at 32+3 weeks (i.e. 32+3/7=32.42857)  
example\_Z <- IG2\_Z(2000,32+3/7)  
example\_Z #the Z-score  
#if user wants centile instead of Z-score   
example\_centile <- round(100\*pnorm(example\_Z))  
example\_centile   
  
#get corresponding weight for given Z-score and exact age in weeks (decimal)  
# example : Z-score of 0.5 at 28+4  
example\_quantile <- Q(0.5, 28+4/7)  
example\_quantile

###### END OF SCRIPT ##########

Based on publication:

Stirnemann, J., Salomon, L.J. and Papageorghiou, A.T. (2020), INTERGROWTH-21st standards for Hadlock's estimation of fetal weight. Ultrasound Obstet Gynecol, 56: 946-948. <https://doi.org/10.1002/uog.22000>