

```
model {
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# cycles through the different combinations of input parameters
for (a in 1:numcombs) {
  for (i in 1:17) {
    for (g in 1:2) {
      r[i,a,g] ~ dbin(p[g,a,i],n[i,a,g])
      rhat[i,a,g] <- p[g,a,i]*n[i,a,g]
      dev[i,a,g] <- 2 * (r[i,a,g] * (log(r[i,a,g])-log(rhat[i,a,g]))) +
        (n[i,a,g]-r[i,a,g]) * (log(n[i,a,g]-r[i,a,g]) -
          log(n[i,a,g]-rhat[i,a,g])))
    }
    sumdev1[i,a] <- sum(dev[i,a,])
    p[1,a,i] <- pi[1,a] * se[i,a] + (1-pi[1,a]) * fp[i,a]
    p[2,a,i] <- pi[3,a]*sec[i,a] + pi[2,a] * se[i,a] + pi[4,a] *
fp[i,a]
    logit(se[i,a]) <- lse[i,a]
    logit(sec[i,a]) <- lse[i,a] + dse[a]
    lse[i,a] ~ dnorm(0,.01)
    lfp[i,a] <- lse[i,a] - res[test[i],a]
    logit(fp[i,a]) <- lfp[i,a]
  }
  for (j in 1:5) {
    res[j,a] ~ dnorm(mean[a],prec[a])I(0,)
  }
  z[a] ~ dbeta(1,1)
  x[a] ~ dbeta(1,1)
  # Ever exposed in control group
  pi[1,a] <- ctprev[a]
  # Ever exposed in Non CT caused TFI
  pi[2,a] <- (1 - pi[3,a]) * (pi[1,a] + z[a] * (1 - pi[1,a]))
  # Proportion of TFI caused by C
  pi[3,a] <- x[a]
  # the negatives in the tfi group
  pi[4,a] <- (1 - pi[3,a]) * ((1 - z[a]) * (1 - pi[1,a]))
  # sum check
  pi[5,a] <- pi[2,a] + pi[3,a] + pi[4,a]
  sumdev2[a] <- sum(sumdev1[,a])
}
```