

1. All parenchymal readings within given categories (rounded, irregular and combined) were averaged utilizing the ILO U/C twelve point scale. If the average came exactly half-way between two values, as is possible with an even number of readers, the values of the three readers who read the entire group of X-rays at one time determined whether one averaged up or down.
2. If the reading of one individual differed by three units from that of the average of the others, all readers re-read that particular film. The readers were told that a disagreement existed on parenchymal readings, but no other information was provided. If the subsequent reading brought the outlying interpretation into closer agreement, the average of the second readings was utilized. If a disagreement of the same magnitude still persisted, the X-ray was interpreted by the entire group of readers and a consensus obtained. (This occurred for fewer than five X-rays.)
3. If a disagreement existed among the readers as to whether or not pleural changes existed such films were also re-read with the specification that a disagreement existed with respect to interpretation of the pleura. Following a second interpretation, a determination was based upon the average of the second reading. If an X-ray was interpreted as normal by two individuals and abnormal by two others, the interpretations of the same three readers as before determined the overall classification.

Approximately 110 X-rays read early in the sequence were reintroduced into the group at a later time to provide information on reproducibility of the individual readers. For this analysis no "second" readings as described above were used. Table 4 shows the distribution of differences of parenchymal and pleural readings of each of the four readers along with the average score of the parenchymal readings for each individual (based on a 12 point scale). As can be seen both the inter-observer reproducibility and intra-observer comparability of readers is well within similar variations determined by other interpretation groups (Rossiter, 1972; Glover, Bevan, Cotes, et al., 1980). (See Table 12 for the results of individual and averaged readings by job category.)