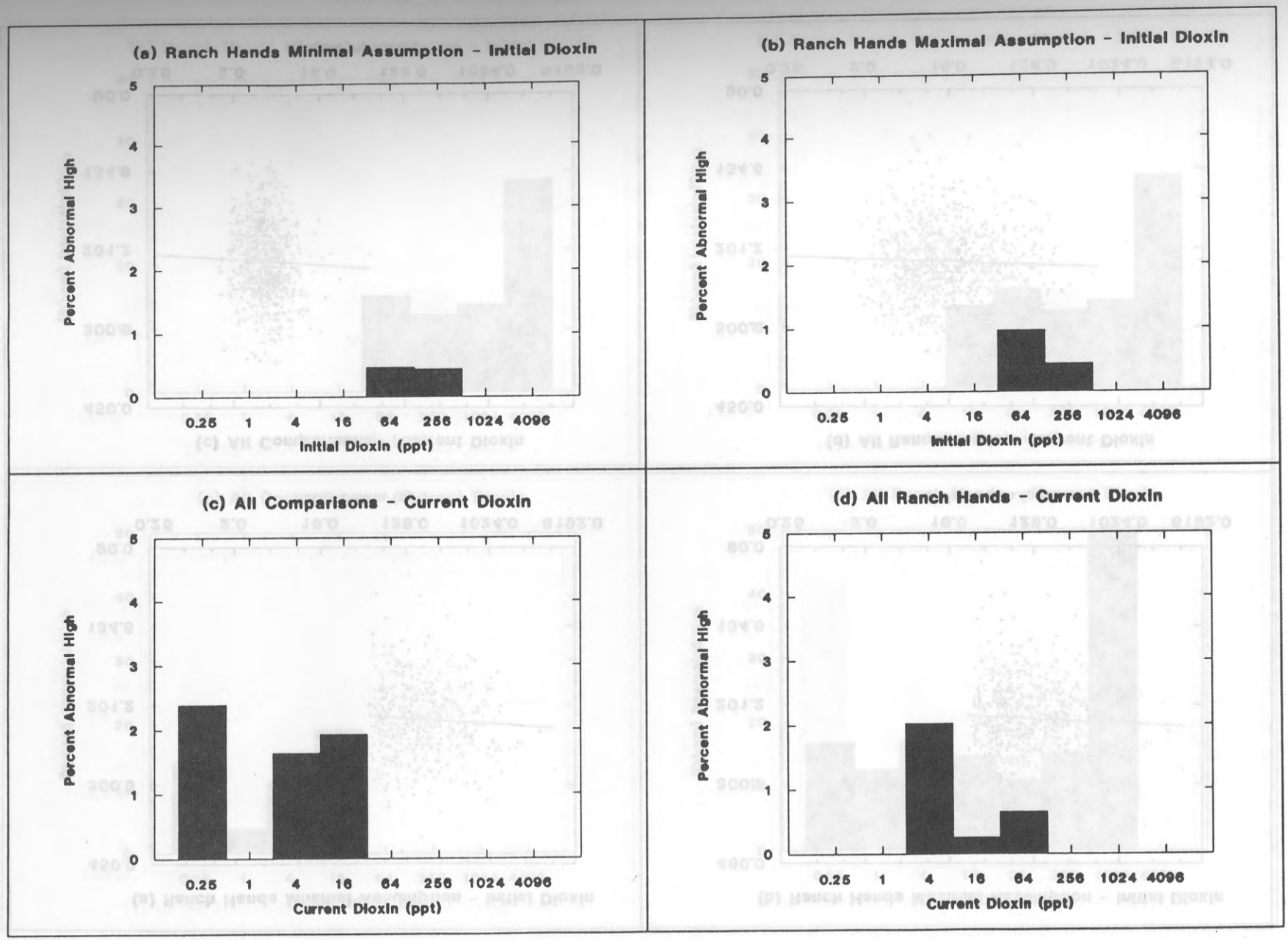

FIGURE I-1-25. LDH (Discrete) versus Dioxin

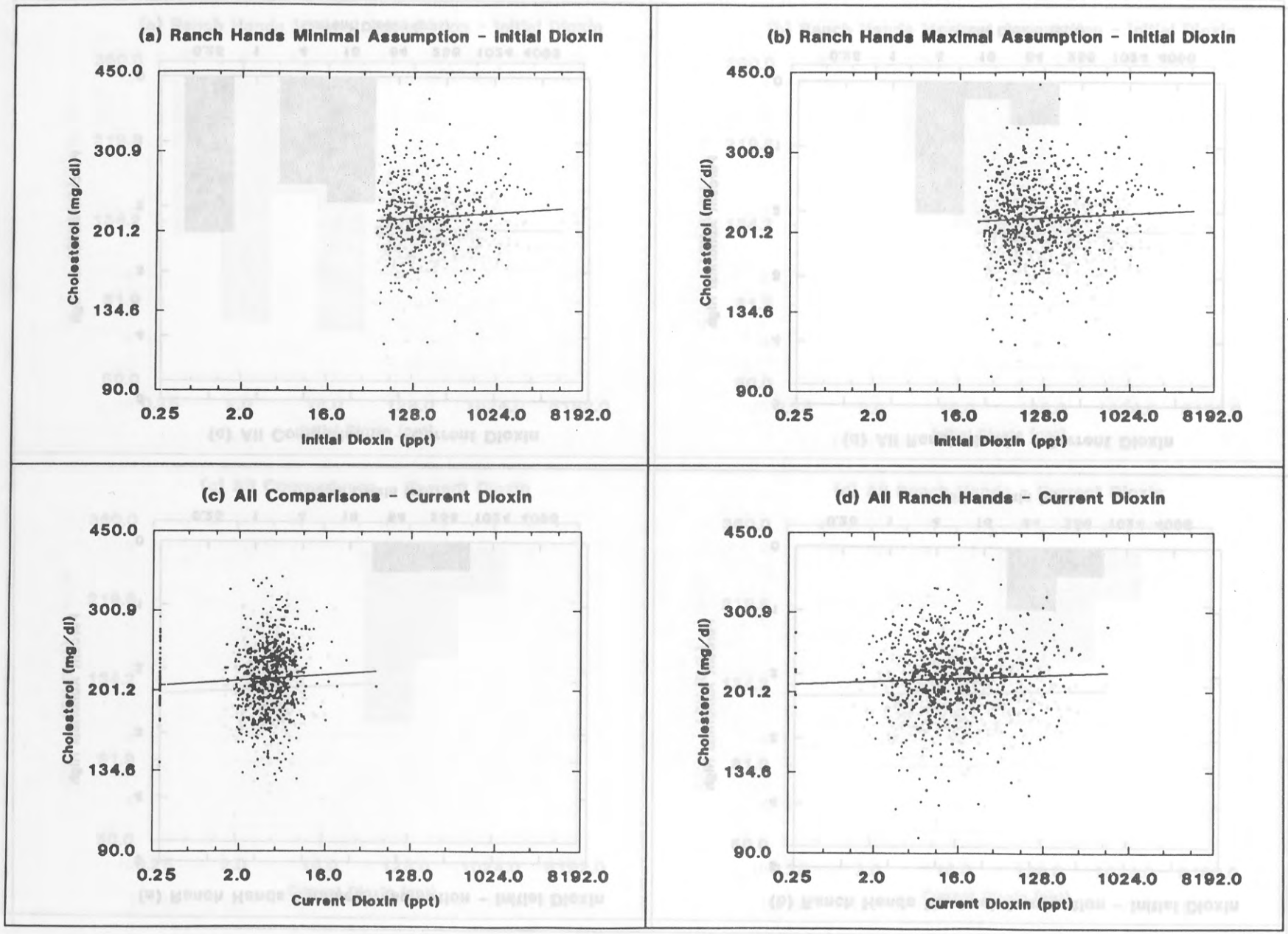

FIGURE I-1-26. Cholesterol (Continuous) versus Dioxin

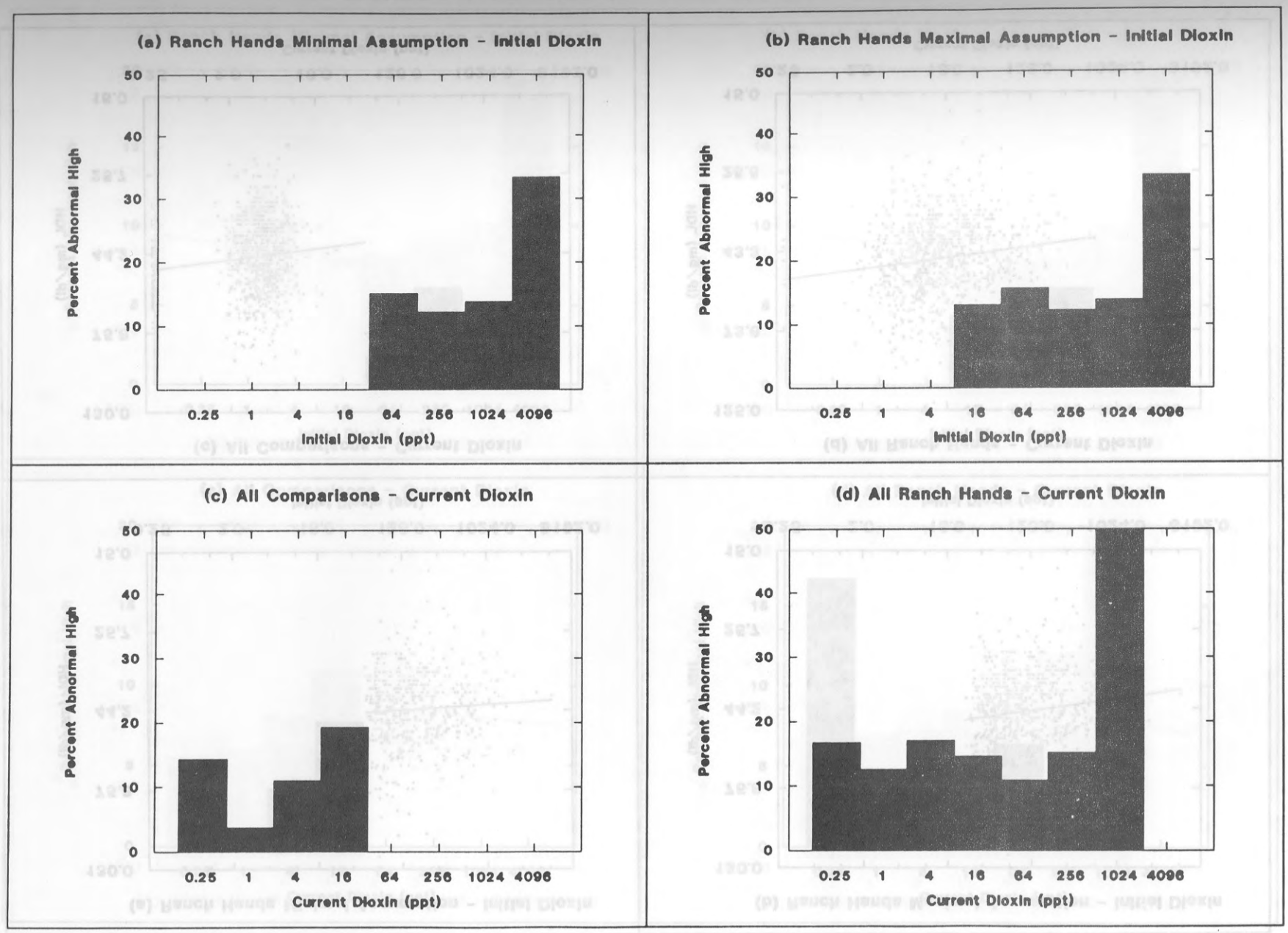

FIGURE I-1-27. Cholesterol (Discrete) versus Dioxin

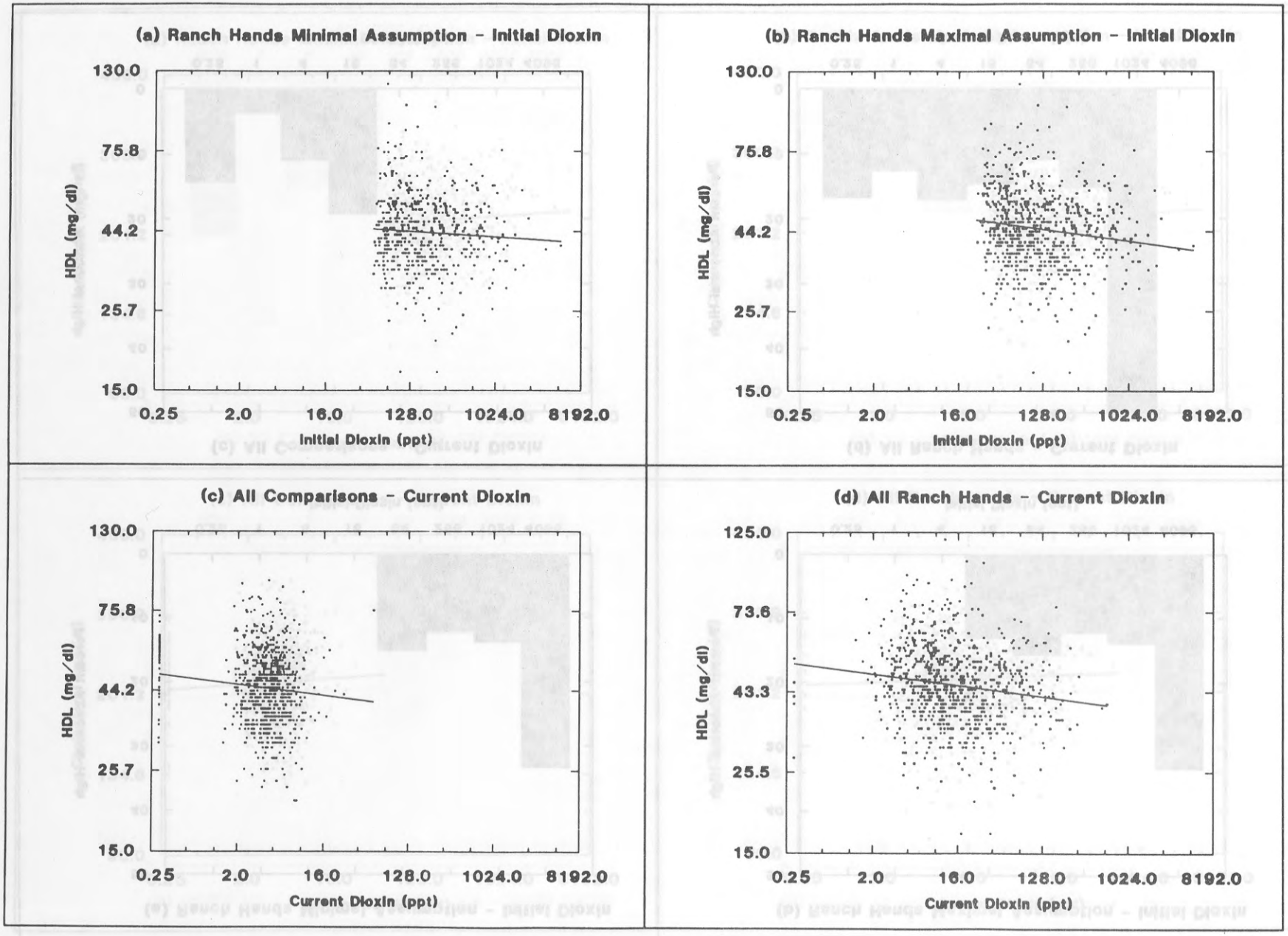

FIGURE I-1-28. HDL (Continuous) versus Dioxin

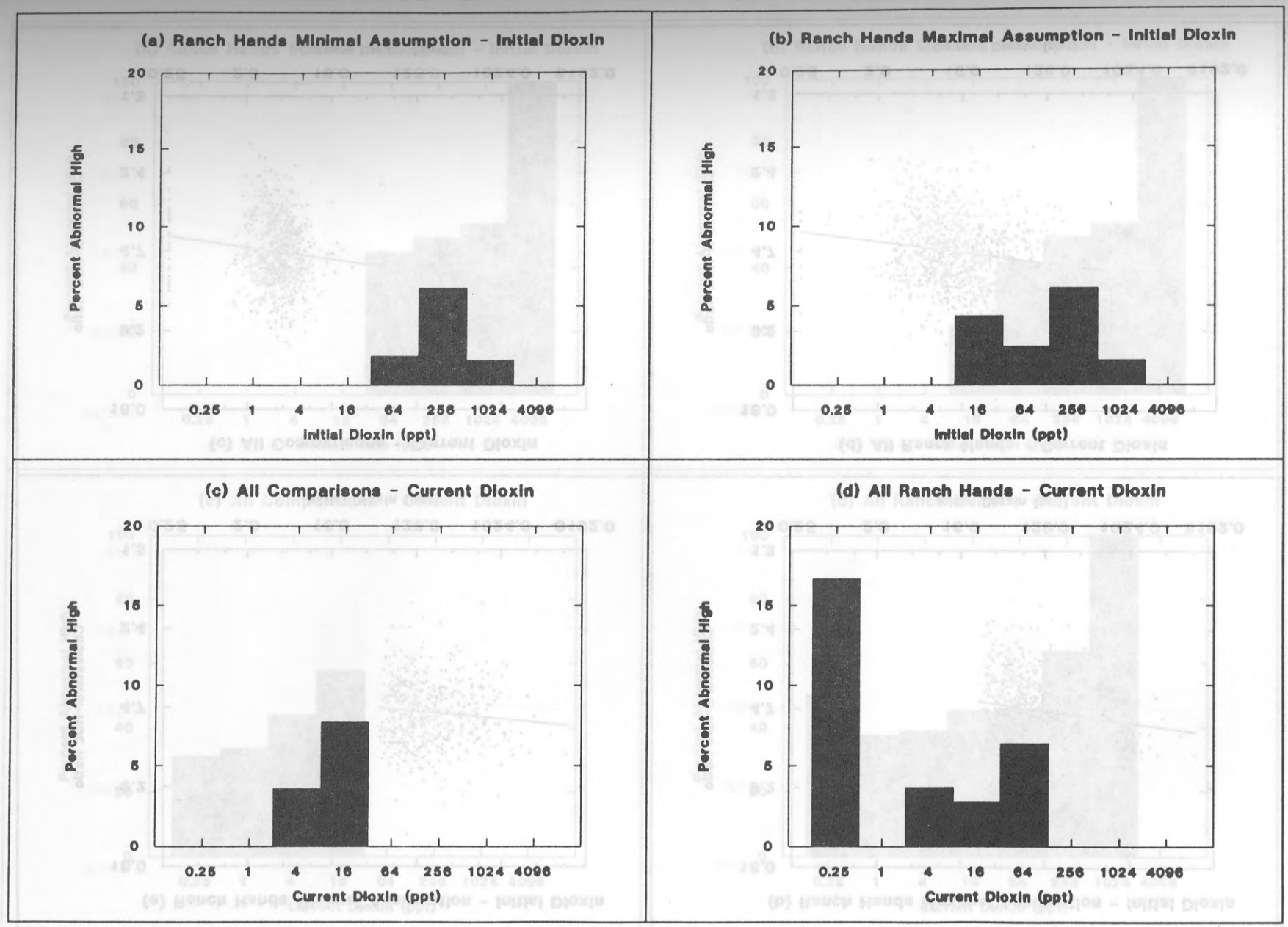

FIGURE I-1-29. HDL (Discrete) versus Dioxin

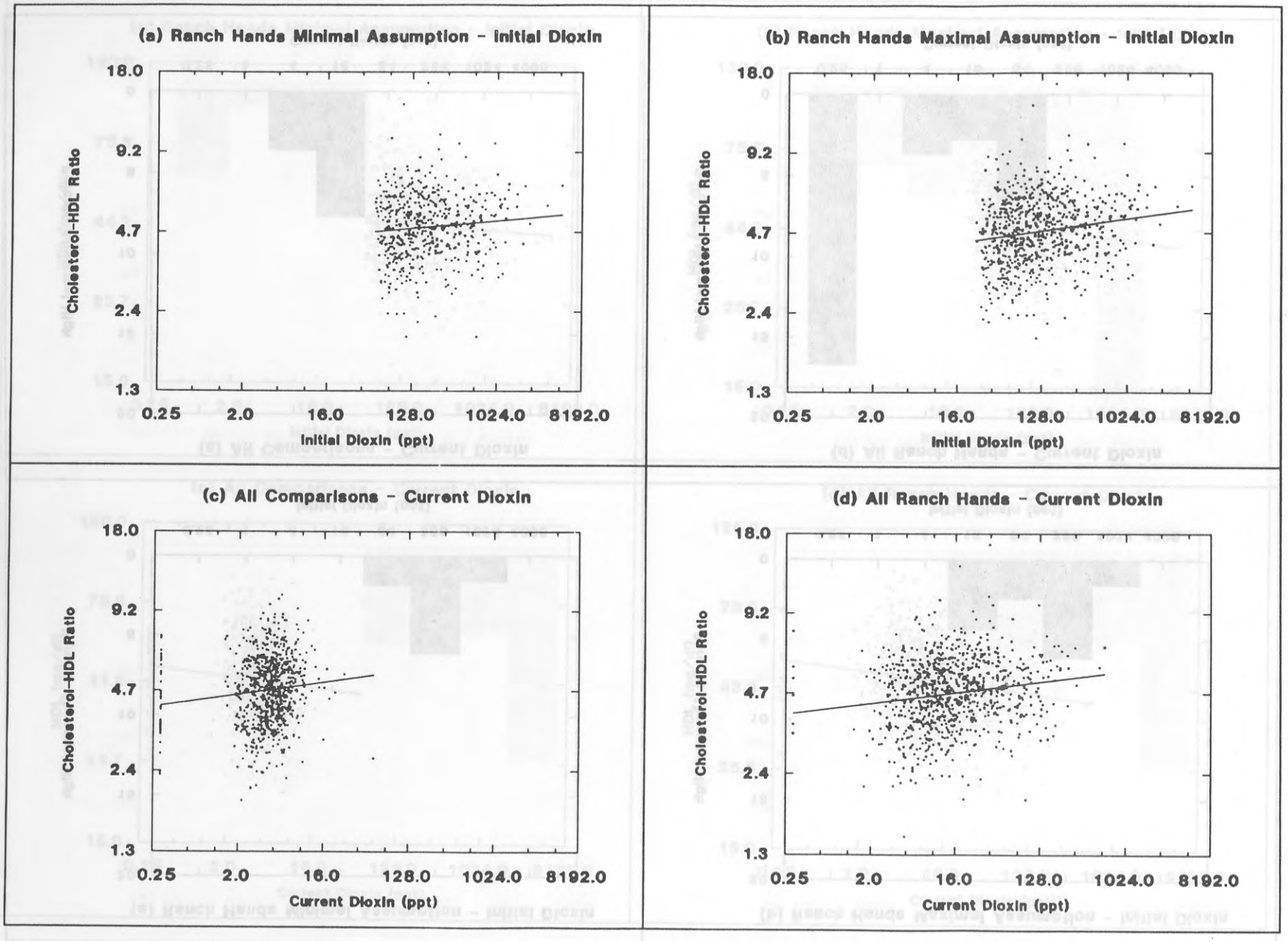

FIGURE I-1-30. Cholesterol-HDL Ratio (Continuous) versus Dioxin

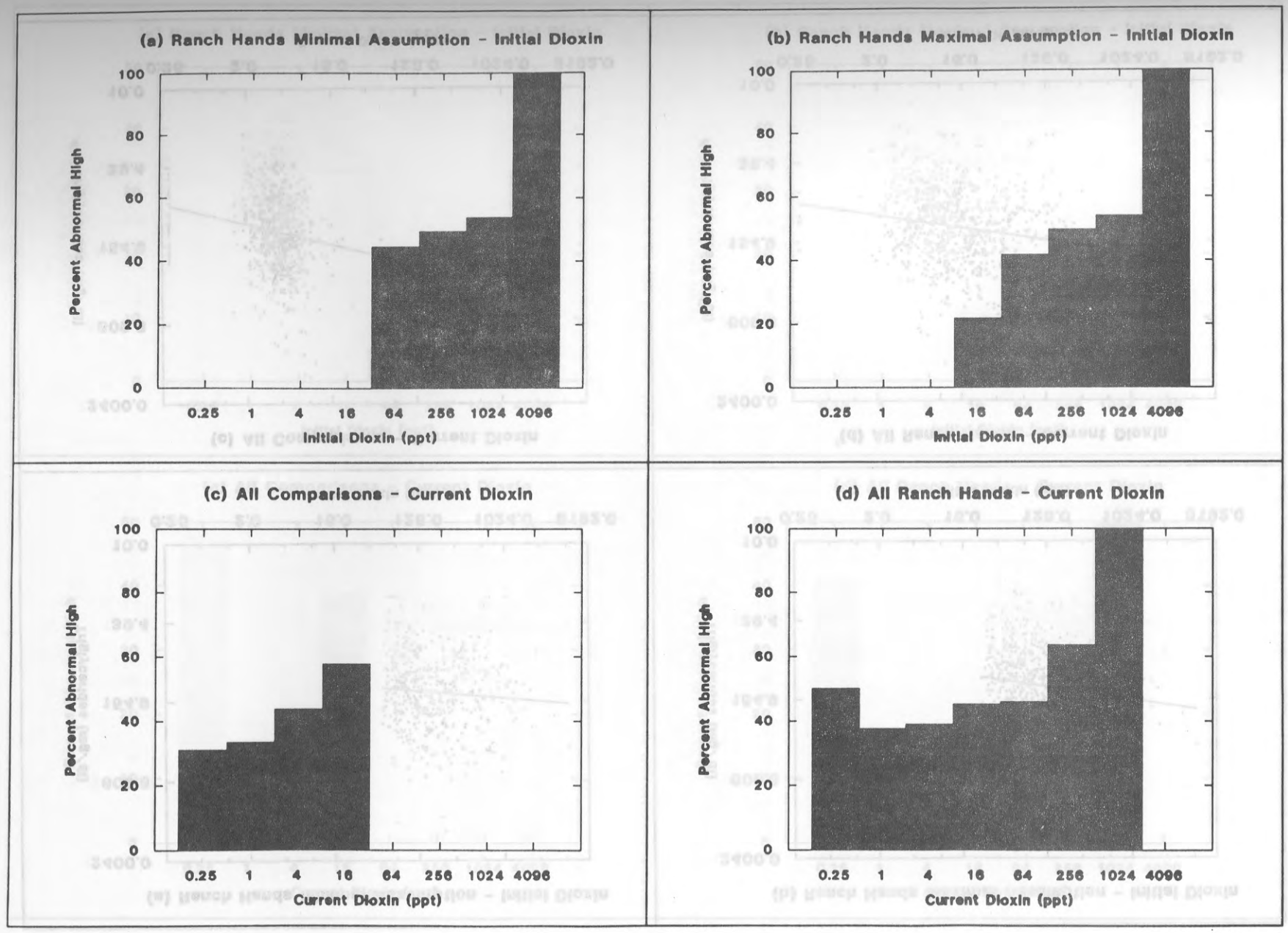

FIGURE I-1-31. Cholesterol-HDL Ratio (Discrete) versus Dioxin

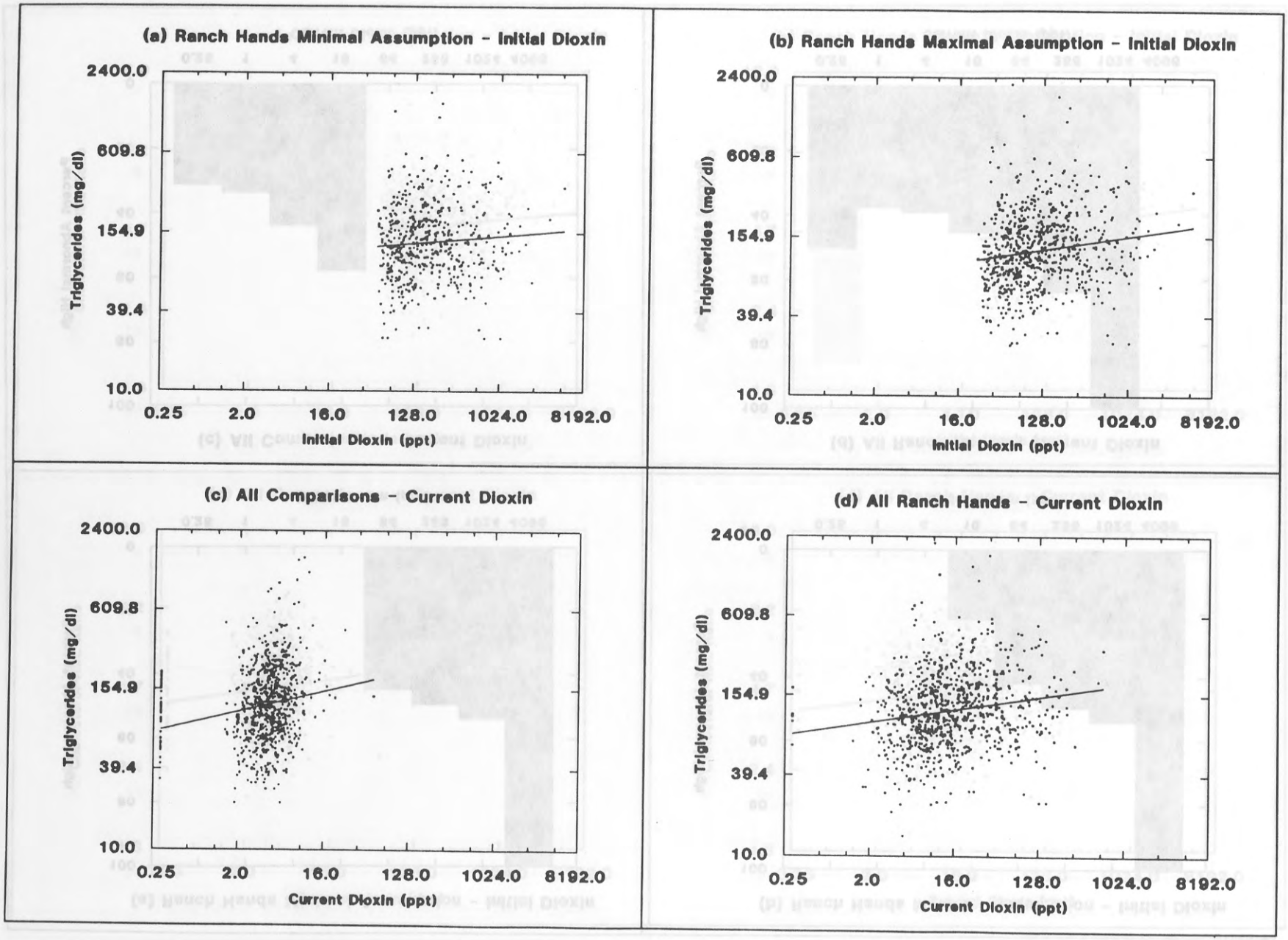

FIGURE I-1-32. Triglycerides (Continuous) versus Dioxin

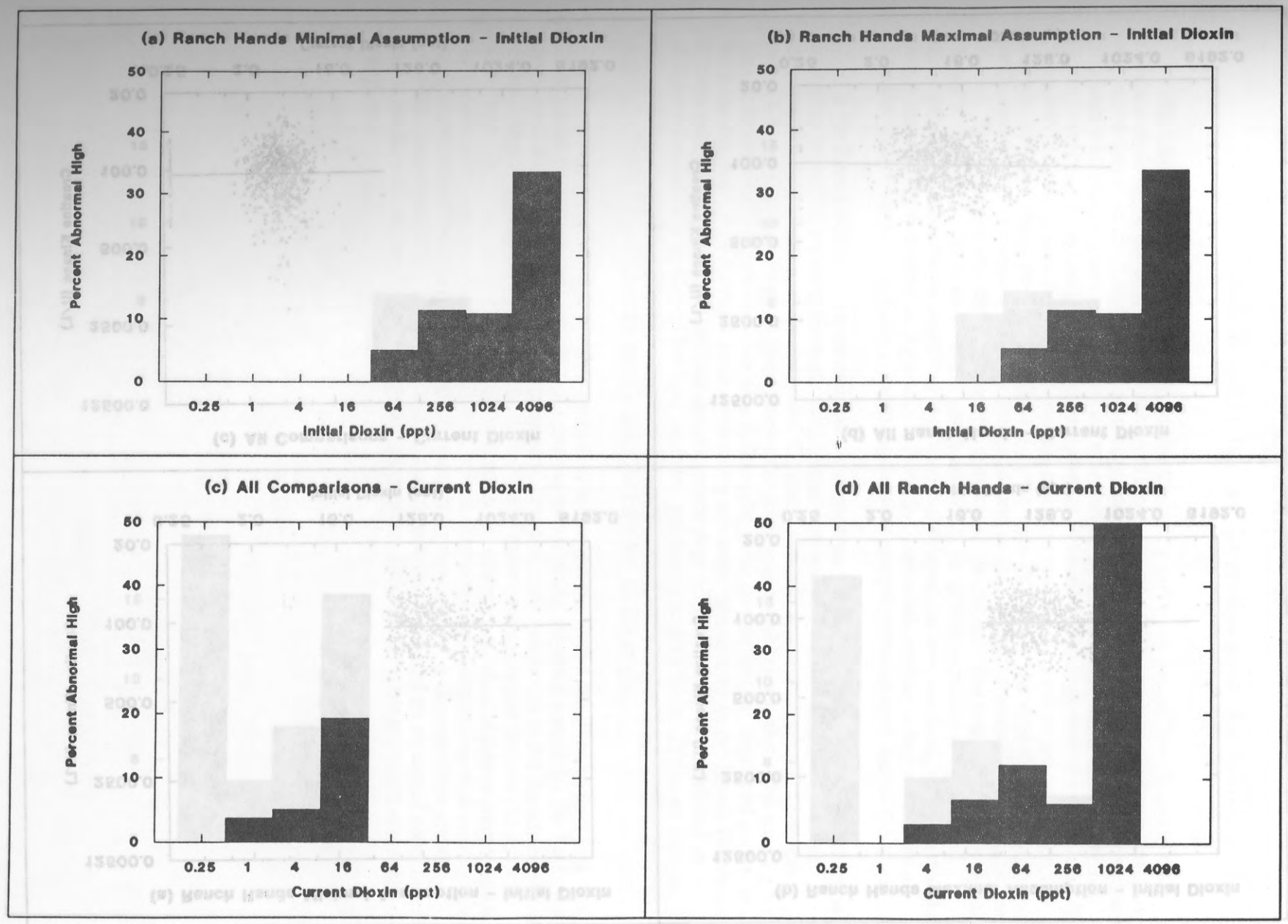

FIGURE I-1-33. Triglycerides (Discrete) versus Dioxin

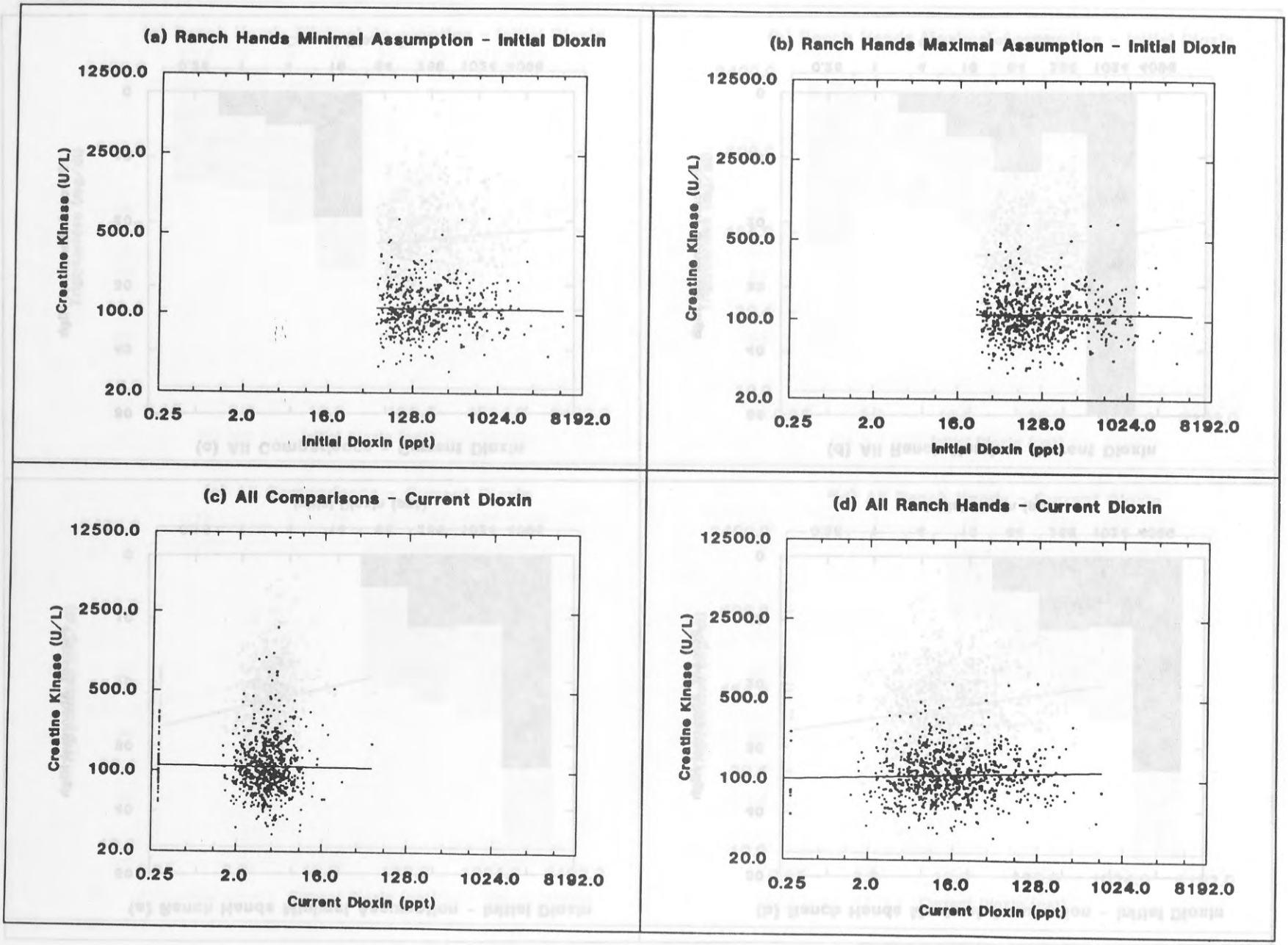

FIGURE I-1-34. Creatine Kinase (Continuous) versus Dioxin

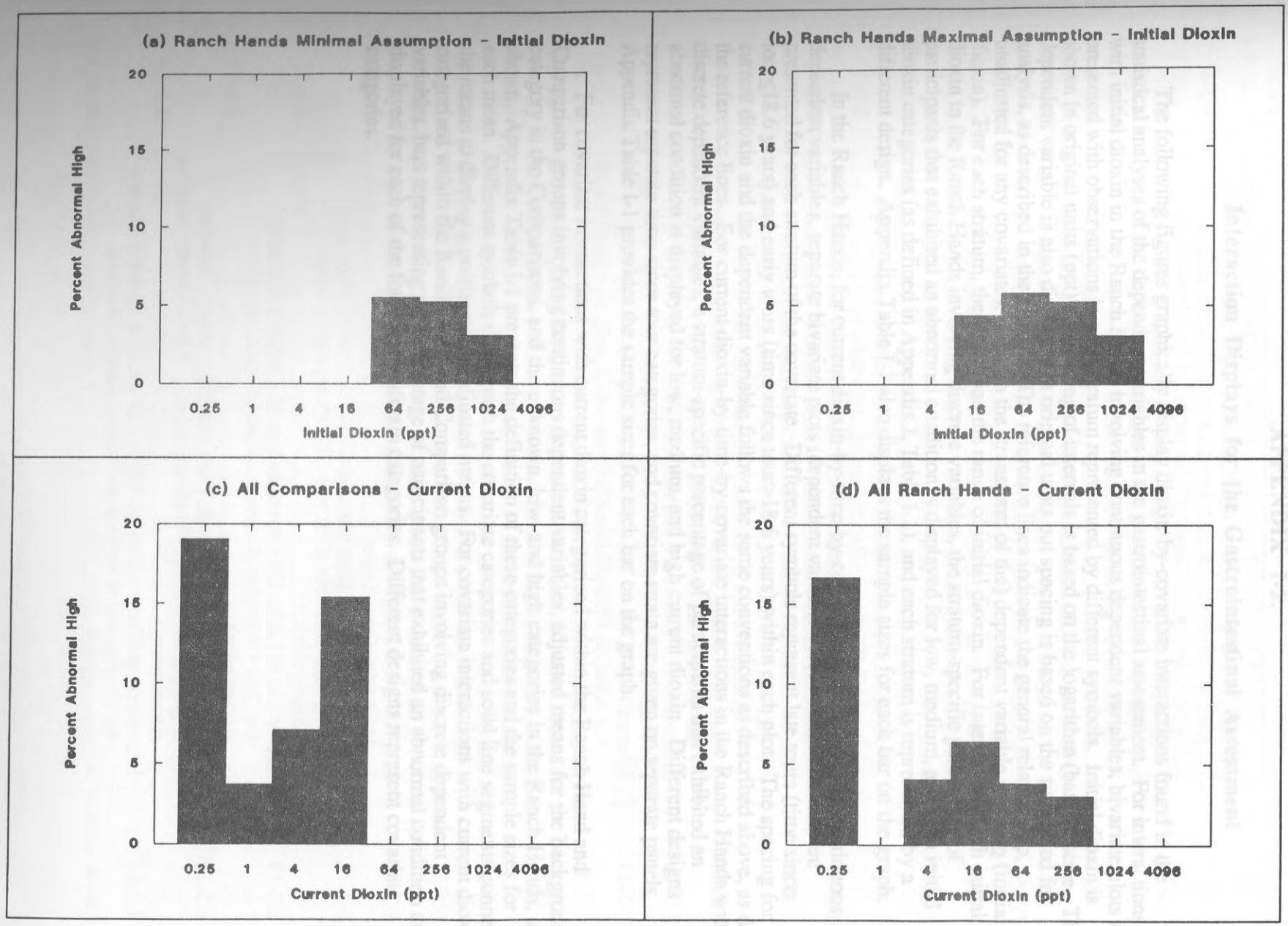

FIGURE I-1-35. Creatine Kinase (Discrete) versus Dioxin

APPENDIX I-2.

Interaction Displays for the Gastrointestinal Assessment

The following figures graphically display dioxin-by-covariate interactions found in the statistical analyses of the dependent variables in the gastrointestinal assessment. For interactions with initial dioxin in the Ranch Hands involving continuous dependent variables, bivariate plots are presented with observations in each stratum represented by different symbols. Initial dioxin is shown in original units (ppt) but spacing of intervals is based on the logarithm (base 2) scale. The dependent variable is also displayed in original units but spacing is based on the scale used for analysis, as described in the chapter. The reference lines indicate the general relationship, unadjusted for any covariates, between the (transform of the) dependent variable and $\log_2$ (initial dioxin). For each stratum, the lines span the range of initial dioxin. For interactions with initial dioxin in the Ranch Hands involving discrete variables, the stratum-specific percentage of participants that exhibited an abnormal condition is displayed for low, medium, and high initial dioxin categories (as defined in Appendix I, Table I-1), and each stratum is represented by a different design. Appendix Table I-1 also displays the sample sizes for each bar on the graph.

In the Ranch Hands, for current dioxin-by-time-by-covariate interactions with continuous dependent variables, separate bivariate plots (dependent variable versus current dioxin) are presented for each stratum of the covariate. Different symbols represent late tours (time since tour$\leq$18.6 years) and early tours (time since tour>18.6 years) within each plot. The spacing for current dioxin and the dependent variable follows the same conventions as described above, as do the reference lines. For current dioxin-by-time-by-covariate interactions in the Ranch Hands with discrete dependent variables, a stratum-specific percentage of participants that exhibited an abnormal condition is displayed for low, medium, and high current dioxin. Different designs represent separate time since tour categories, and covariate strata are given on separate panels. Appendix Table I-1 provides the sample sizes for each bar on the graph.

For covariate interactions with current dioxin categorized within the Ranch Hand and Comparison groups involving continuous dependent variables, adjusted means for the background category in the Comparisons, and the unknown, low, and high categories in the Ranch Hands, are shown. Appendix Table I-1 presents the definition of these categories and the sample sizes for each mean. Different symbols distinguish the covariate categories and solid line segments connect the means to display a profile of the adjusted means. For covariate interactions with current dioxin categorized within the Ranch Hand and Comparison groups involving discrete dependent variables, bars representing the percentage of participants that exhibited an abnormal condition are displayed for each of the four current dioxin categories. Different designs represent covariate categories.

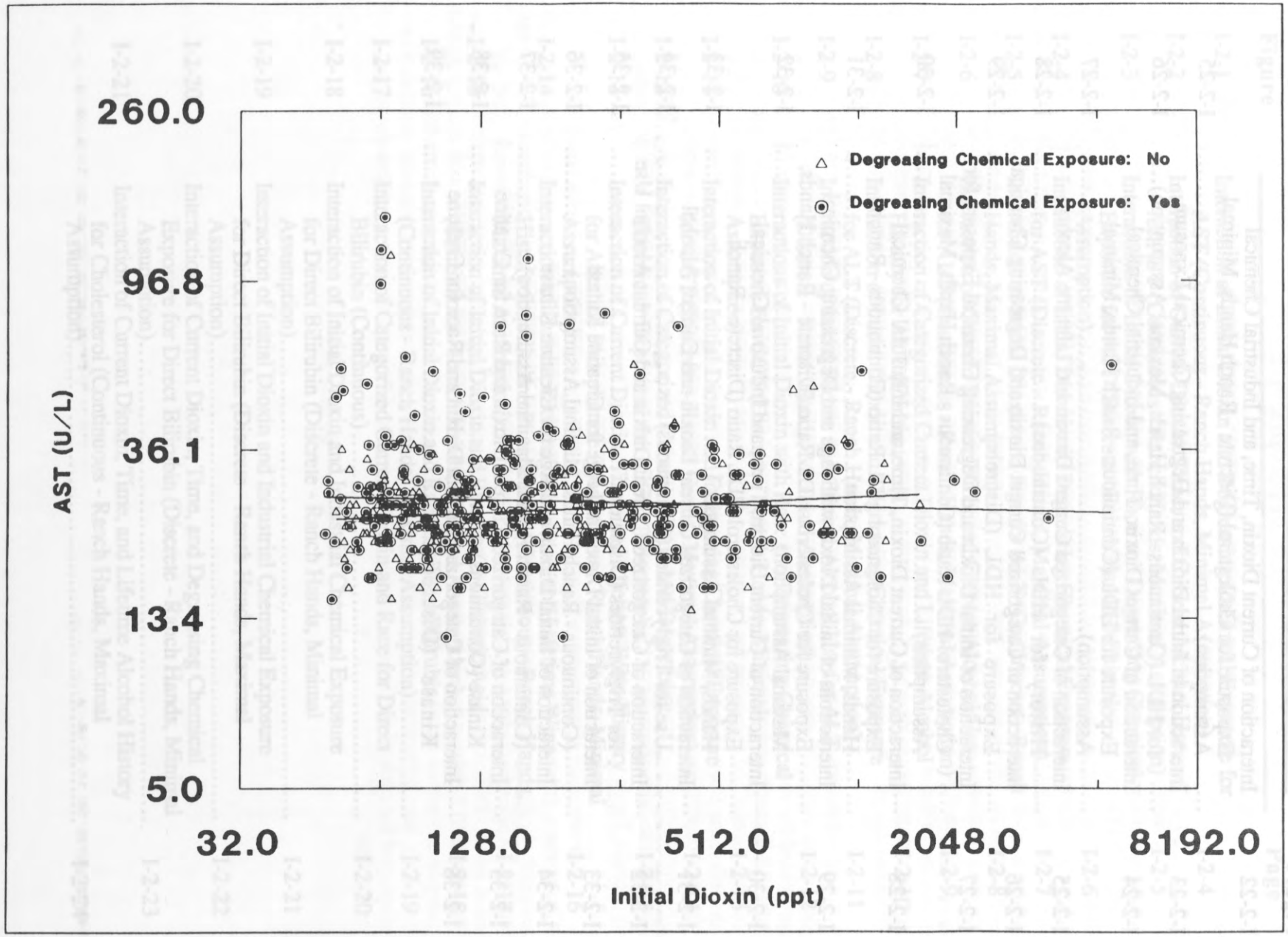

FIGURE I-2-1. Interaction of Initial Dioxin and Degreasing Chemical Exposure for AST (Continuous - Ranch Hands, Minimal Assumption)

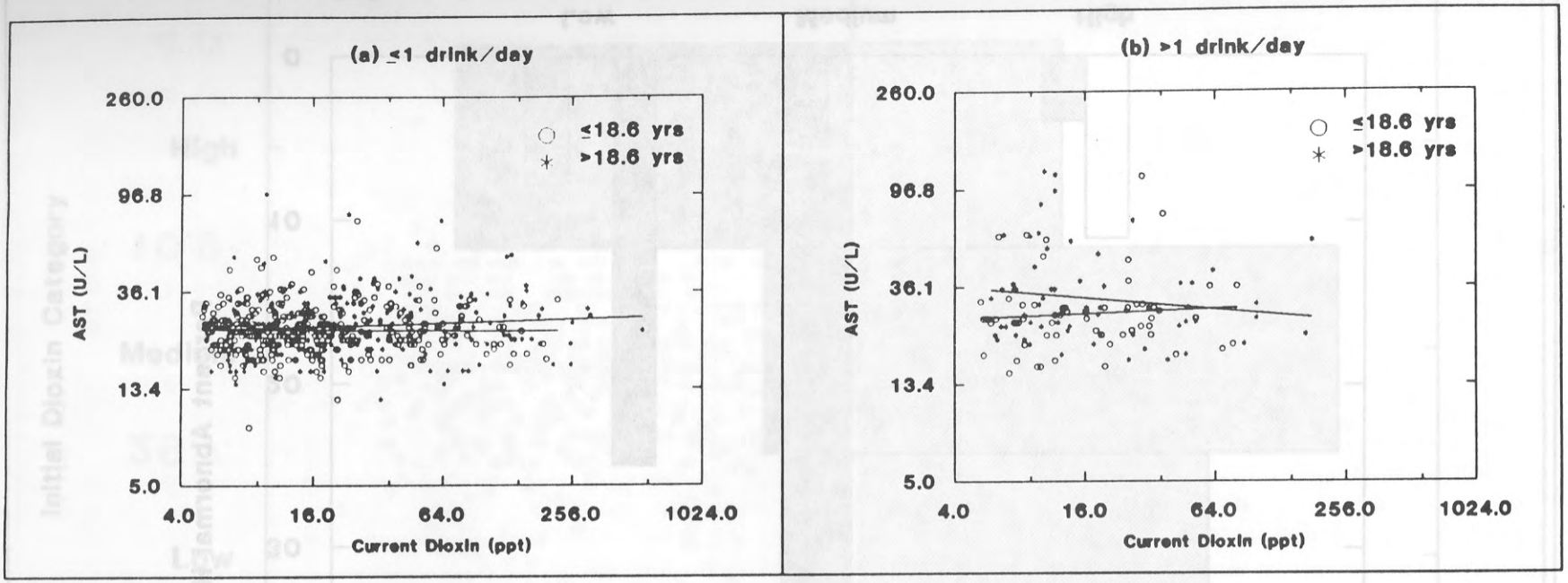

FIGURE I-2-2. Interaction of Current Dioxin, Time, and Current Alcohol Use for AST (Continuous - Ranch Hands, Maximal Assumption)

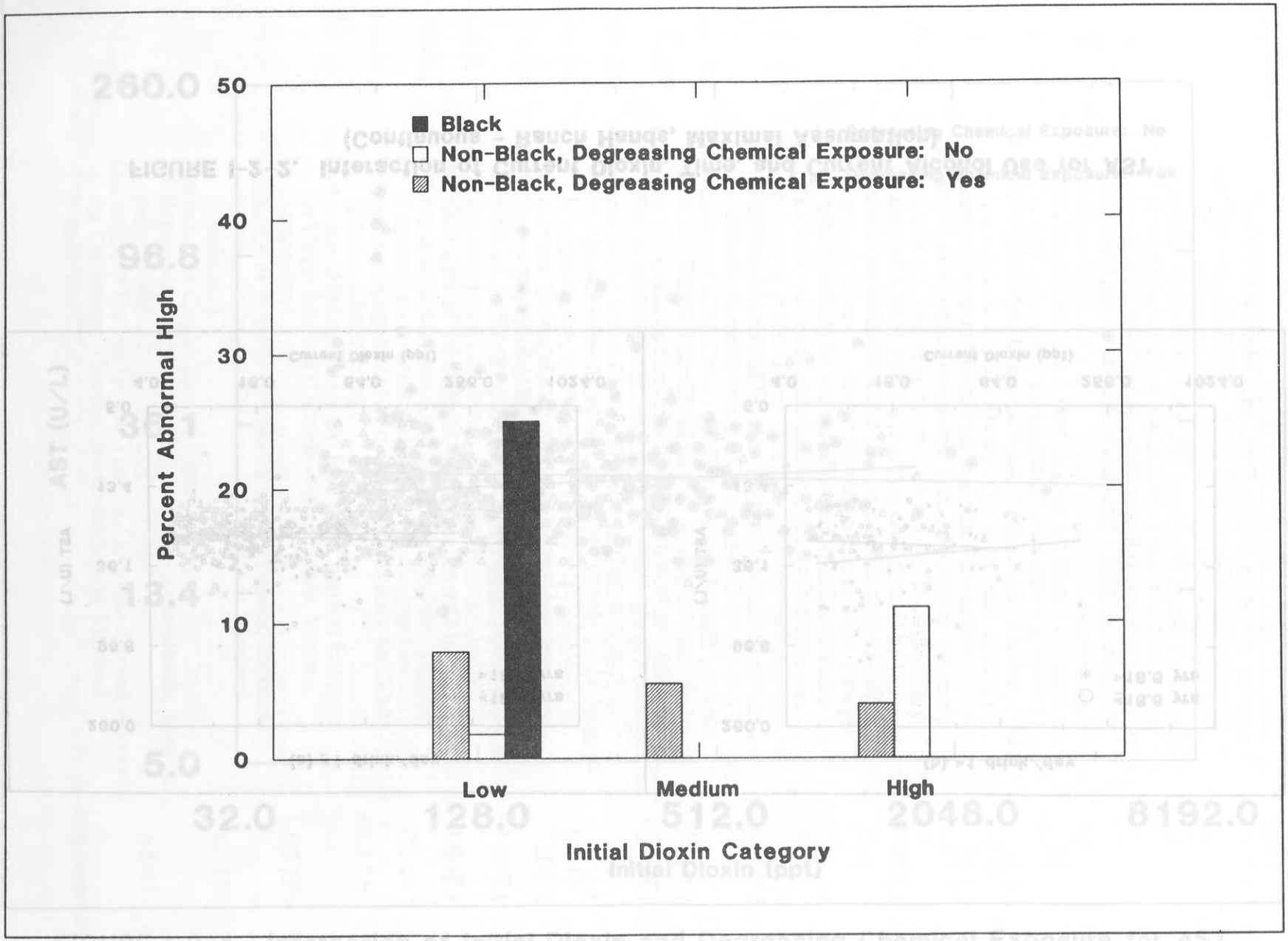

FIGURE I-2-3. Interactions of Initial Dioxin with Race and Degreasing Chemical Exposure for AST (Discrete - Ranch Hands, Minimal Assumption)

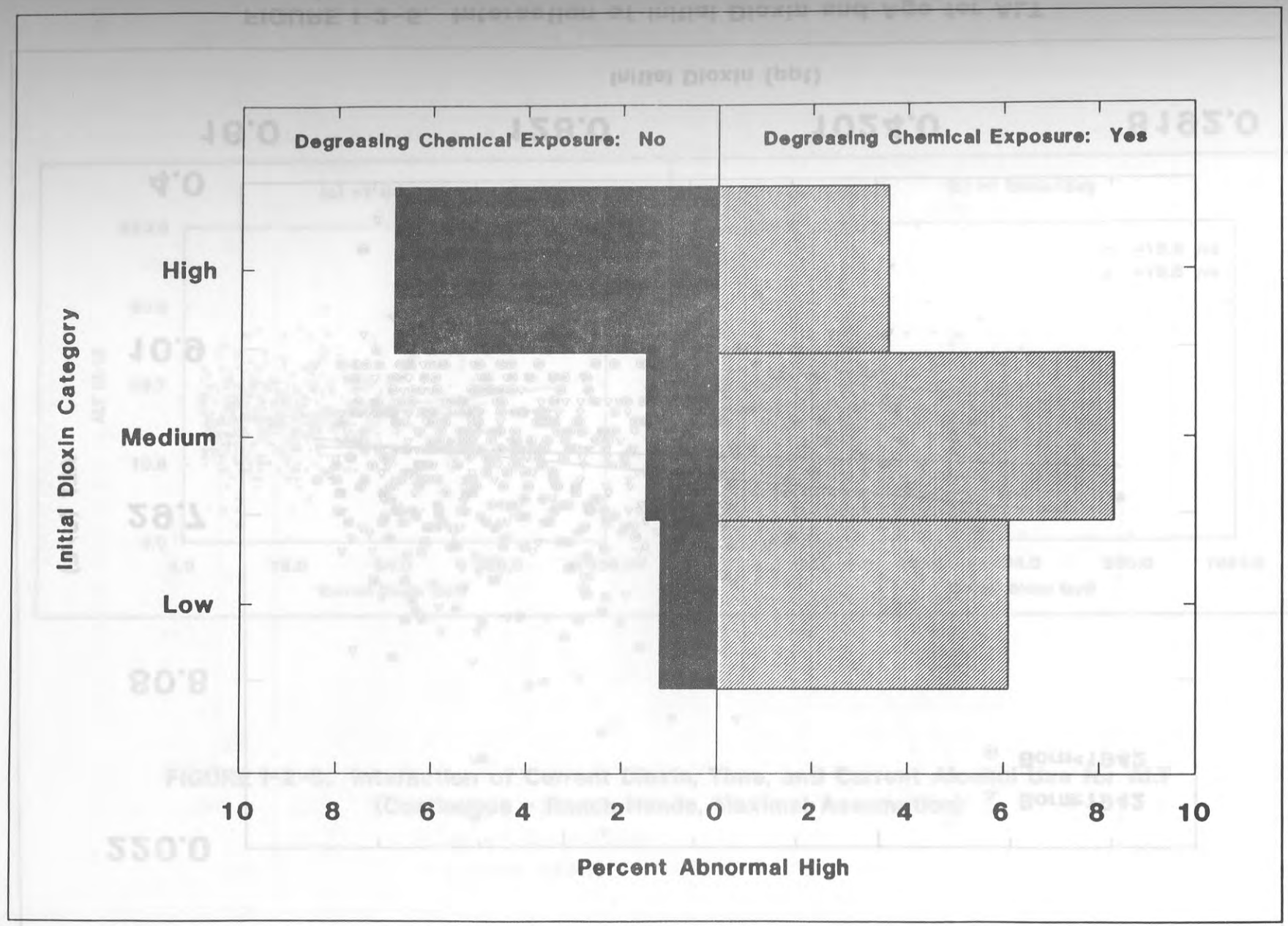

FIGURE I-2-4. Interaction of Initial Dioxin and Degreasing Chemical Exposure for AST (Discrete - Ranch Hands, Maximal Assumption)

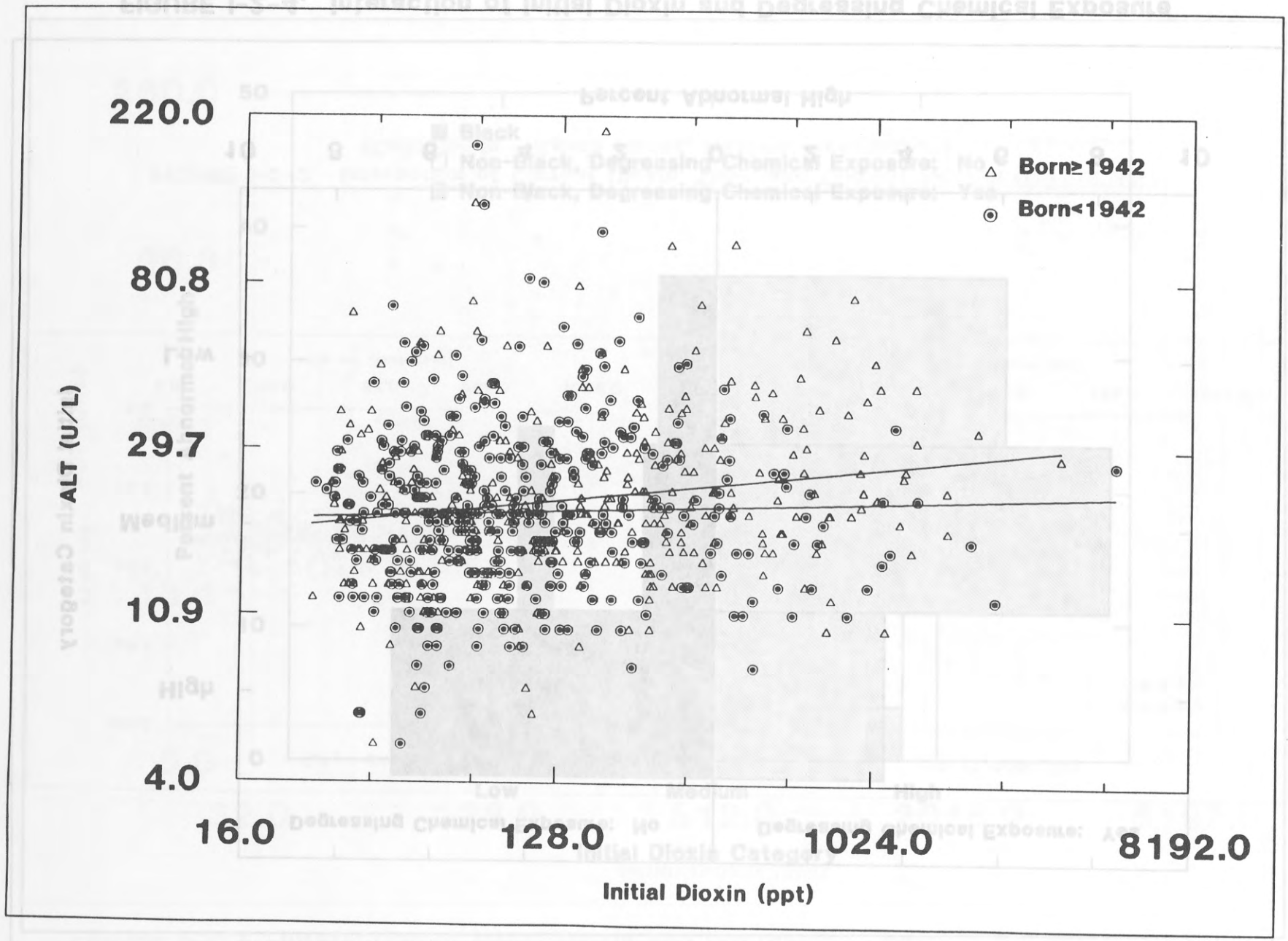

FIGURE I-2-5. Interaction of Initial Dioxin and Age for ALT (Continuous - Ranch Hands, Maximal Assumption)

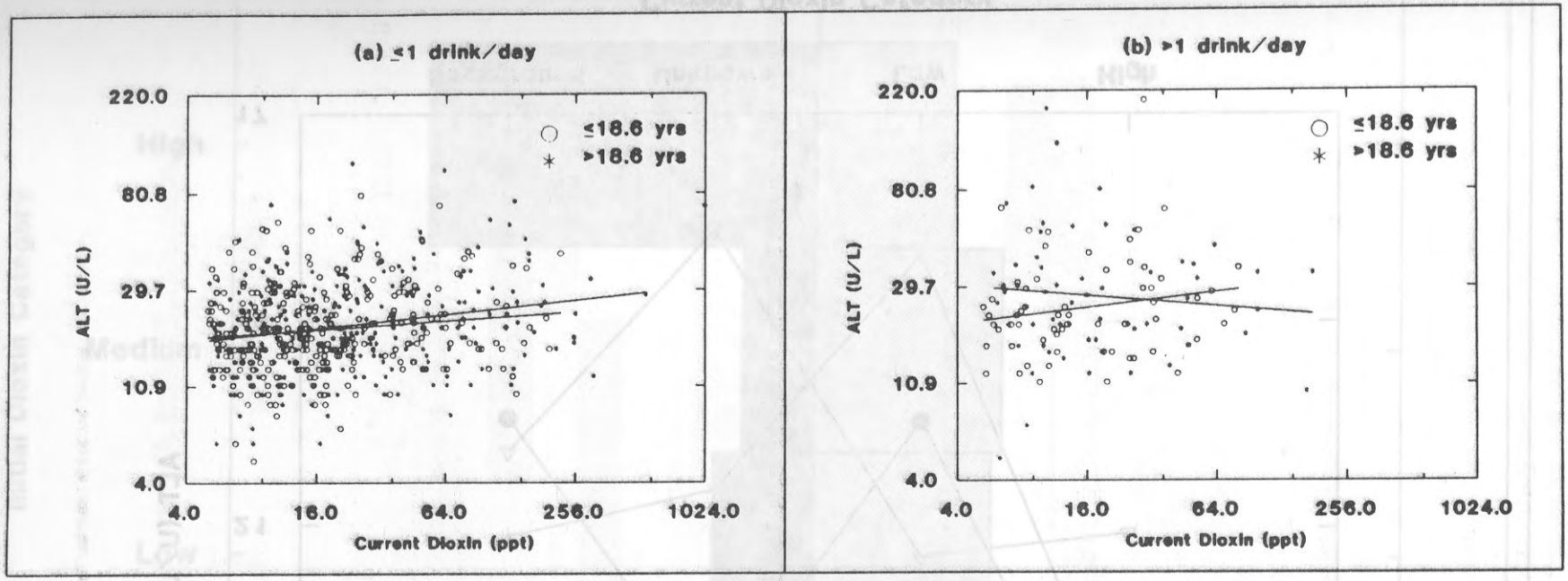

FIGURE I-2-6. Interaction of Current Dioxin, Time, and Current Alcohol Use for ALT (Continuous - Ranch Hands, Maximal Assumption)

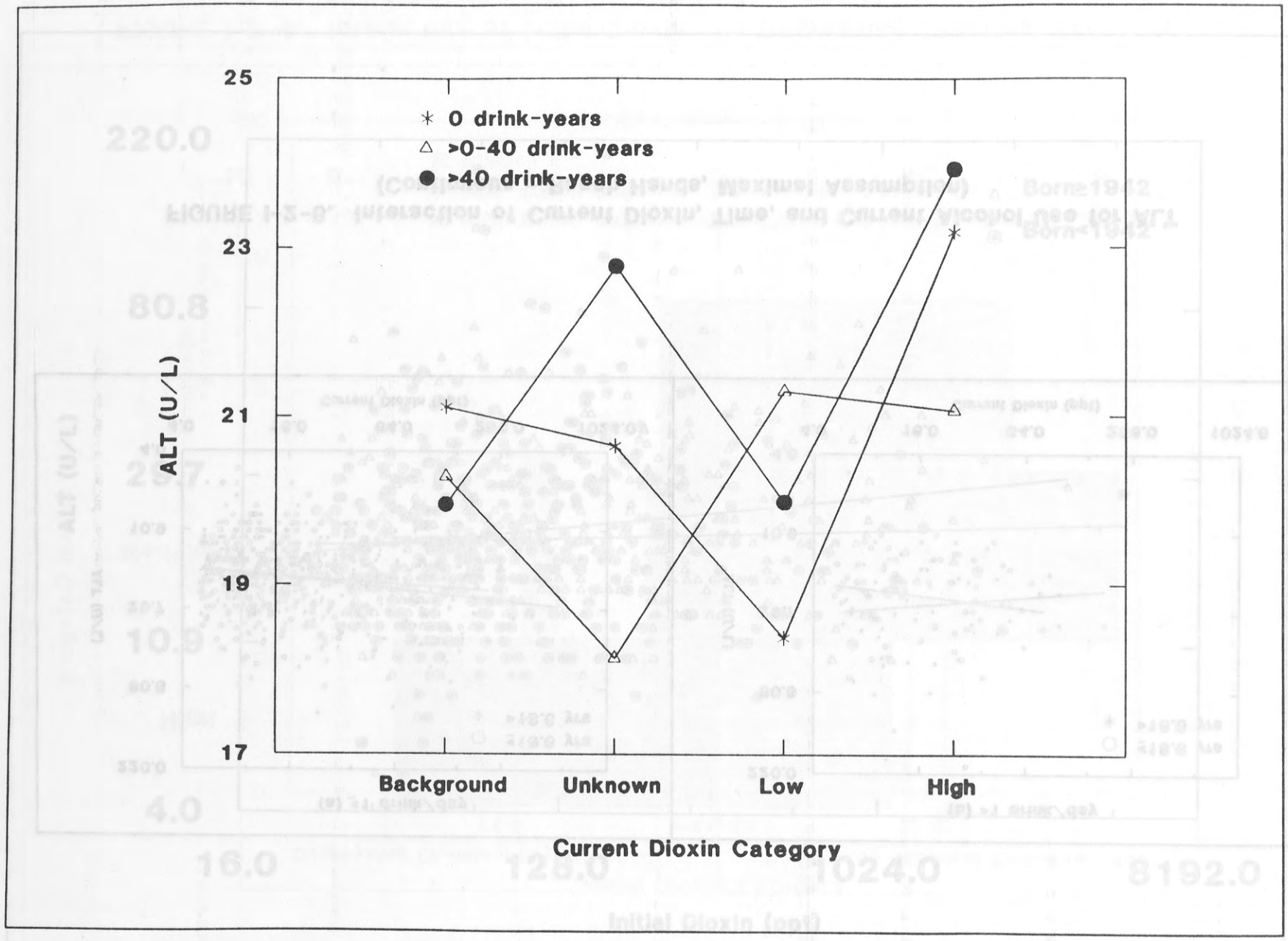

FIGURE I-2-7. Interaction of Categorized Current Dioxin and Lifetime Alcohol History for ALT (Continuous)

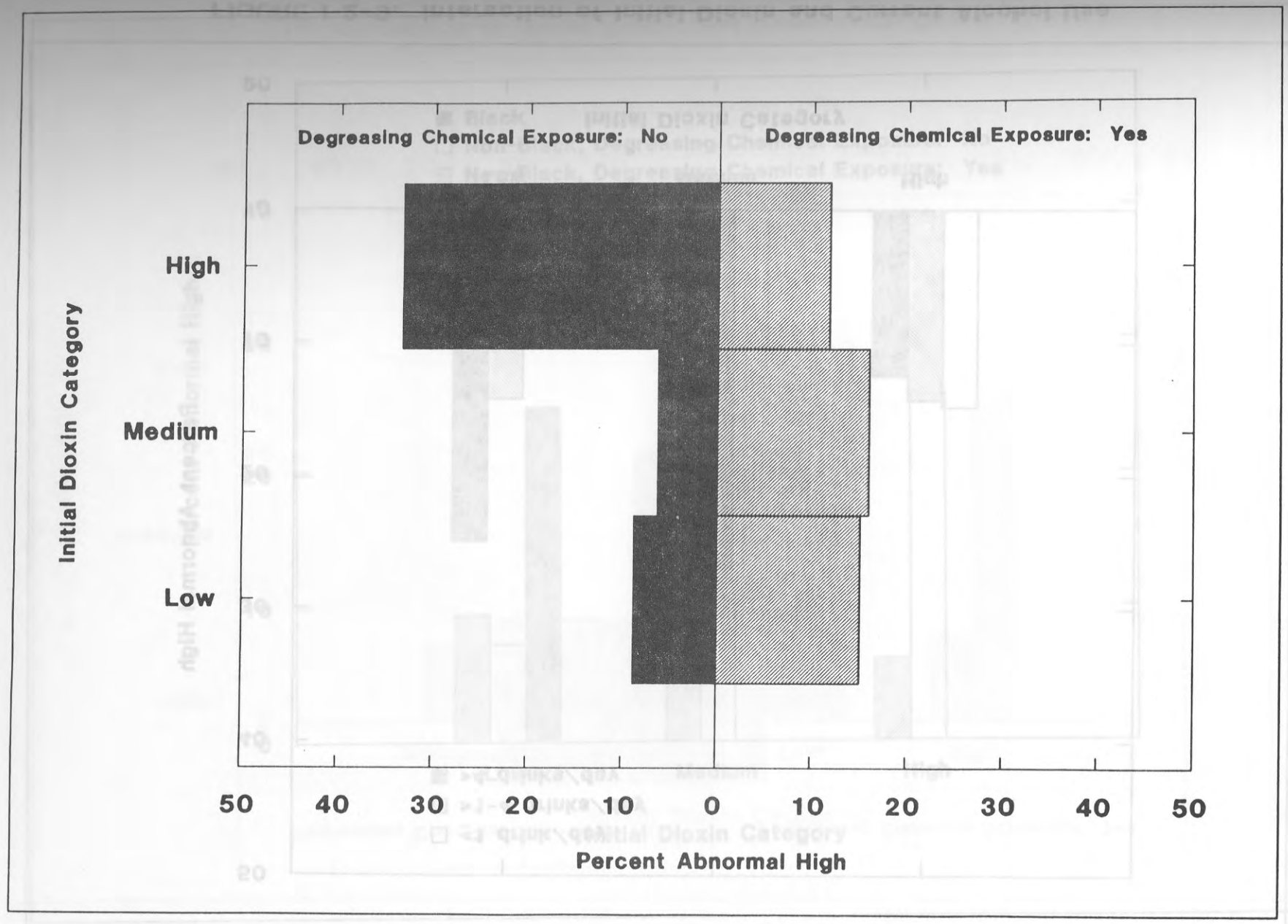

FIGURE I-2-8. Interaction of Initial Dioxin and Degreasing Chemical Exposure for ALT (Discrete - Ranch Hands, Minimal Assumption)

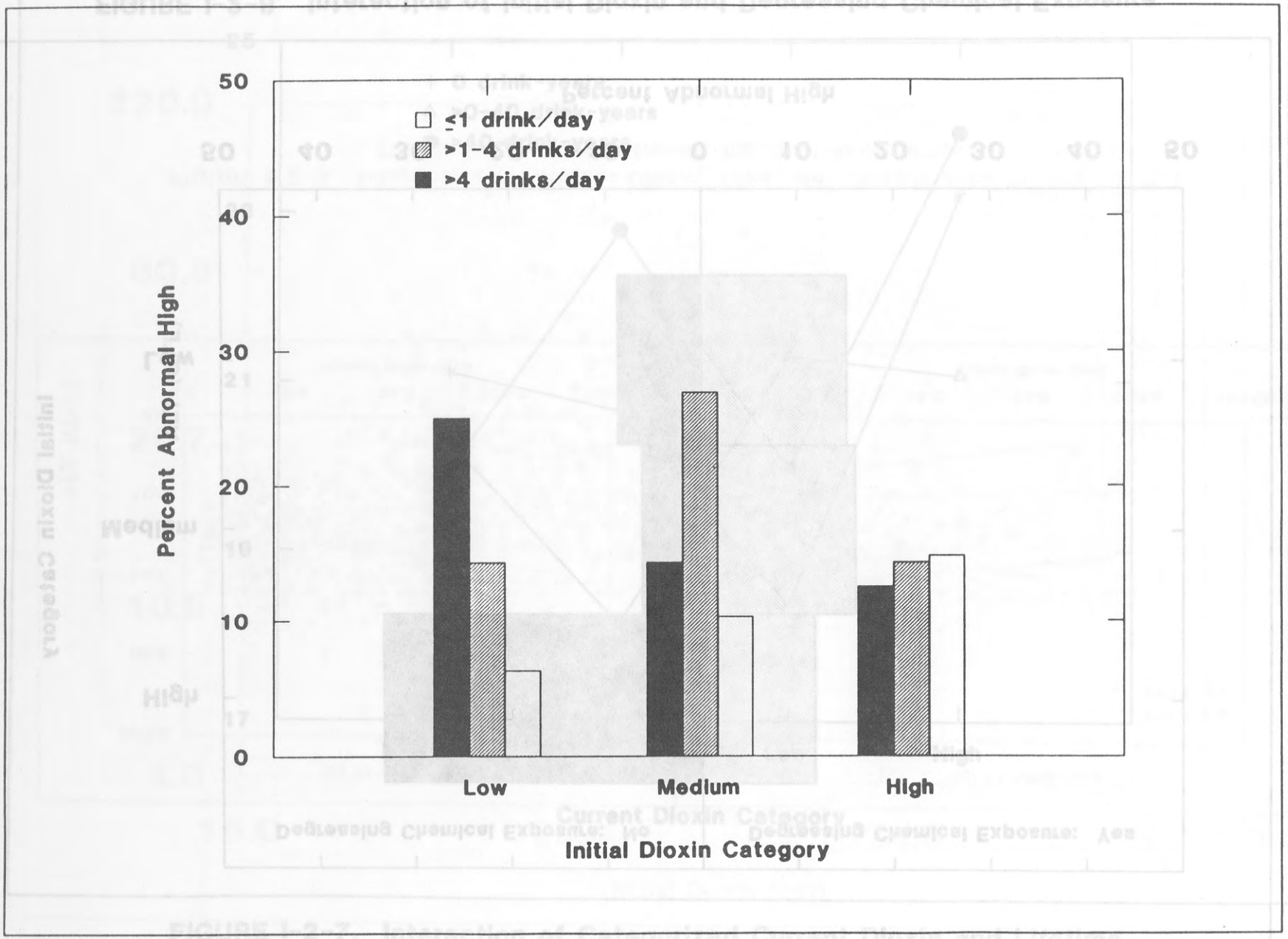

FIGURE I-2-9. Interaction of Initial Dioxin and Current Alcohol Use for ALT (Discrete - Ranch Hands, Maximal Assumption)

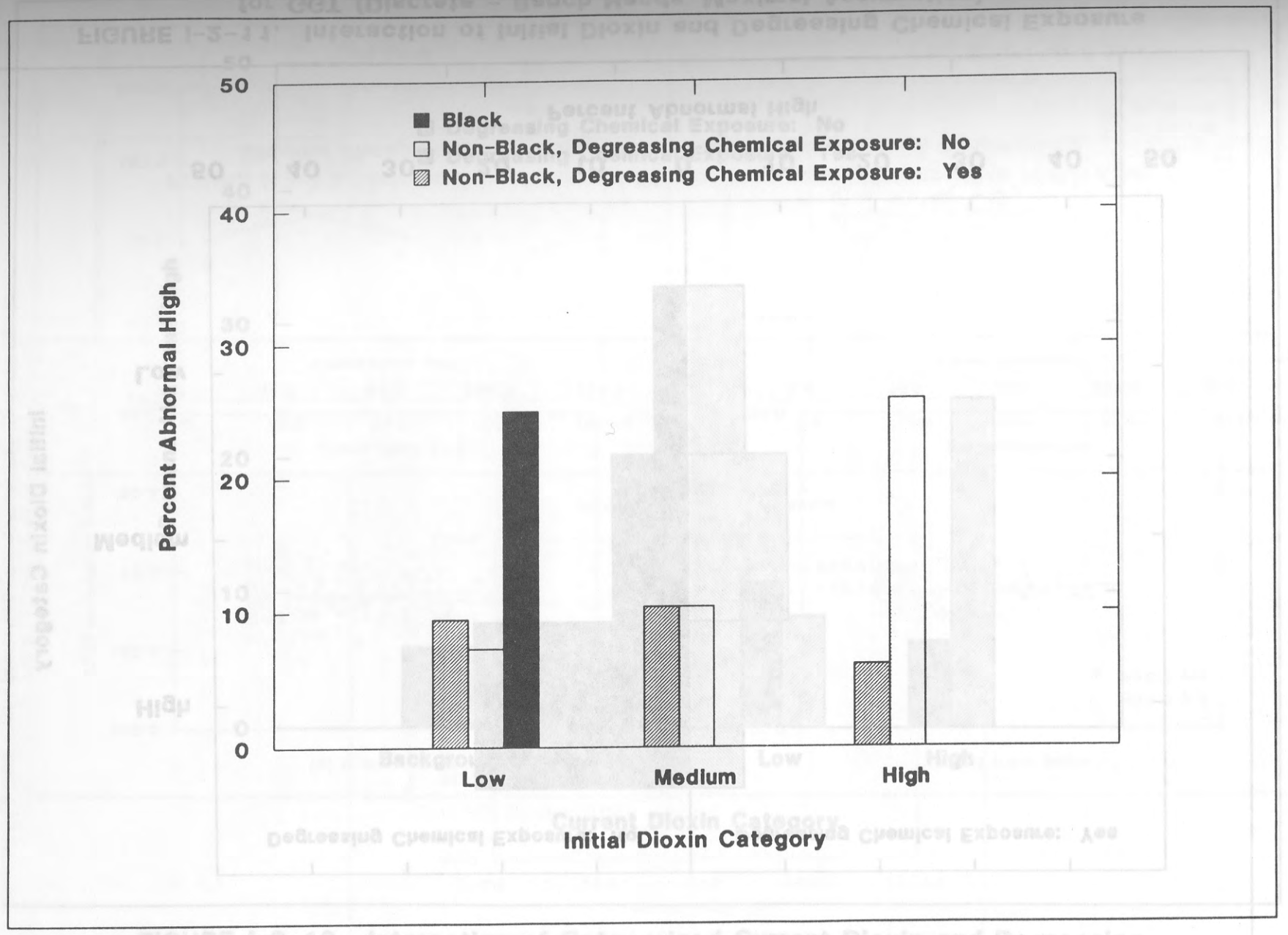

FIGURE I-2-10. Interactions of Initial Dioxin with Race and Degreasing Chemical Exposure for GGT (Discrete - Ranch Hands, Minimal Assumption)

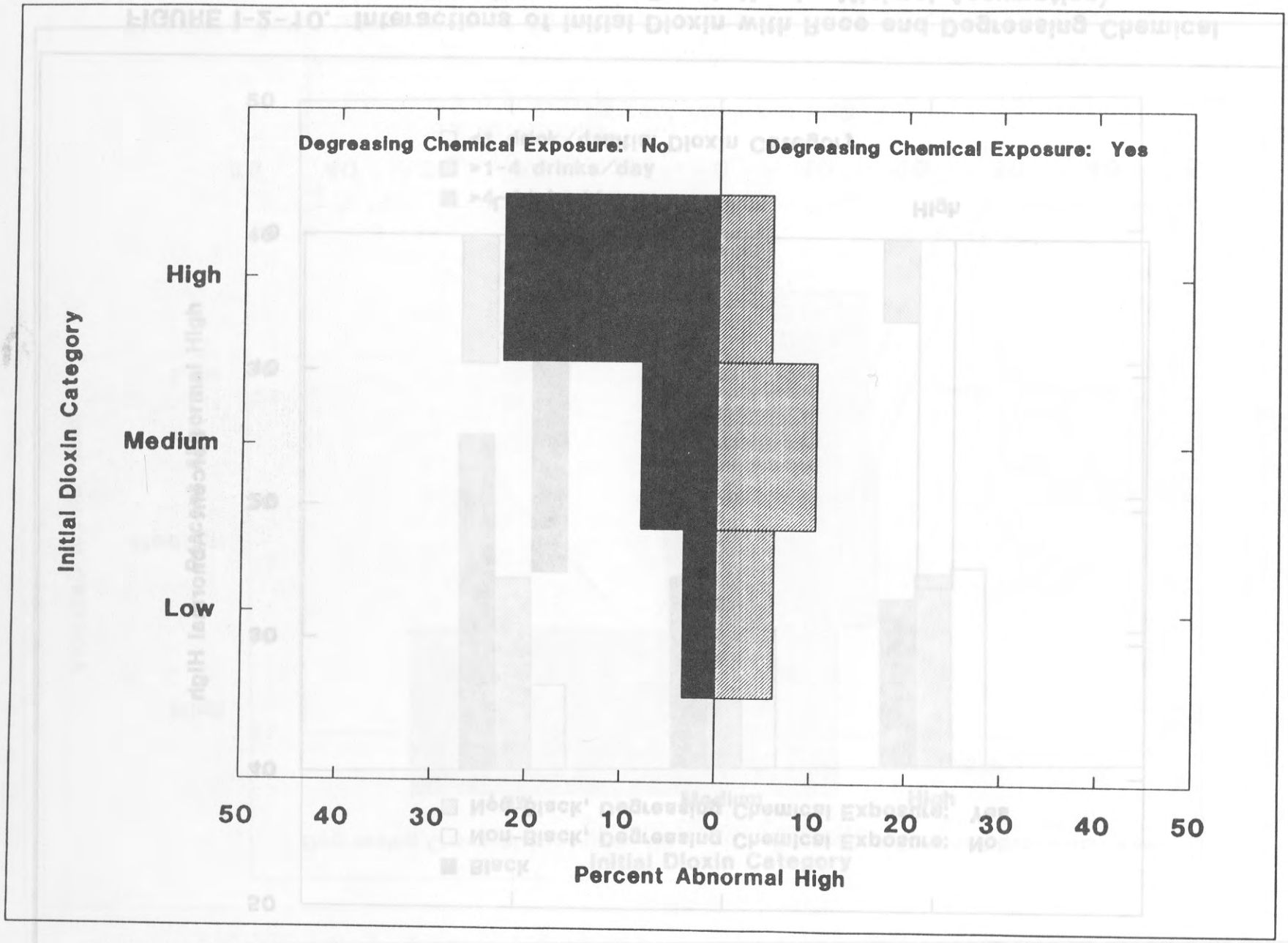

FIGURE I-2-11. Interaction of Initial Dioxin and Degreasing Chemical Exposure for GGT (Discrete - Ranch Hands, Maximal Assumption)

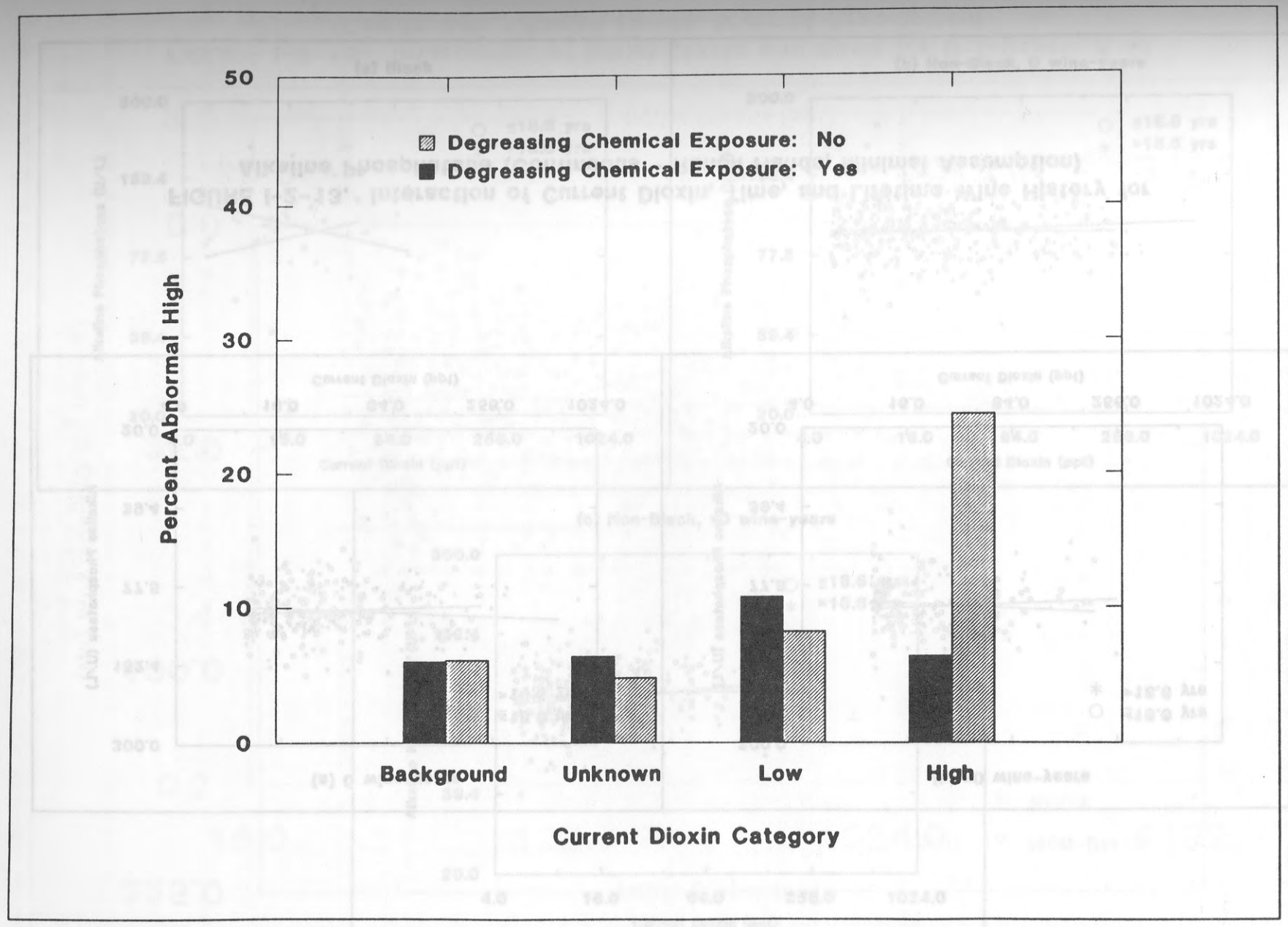

FIGURE I-2-12. Interaction of Categorized Current Dioxin and Degreasing Chemical Exposure for GGT (Discrete)

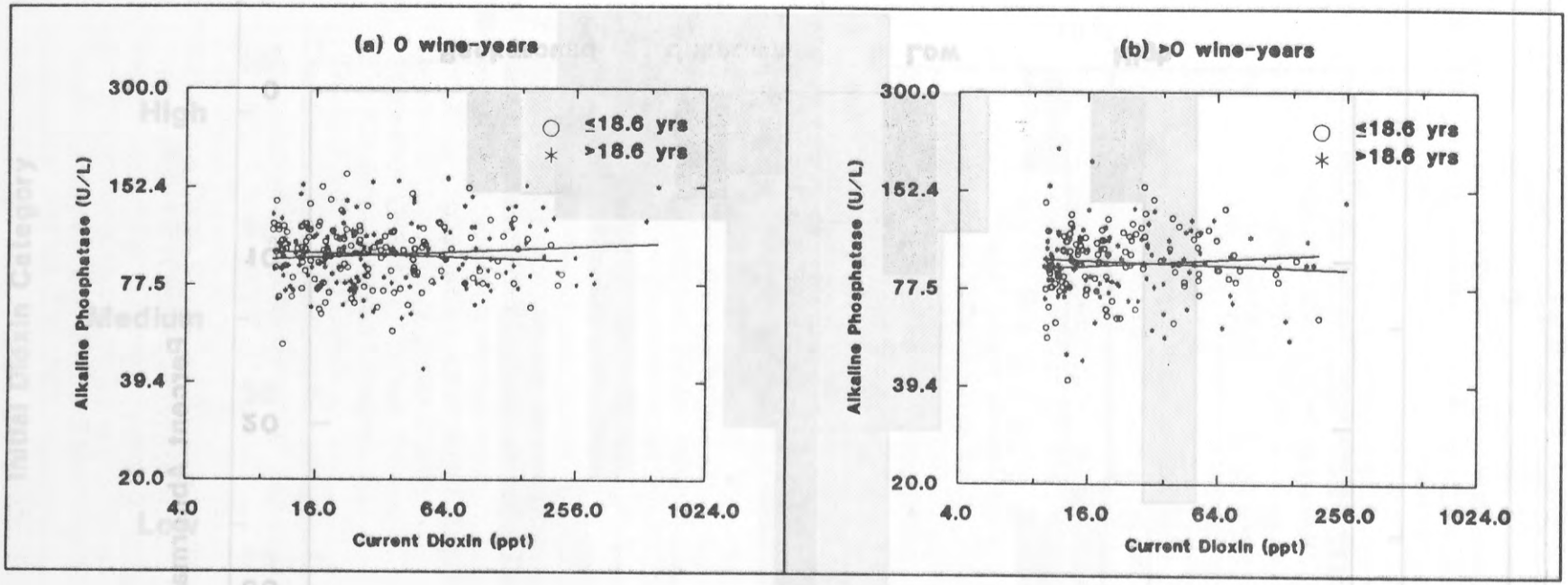

FIGURE I-2-13. Interaction of Current Dioxin, Time, and Lifetime Wine History for Alkaline Phosphatase (Continuous - Ranch Hands, Minimal Assumption)

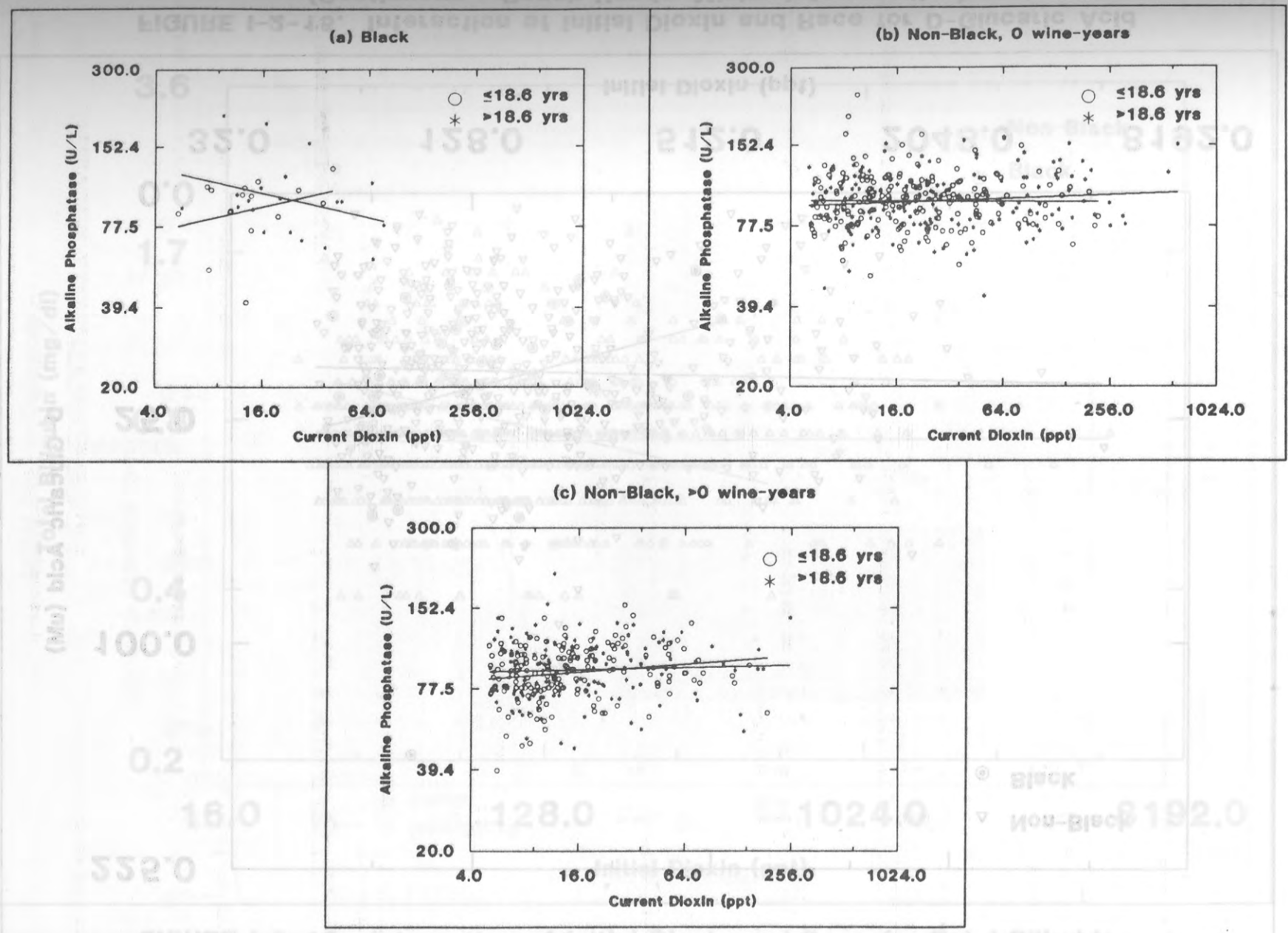

FIGURE I-2-14. Interaction of Current Dioxin, Time, Race, and Lifetime Wine History for Alkaline Phosphatase (Continuous - Ranch Hands, Maximal Assumption)

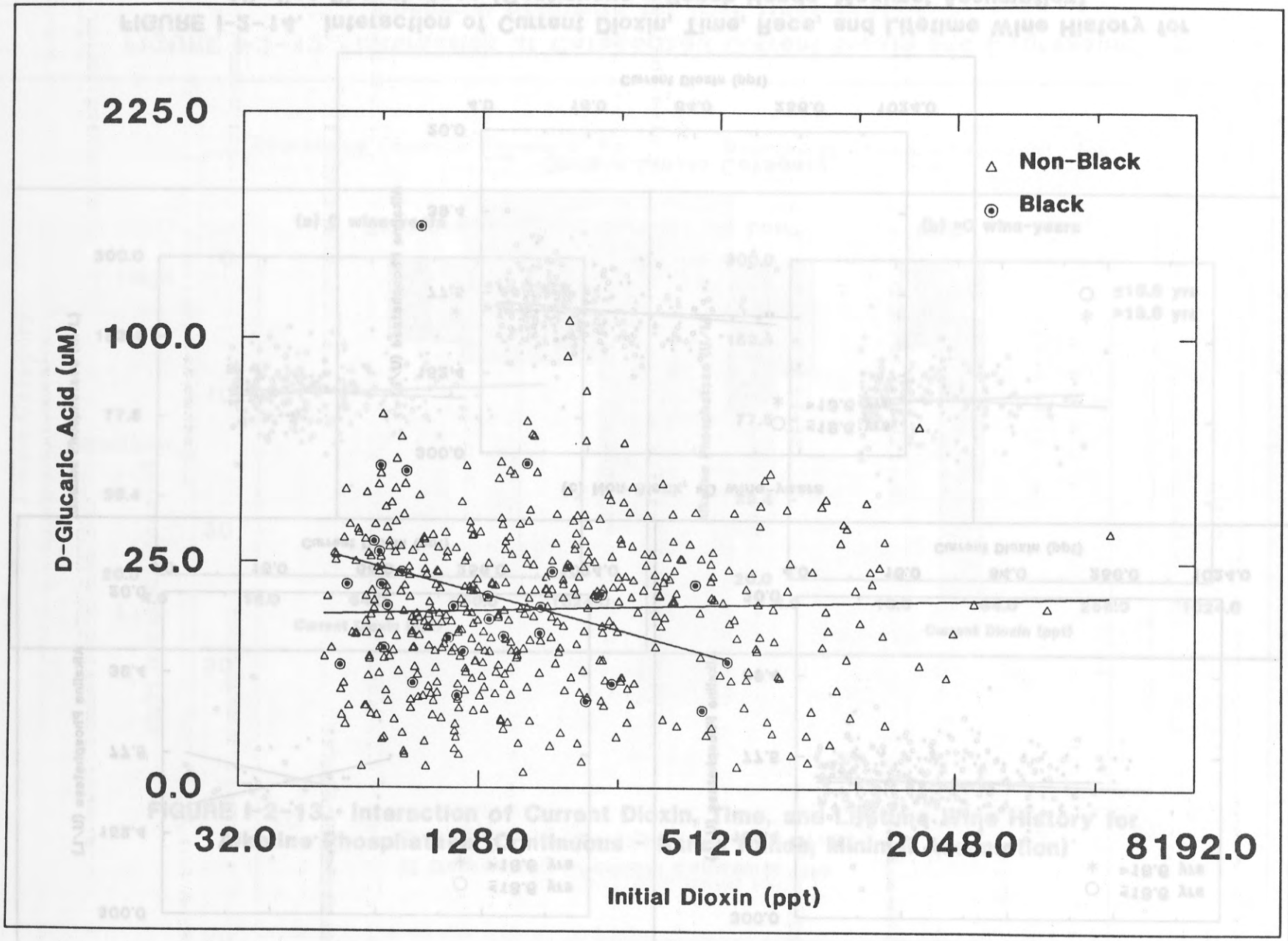

FIGURE I-2-15. Interaction of Initial Dioxin and Race for D-Glucaric Acid (Continuous - Ranch Hands, Minimal Assumption)

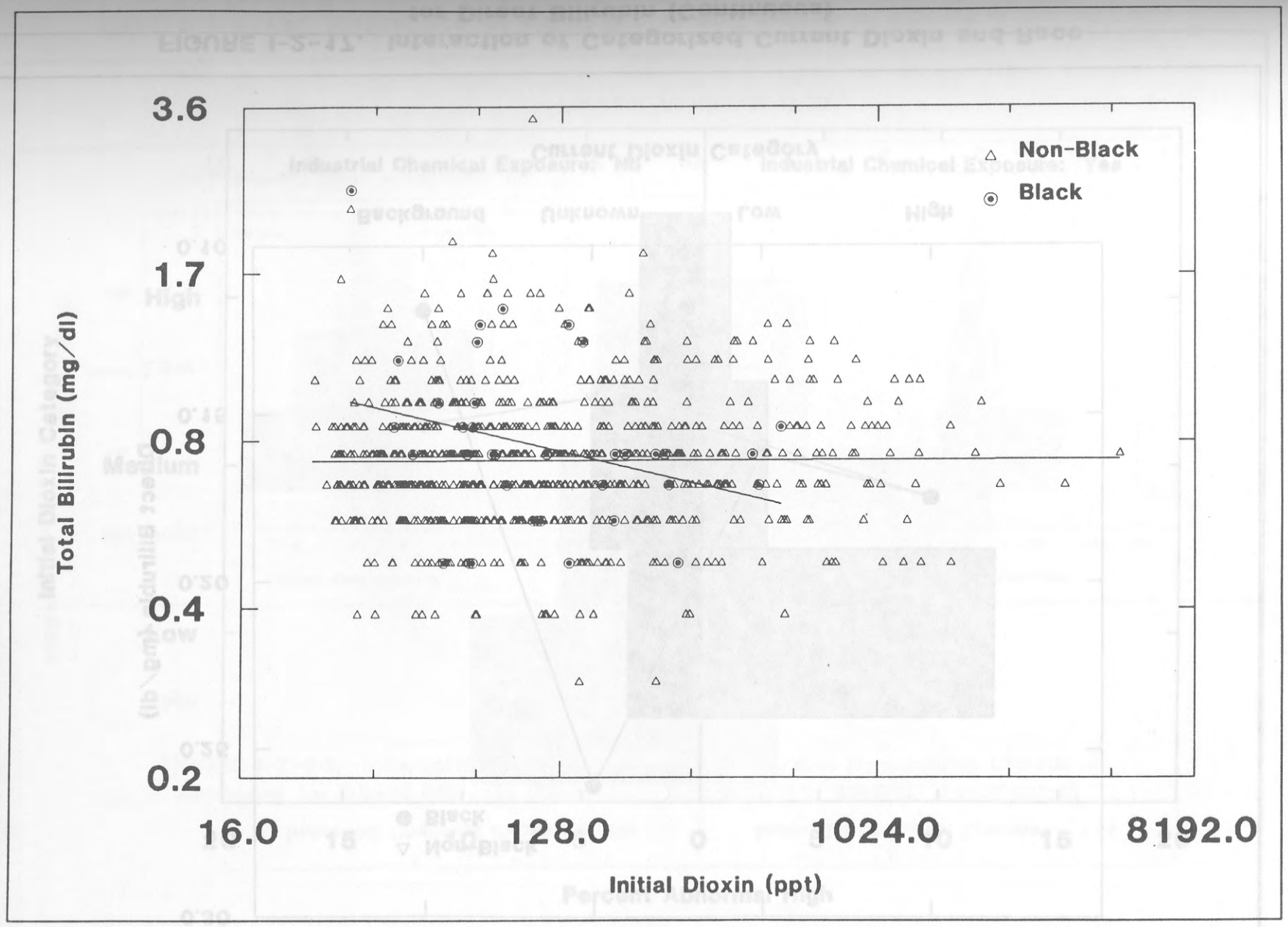

FIGURE I-2-16. Interaction of Initial Dioxin and Race for Total Bilirubin (Continuous - Ranch Hands, Maximal Assumption)

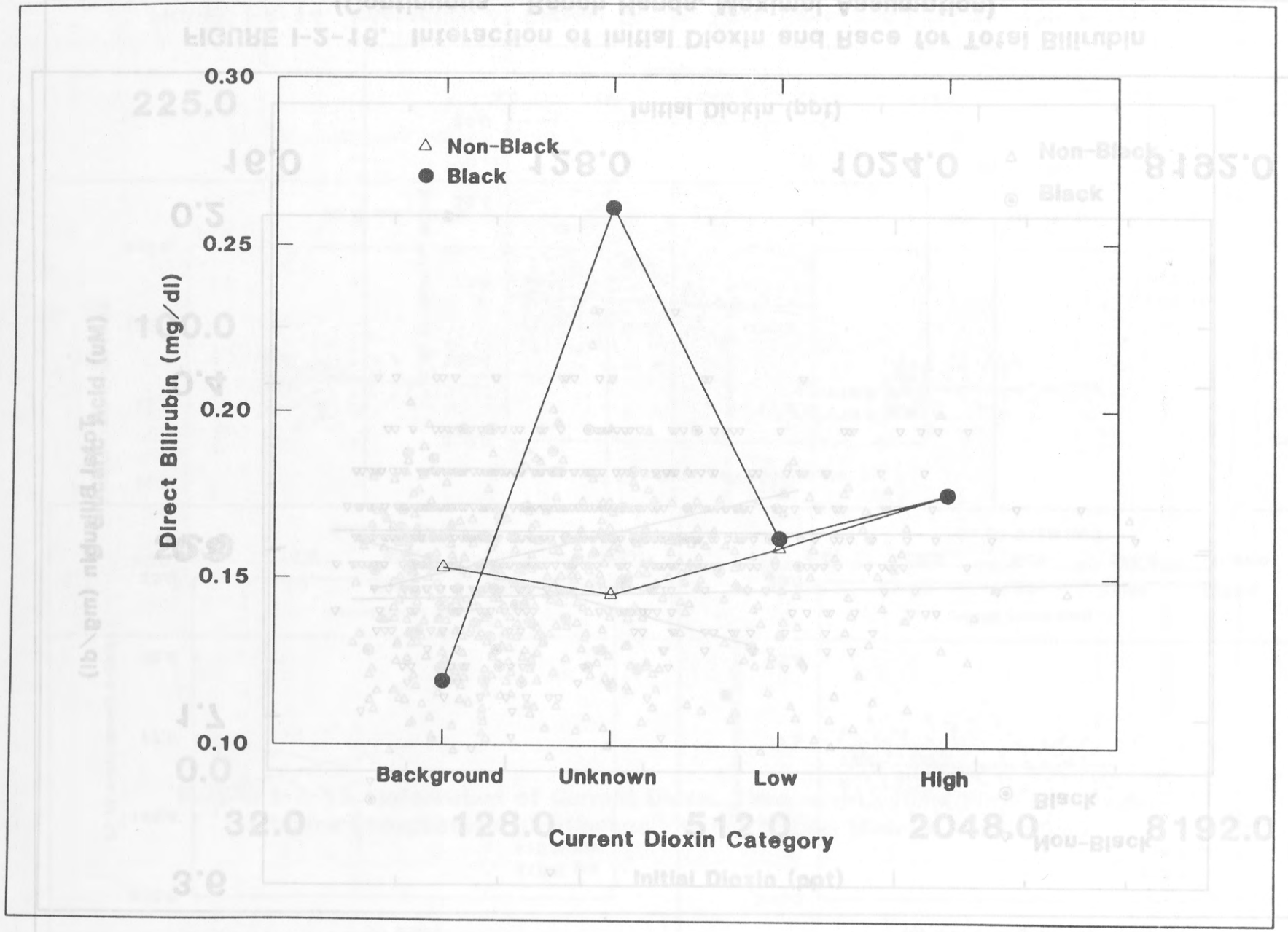

FIGURE I-2-17. Interaction of Categorized Current Dioxin and Race for Direct Bilirubin (Continuous)

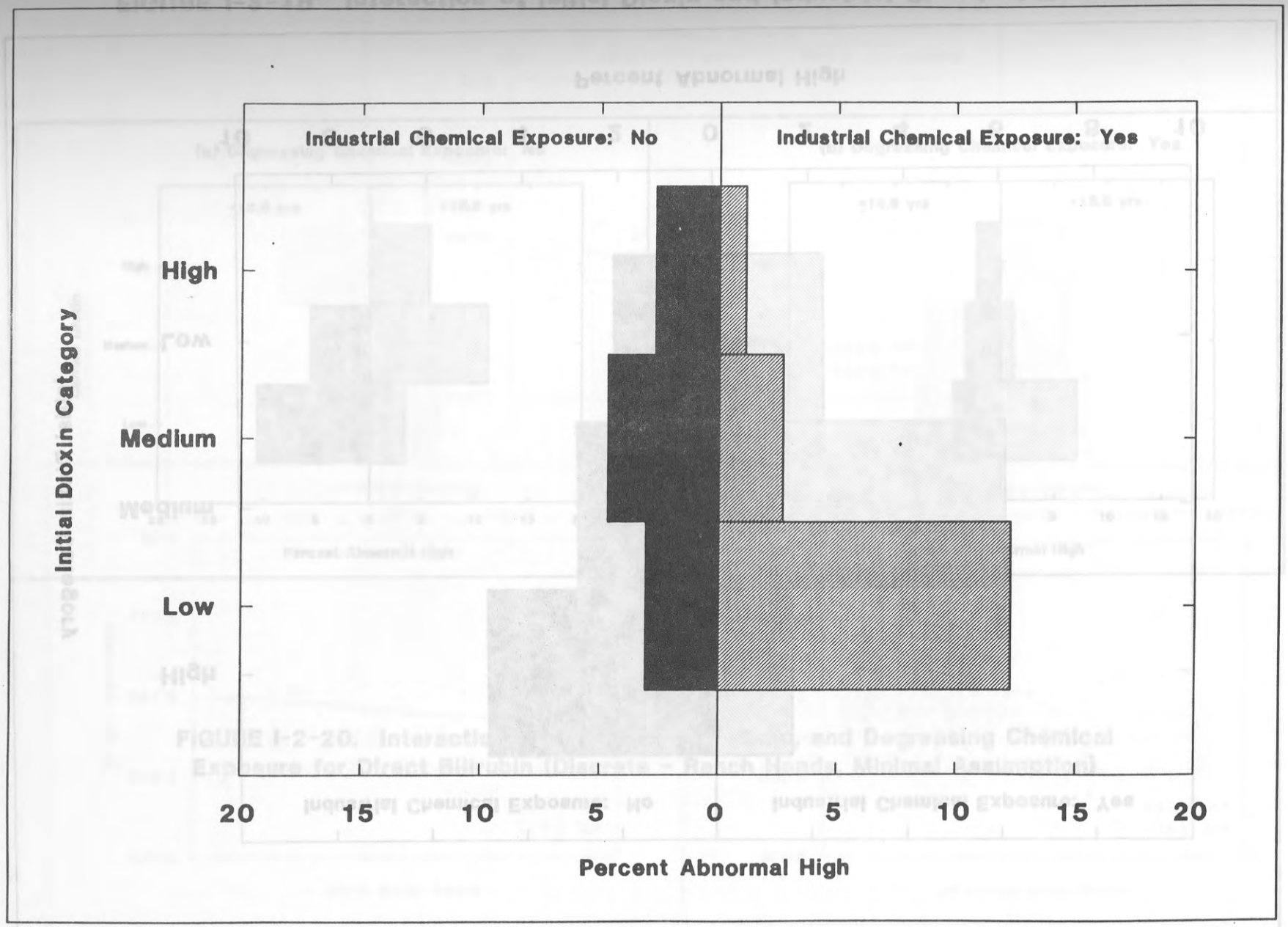

FIGURE I-2-18. Interaction of Initial Dioxin and Industrial Chemical Exposure for Direct Bilirubin (Discrete - Ranch Hands, Minimal Assumption)

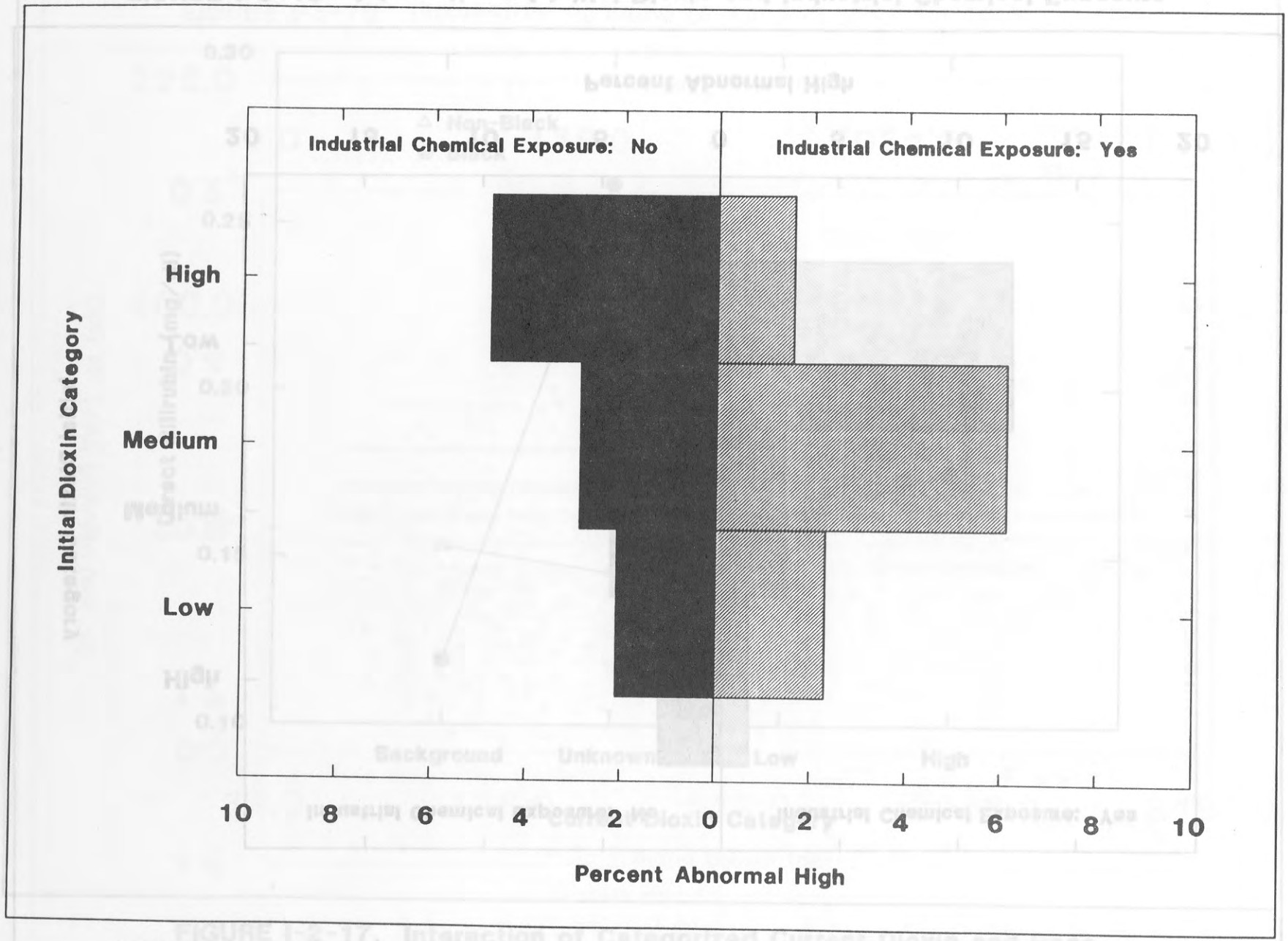

FIGURE I-2-19. Interaction of Initial Dioxin and Industrial Chemical Exposure for Direct Bilirubin (Discrete - Ranch Hands, Maximal Assumption)

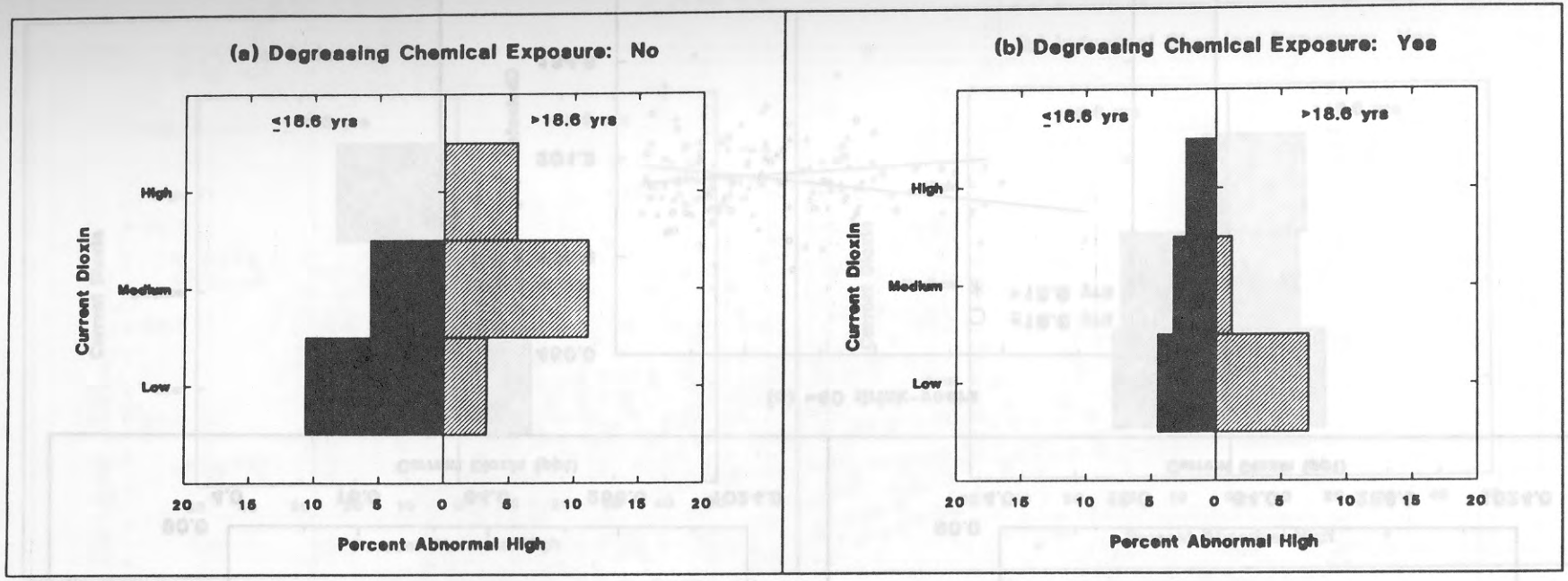

FIGURE I-2-20. Interaction of Current Dioxin, Time, and Degreasing Chemical Exposure for Direct Bilirubin (Discrete - Ranch Hands, Minimal Assumption)

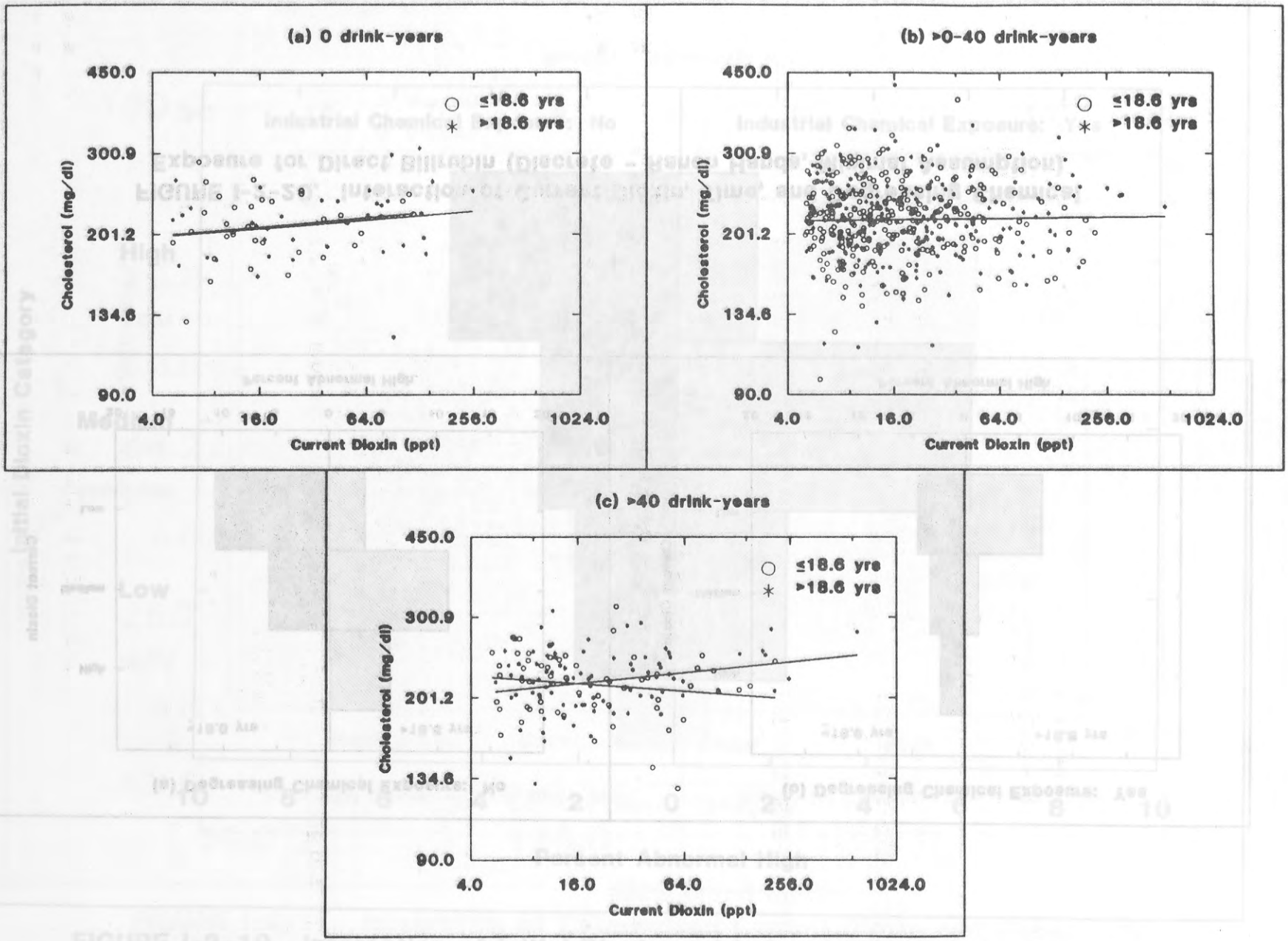

FIGURE I-2-21. Interaction of Current Dioxin, Time, and Lifetime Alcohol History for Cholesterol (Continuous - Ranch Hands, Maximal Assumption)

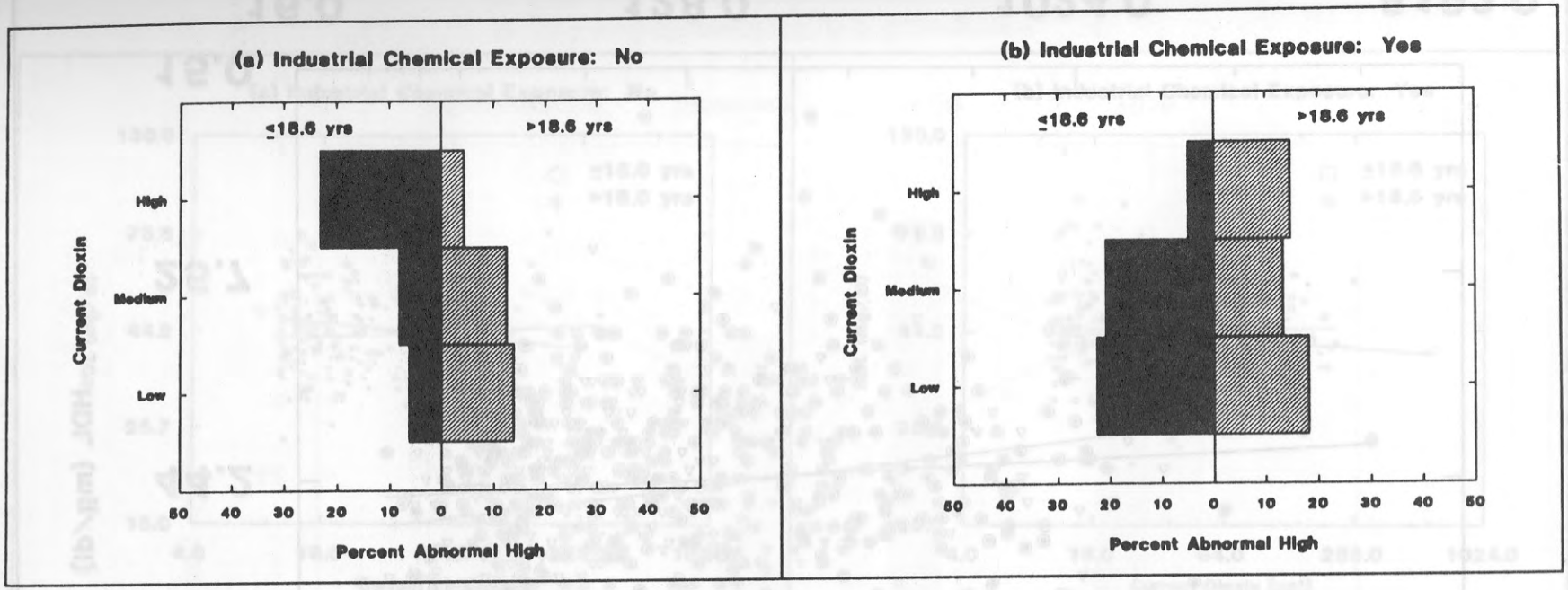

FIGURE I-2-22. Interaction of Current Dioxin, Time, and Industrial Chemical Exposure for Cholesterol (Discrete - Ranch Hands, Minimal Assumption)

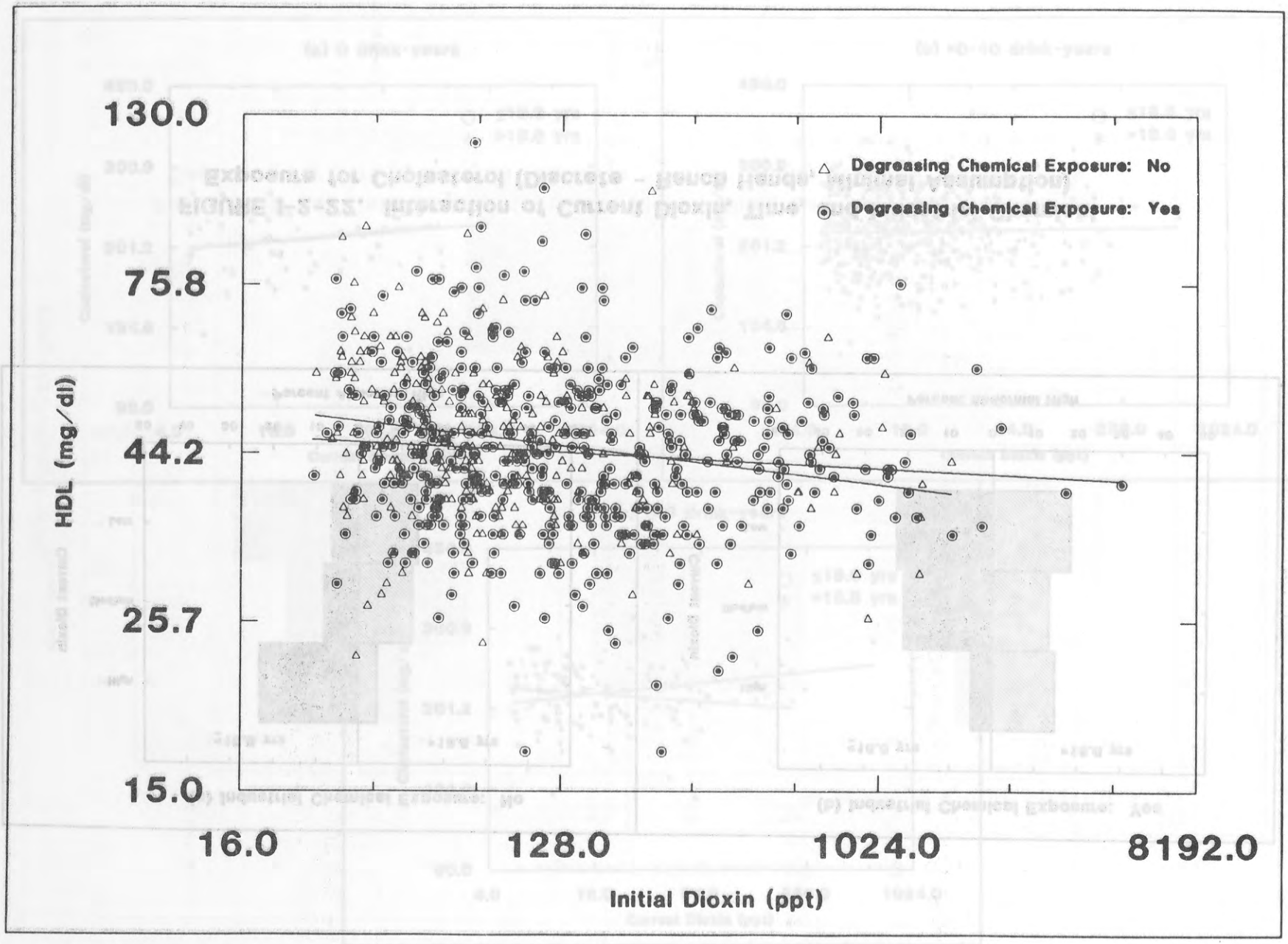

FIGURE I-2-23. Interaction of Initial Dioxin and Degreasing Chemical Exposure for HDL (Continuous - Ranch Hands, Maximal Assumption)

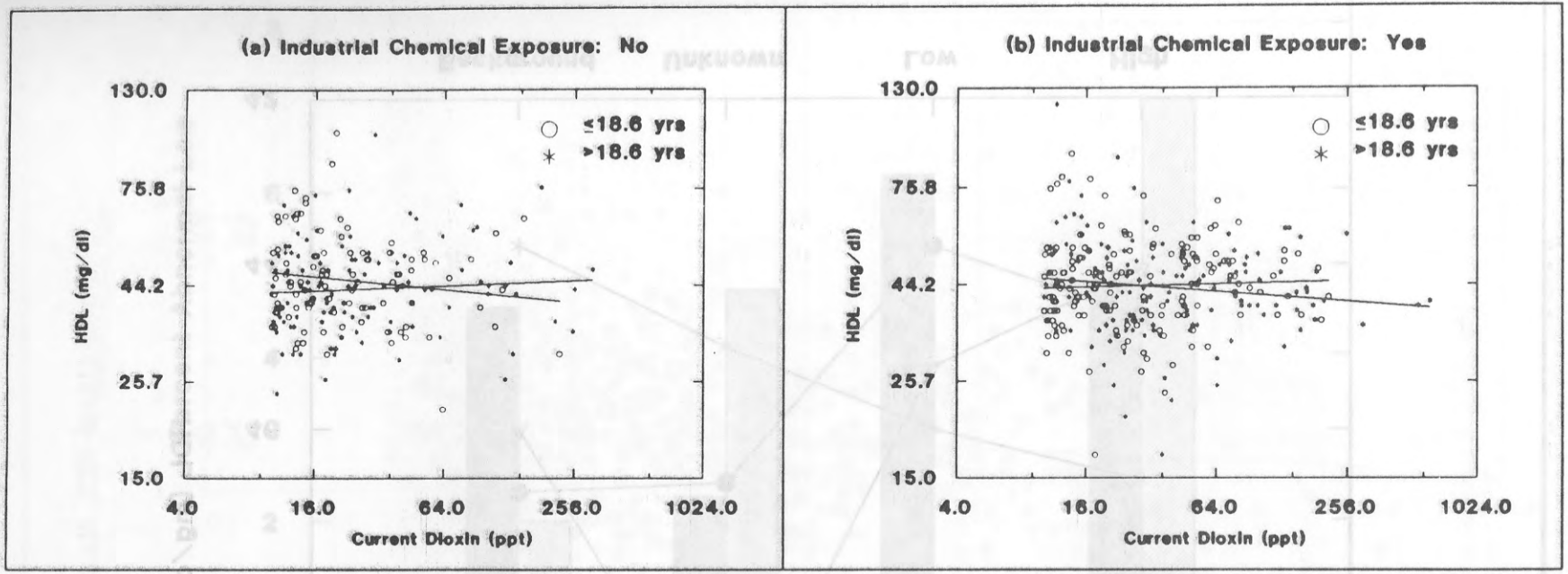

FIGURE I-2-24. Interaction of Current Dioxin, Time, and Industrial Chemical Exposure for HDL (Continuous - Ranch Hands, Minimal Assumption)

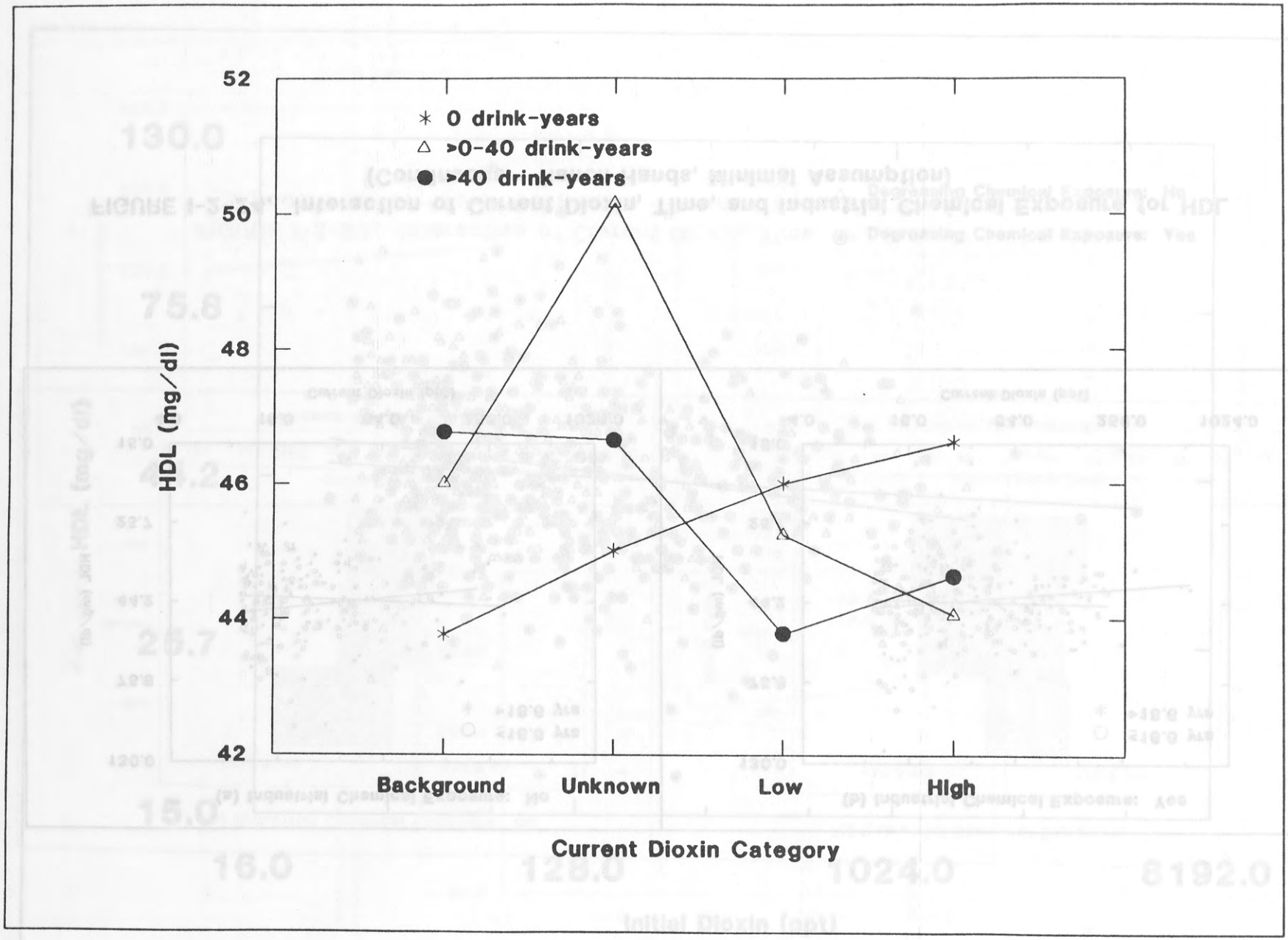

FIGURE I-2-25. Interaction of Categorized Current Dioxin and Lifetime Alcohol History for HDL (Continuous)

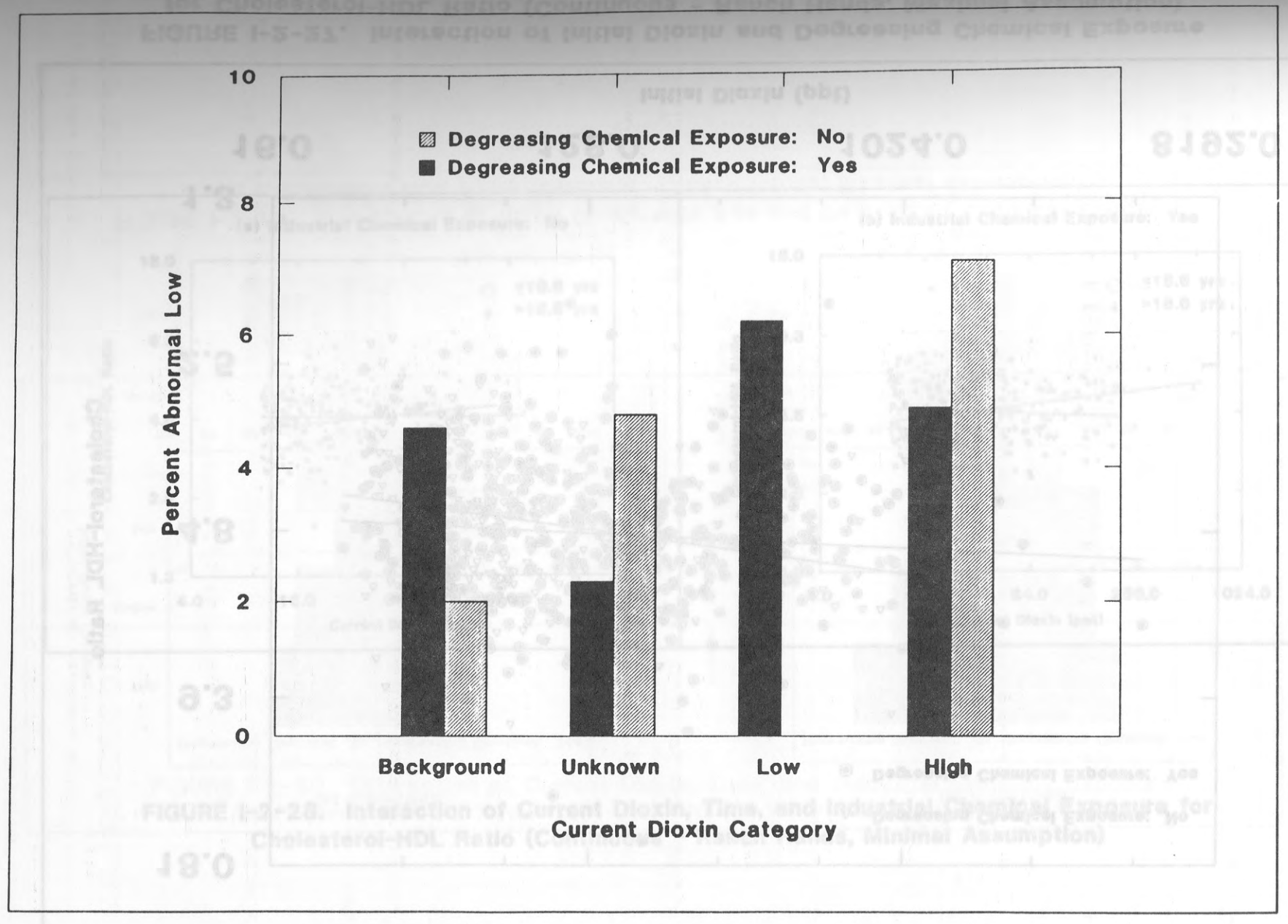

FIGURE I-2-26. Interaction of Categorized Current Dioxin and Degreasing Chemical Exposure for HDL (Discrete)

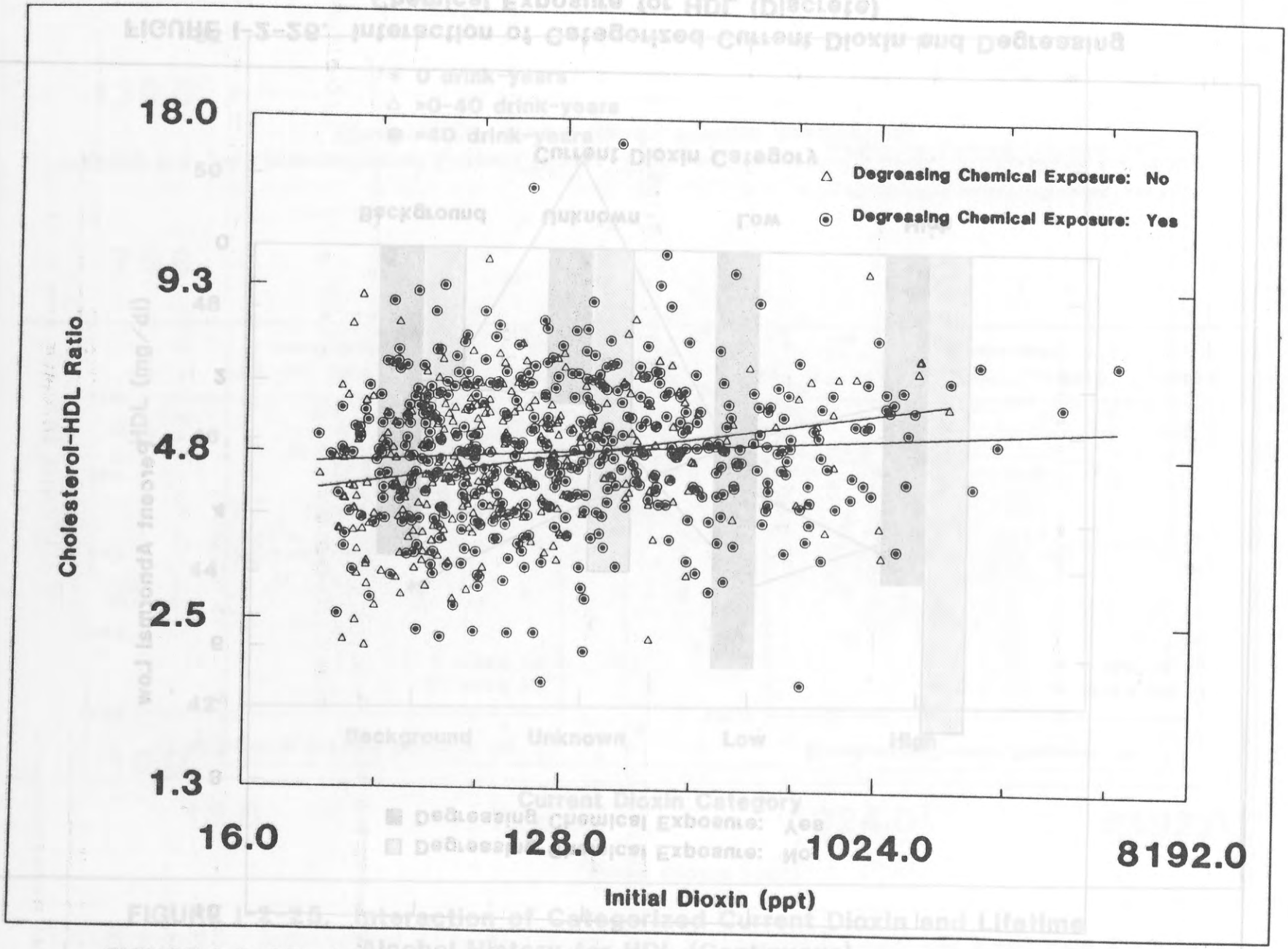

FIGURE I-2-27. Interaction of Initial Dioxin and Degreasing Chemical Exposure for Cholesterol-HDL Ratio (Continuous - Ranch Hands, Maximal Assumption)

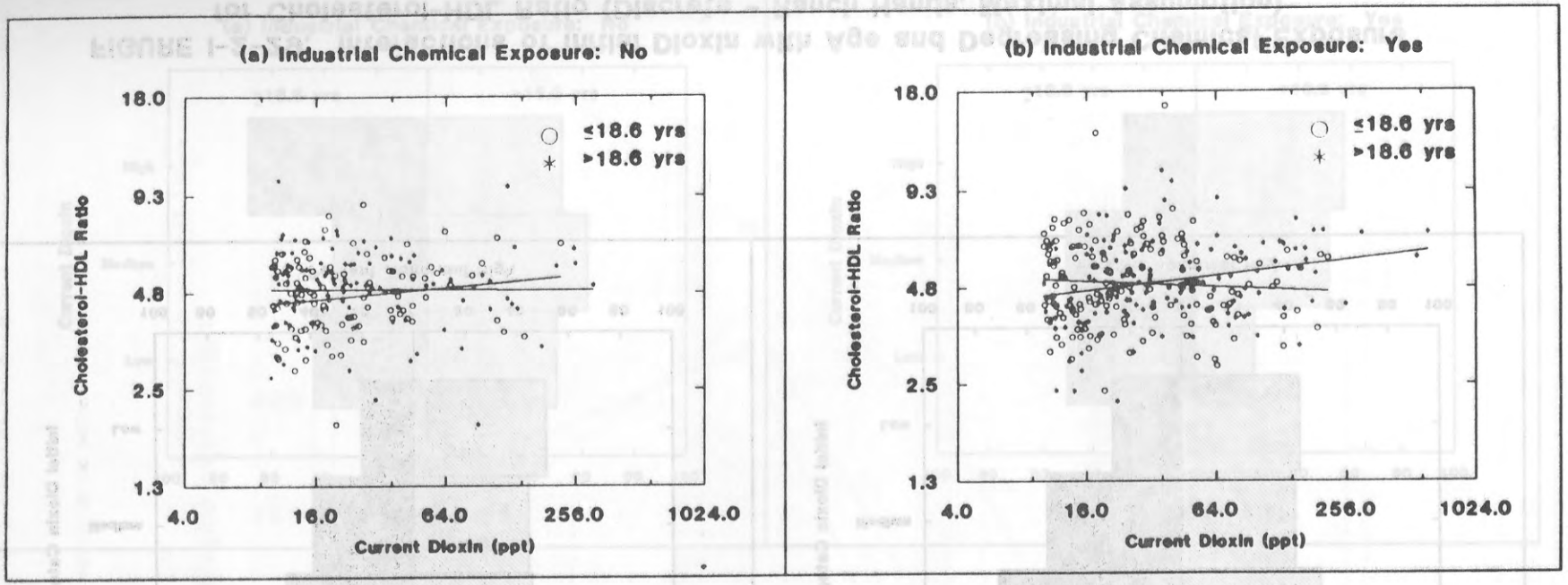

FIGURE I-2-28. Interaction of Current Dioxin, Time, and Industrial Chemical Exposure for Cholesterol-HDL Ratio (Continuous - Ranch Hands, Minimal Assumption)

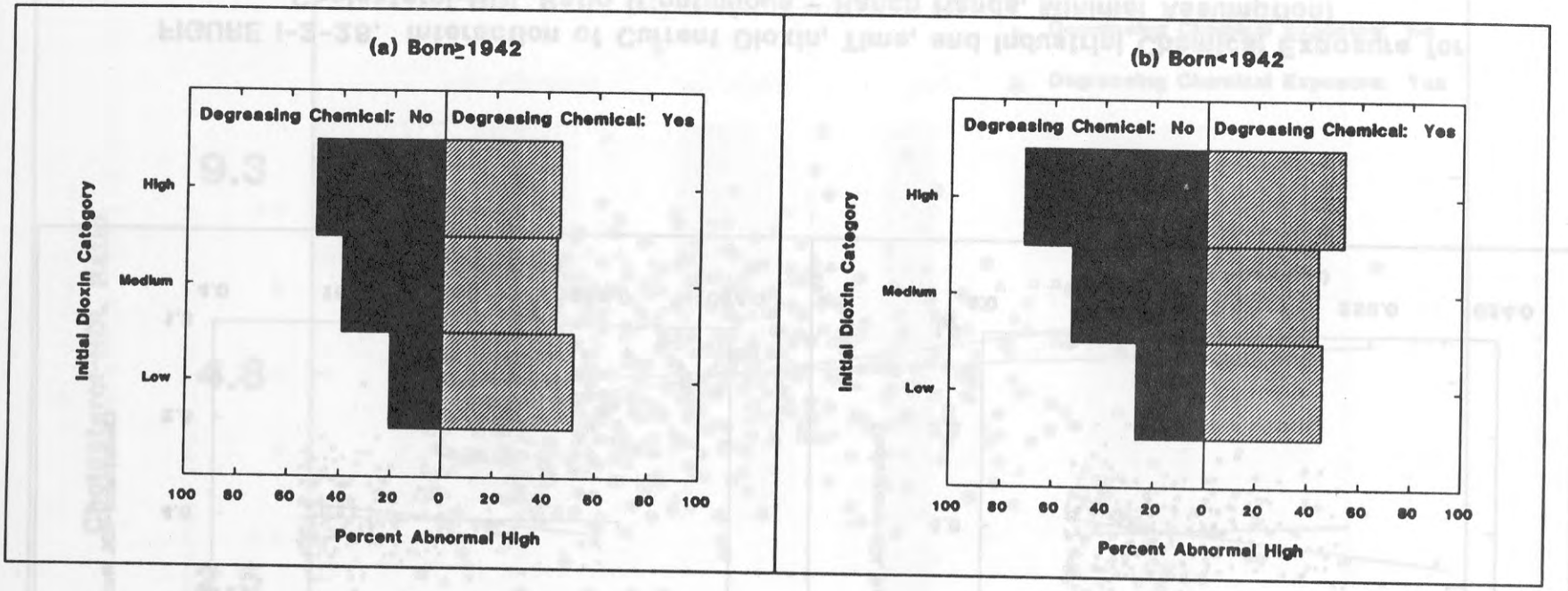

FIGURE I-2-29. Interactions of Initial Dioxin with Age and Degreasing Chemical Exposure for Cholesterol-HDL Ratio (Discrete - Ranch Hands, Maximal Assumption)

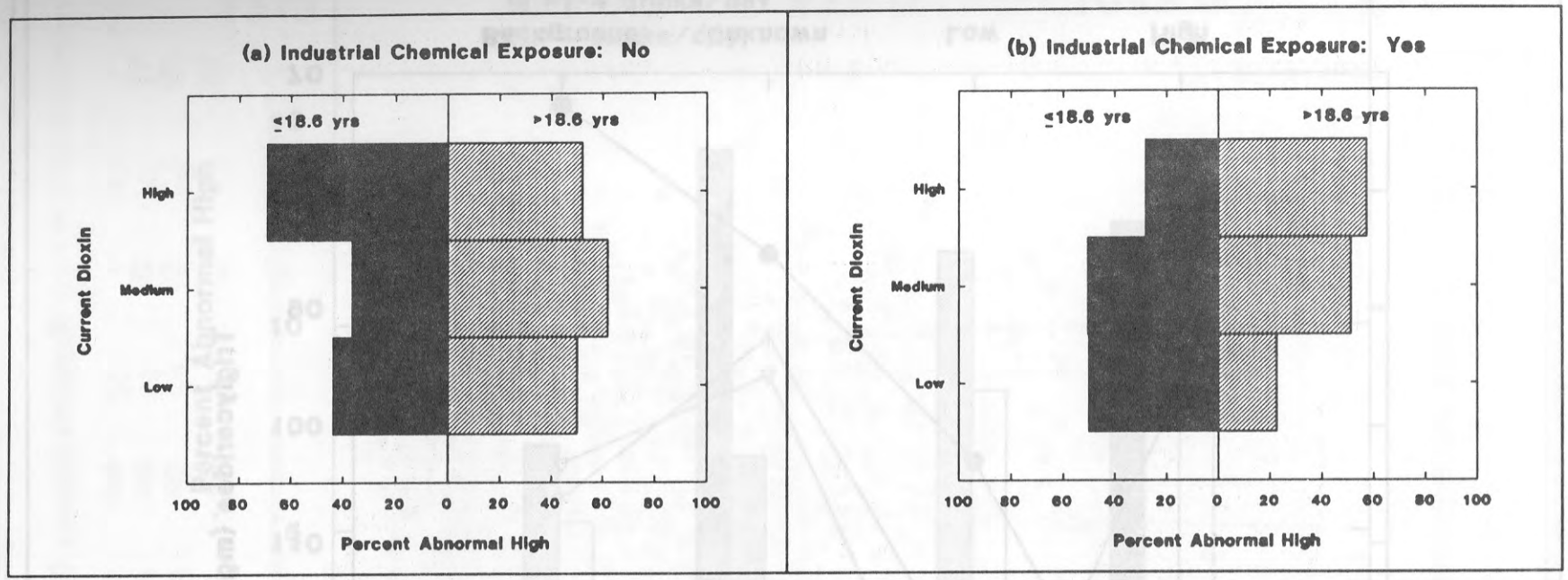

FIGURE I-2-30. Interaction of Current Dioxin, Time, and Industrial Chemical Exposure for Cholesterol-HDL Ratio (Discrete - Ranch Hands, Minimal Assumption)

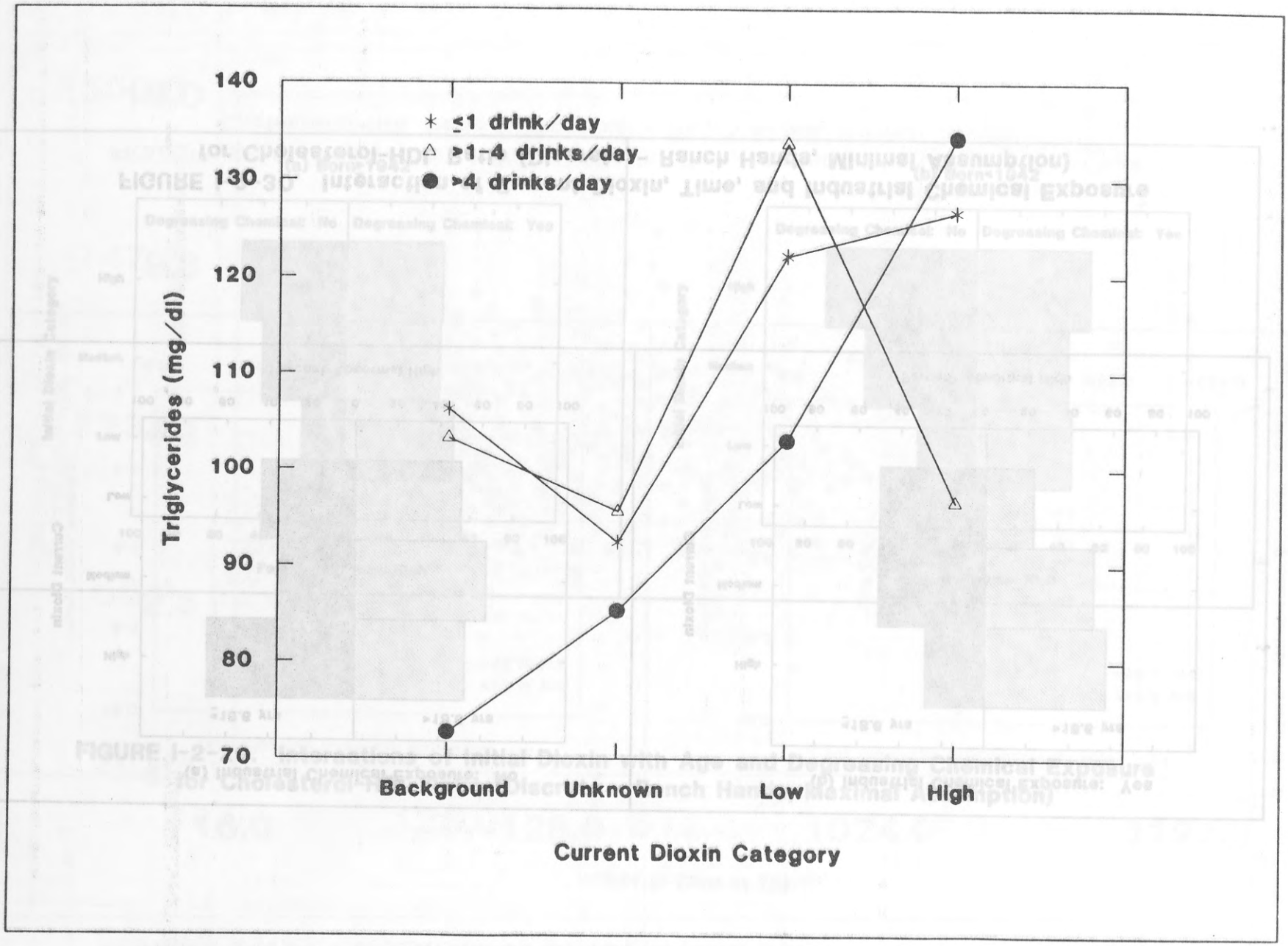

FIGURE I-2-31. Interaction of Categorized Current Dioxin and Current Alcohol Use for Triglycerides (Continuous)

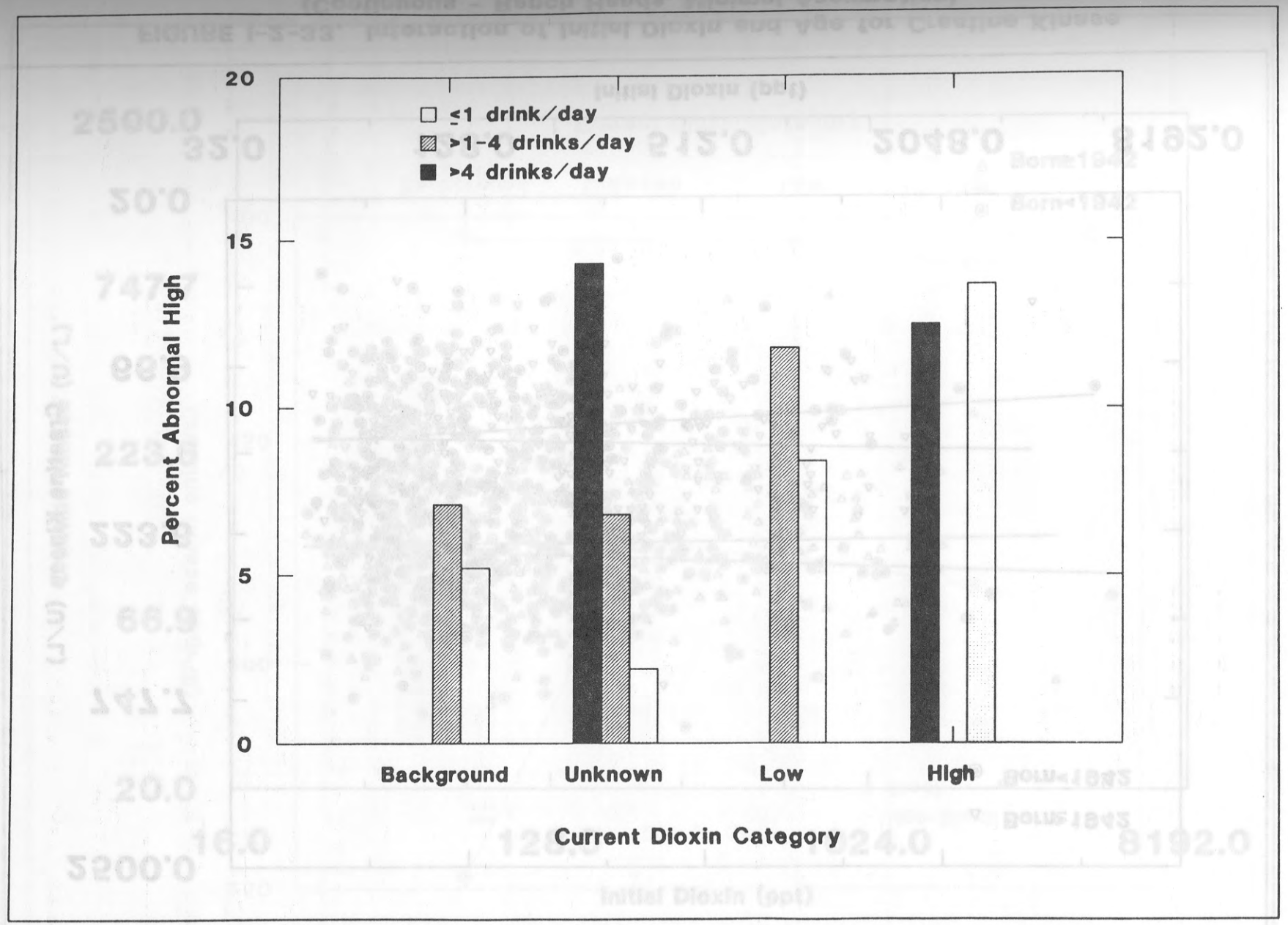

FIGURE I-2-32. Interaction of Categorized Current Dioxin and Current Alcohol Use for Triglycerides (Discrete)

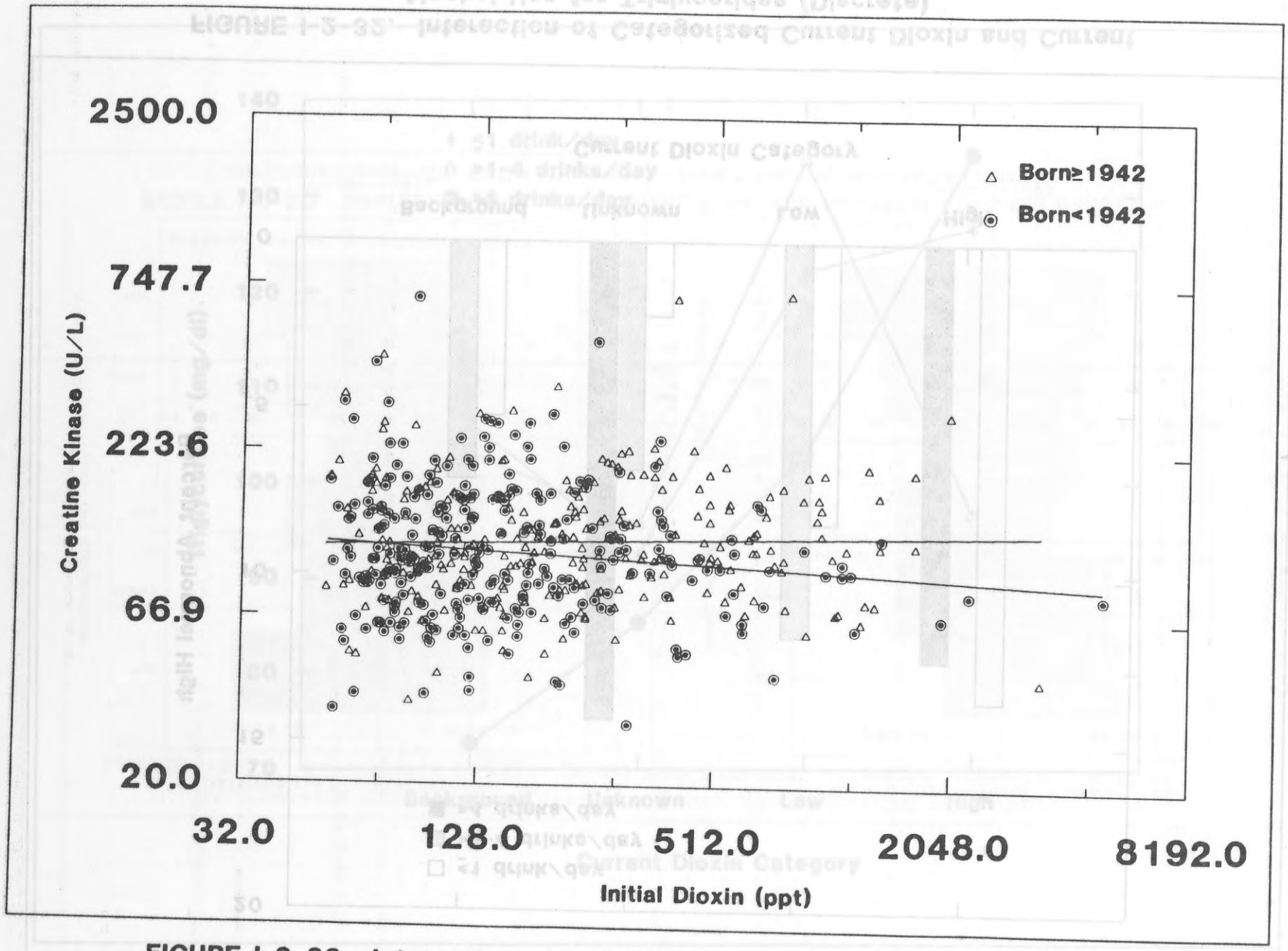

FIGURE I-2-33. Interaction of Initial Dioxin and Age for Creatine Kinase (Continuous - Ranch Hands, Minimal Assumption)

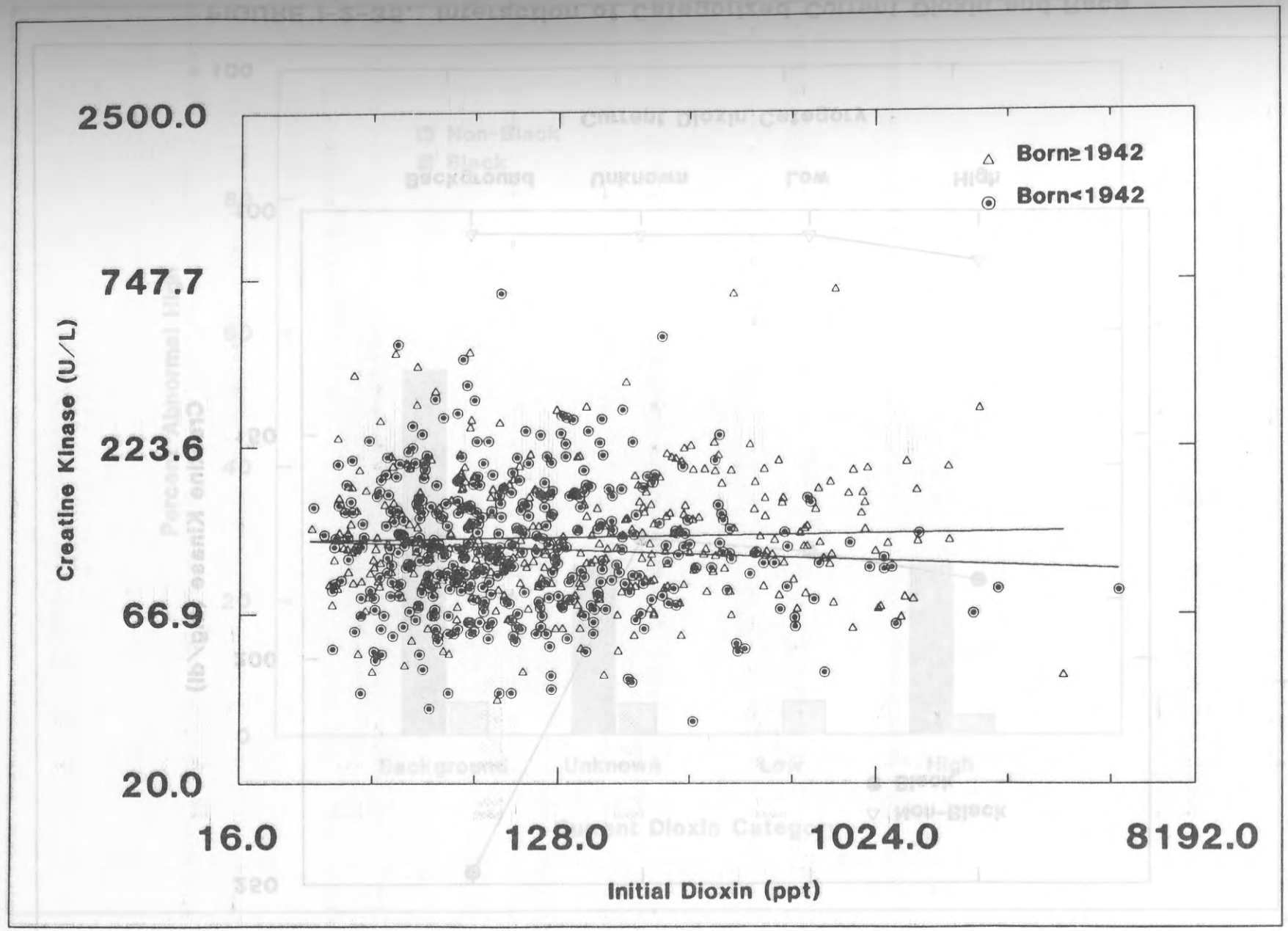

FIGURE I-2-34. Interaction of Initial Dioxin and Age for Creatine Kinase (Continuous - Ranch Hands, Maximal Assumption)

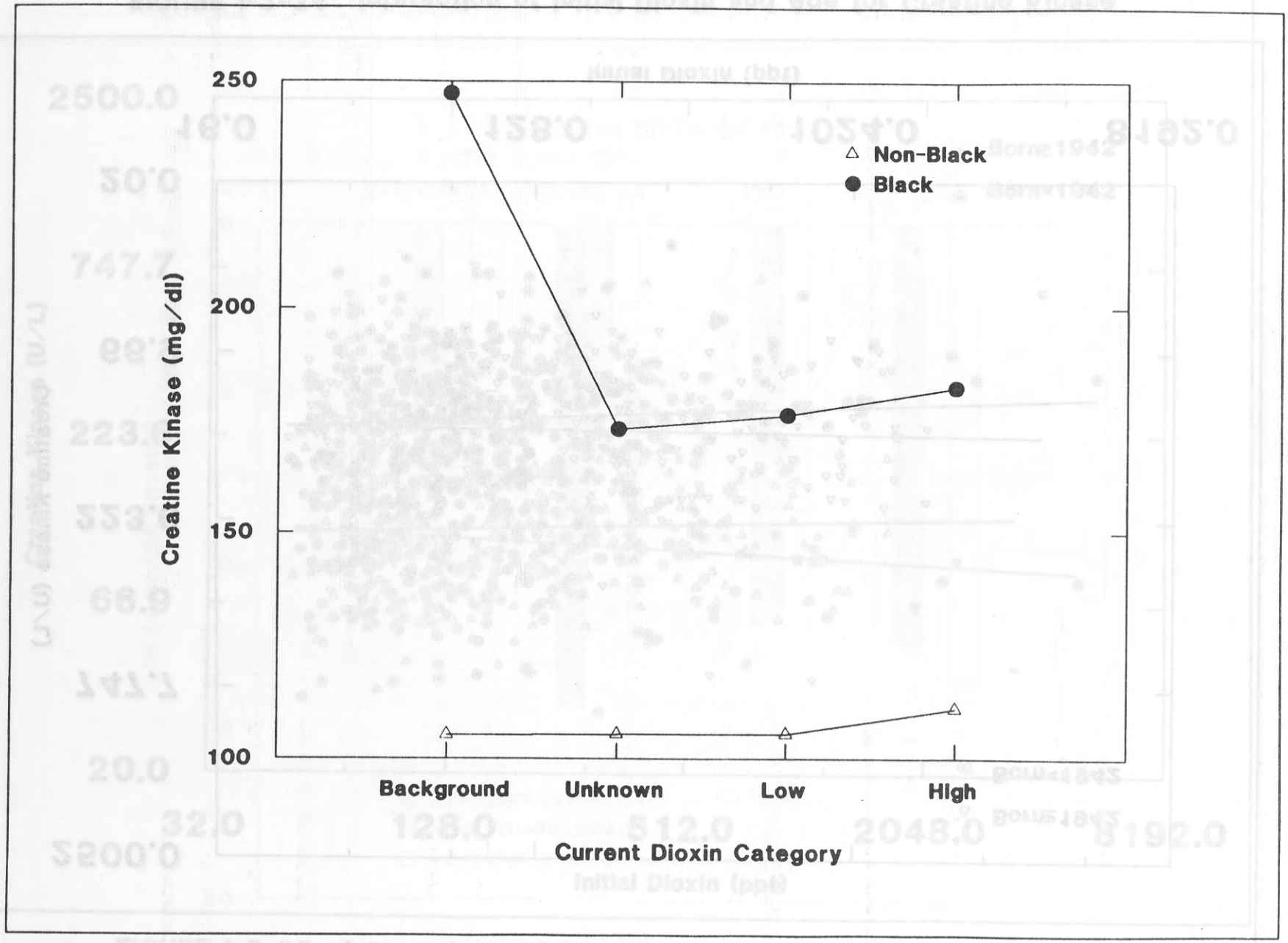

FIGURE I-2-35. Interaction of Categorized Current Dioxin and Race for Creatine Kinase (Continuous)

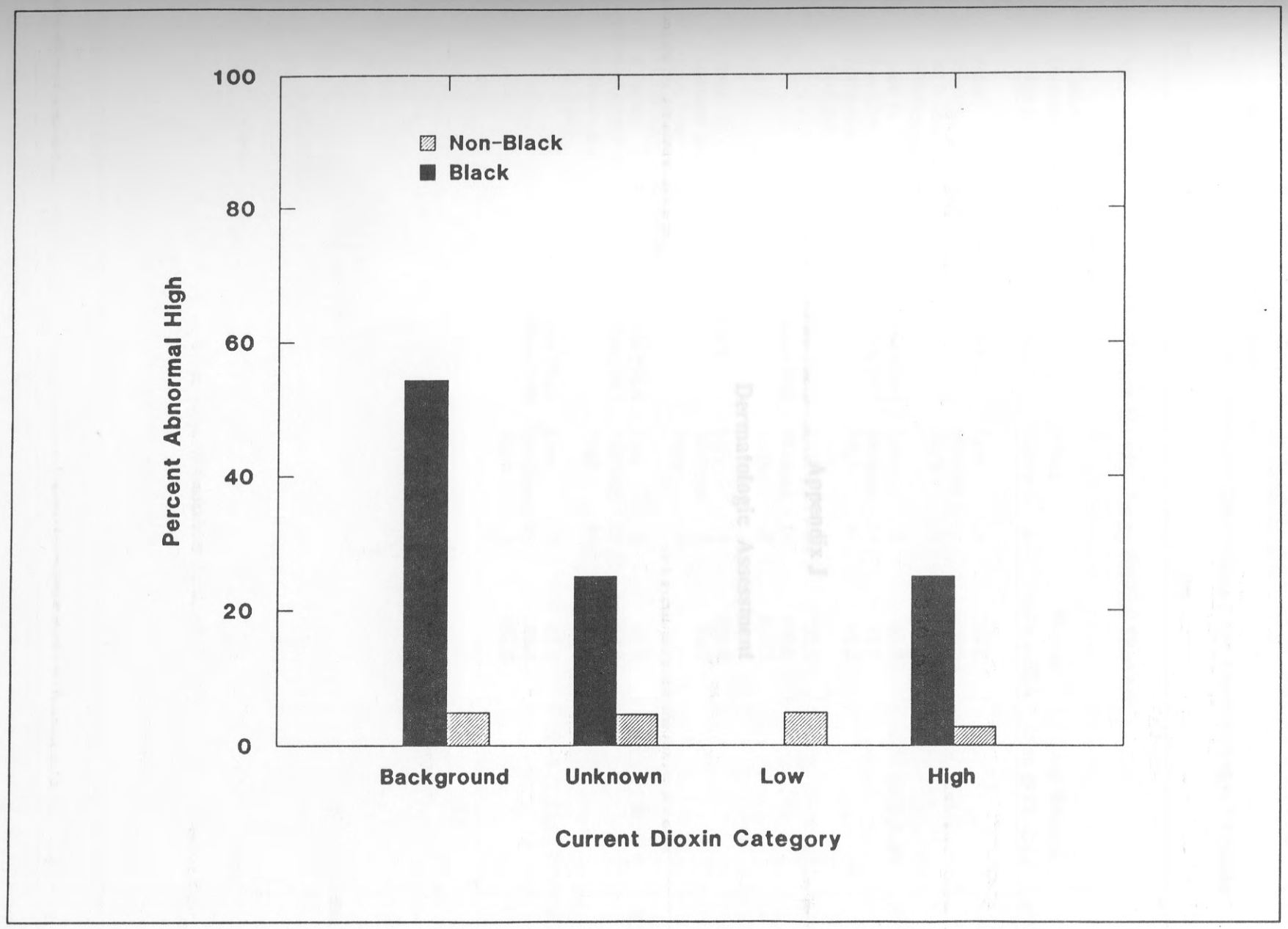

FIGURE I-2-36. Interaction of Categorized Current Dioxin and Race for Creatine Kinase (Discrete)