

Supplemental Table S1. Pairwise comparisons of lens age and zonules of various disorder predictors. The table presents the results of a statistical analysis comparing the means of different lens ages and zonular parameters through Tukey's honestly significant difference test, with family-wise error rates set at 0.05.

Pairwise comparisons for PER(VLXT):

Multiple Comparison of Means - Tukey HSD, FWER=0.05

| group1              | group2           | meandiff | p-adj  | lower   | upper   | reject |
|---------------------|------------------|----------|--------|---------|---------|--------|
| 25/37-year-old Lens | 58-year-old Lens | -3.1991  | 0.0178 | -5.9523 | -0.4459 | True   |
| 25/37-year-old Lens | Zonules          | 1.2932   | 0.4951 | -1.3895 | 3.9759  | False  |
| 58-year-old Lens    | Zonules          | 4.4923   | 0.0053 | 1.1088  | 7.8758  | True   |

Pairwise comparisons for RNK(VLXT):

Multiple Comparison of Means - Tukey HSD, FWER=0.05

| group1              | group2           | meandiff | p-adj  | lower   | upper   | reject |
|---------------------|------------------|----------|--------|---------|---------|--------|
| 25/37-year-old Lens | 58-year-old Lens | -0.027   | 0.0118 | -0.0491 | -0.0049 | True   |
| 25/37-year-old Lens | Zonules          | 0.0164   | 0.1762 | -0.0052 | 0.0379  | False  |
| 58-year-old Lens    | Zonules          | 0.0434   | 0.0006 | 0.0162  | 0.0706  | True   |

Pairwise comparisons for PER(VSL2B):

Multiple Comparison of Means - Tukey HSD, FWER=0.05

| group1              | group2           | meandiff | p-adj  | lower   | upper   | reject |
|---------------------|------------------|----------|--------|---------|---------|--------|
| 25/37-year-old Lens | 58-year-old Lens | -3.6375  | 0.0349 | -7.0721 | -0.2029 | True   |
| 25/37-year-old Lens | Zonules          | 8.2083   | 0.0    | 4.8616  | 11.555  | True   |
| 58-year-old Lens    | Zonules          | 11.8458  | 0.0    | 7.6249  | 16.0667 | True   |

Pairwise comparisons for RNK(VSL2B):

Multiple Comparison of Means - Tukey HSD, FWER=0.05

| group1              | group2           | meandiff | p-adj  | lower   | upper   | reject |
|---------------------|------------------|----------|--------|---------|---------|--------|
| 25/37-year-old Lens | 58-year-old Lens | -0.0237  | 0.0377 | -0.0463 | -0.0011 | True   |
| 25/37-year-old Lens | Zonules          | 0.0563   | 0.0    | 0.0343  | 0.0783  | True   |
| 58-year-old Lens    | Zonules          | 0.08     | 0.0    | 0.0522  | 0.1078  | True   |

Pairwise comparisons for PER(VL3):

Multiple Comparison of Means - Tukey HSD, FWER=0.05

| group1              | group2           | meandiff | p-adj  | lower   | upper   | reject |
|---------------------|------------------|----------|--------|---------|---------|--------|
| 25/37-year-old Lens | 58-year-old Lens | -4.942   | 0.0088 | -8.8614 | -1.0226 | True   |
| 25/37-year-old Lens | Zonules          | 8.0078   | 0.0    | 4.1887  | 11.8269 | True   |
| 58-year-old Lens    | Zonules          | 12.9498  | 0.0    | 8.1331  | 17.7665 | True   |

Pairwise comparisons for RNK(VL3):

Multiple Comparison of Means - Tukey HSD, FWER=0.05

| group1              | group2           | meandiff | p-adj | lower   | upper   | reject |
|---------------------|------------------|----------|-------|---------|---------|--------|
| 25/37-year-old Lens | 58-year-old Lens | -0.0357  | 0.004 | -0.0618 | -0.0095 | True   |
| 25/37-year-old Lens | Zonules          | 0.0566   | 0.0   | 0.0311  | 0.0821  | True   |
| 58-year-old Lens    | Zonules          | 0.0922   | 0.0   | 0.0601  | 0.1244  | True   |

Pairwise comparisons for PER(IUP\_S):

Multiple Comparison of Means - Tukey HSD, FWER=0.05

| group1              | group2           | meandiff | p-adj  | lower   | upper  | reject |
|---------------------|------------------|----------|--------|---------|--------|--------|
| 25/37-year-old Lens | 58-year-old Lens | -2.398   | 0.0563 | -4.8455 | 0.0495 | False  |
| 25/37-year-old Lens | Zonules          | 2.4513   | 0.0423 | 0.0664  | 4.8362 | True   |
| 58-year-old Lens    | Zonules          | 4.8493   | 0.0005 | 1.8415  | 7.8571 | True   |

Pairwise comparisons for RNK(IUP\_S):

Multiple Comparison of Means - Tukey HSD, FWER=0.05

| group1              | group2           | meandiff | p-adj  | lower   | upper  | reject |
|---------------------|------------------|----------|--------|---------|--------|--------|
| 25/37-year-old Lens | 58-year-old Lens | -0.0126  | 0.1955 | -0.0297 | 0.0045 | False  |
| 25/37-year-old Lens | Zonules          | 0.0307   | 0.0    | 0.0141  | 0.0474 | True   |
| 58-year-old Lens    | Zonules          | 0.0433   | 0.0    | 0.0223  | 0.0643 | True   |

Pairwise comparisons for PER(IUP\_L):

Multiple Comparison of Means - Tukey HSD, FWER=0.05

| group1              | group2           | meandiff | p-adj  | lower   | upper  | reject |
|---------------------|------------------|----------|--------|---------|--------|--------|
| 25/37-year-old Lens | 58-year-old Lens | -2.523   | 0.1276 | -5.5722 | 0.5261 | False  |
| 25/37-year-old Lens | Zonules          | 3.6511   | 0.0111 | 0.68    | 6.6222 | True   |
| 58-year-old Lens    | Zonules          | 6.1741   | 0.0003 | 2.4269  | 9.9213 | True   |

Pairwise comparisons for RNK(IUP\_L):

Multiple Comparison of Means - Tukey HSD, FWER=0.05

| group1              | group2           | meandiff | p-adj | lower   | upper  | reject |
|---------------------|------------------|----------|-------|---------|--------|--------|
| 25/37-year-old Lens | 58-year-old Lens | -0.0151  | 0.252 | -0.0375 | 0.0072 | False  |
| 25/37-year-old Lens | Zonules          | 0.0428   | 0.0   | 0.021   | 0.0646 | True   |
| 58-year-old Lens    | Zonules          | 0.058    | 0.0   | 0.0305  | 0.0855 | True   |

Pairwise comparisons for PER(PFIT):

Multiple Comparison of Means - Tukey HSD, FWER=0.05

| group1              | group2           | meandiff | p-adj  | lower   | upper  | reject |
|---------------------|------------------|----------|--------|---------|--------|--------|
| 25/37-year-old Lens | 58-year-old Lens | -4.214   | 0.0036 | -7.274  | -1.154 | True   |
| 25/37-year-old Lens | Zonules          | 2.9453   | 0.0537 | -0.0364 | 5.927  | False  |

112 58-year-old Lens Zonules 7.1594 0.0 3.3988 10.9199 True

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115 Pairwise comparisons for RNK(PFIT):

116 Multiple Comparison of Means - Tukey HSD, FWER=0.05

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118 group1 group2 meandiff p-adj lower upper reject

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120 25/37-year-old Lens 58-year-old Lens -0.0284 0.007 -0.0503 -0.0064 True

121 25/37-year-old Lens Zonules 0.0308 0.0022 0.0094 0.0522 True

122 58-year-old Lens Zonules 0.0592 0.0 0.0322 0.0862 True

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125 Pairwise comparisons for PER(MDP):

126 Multiple Comparison of Means - Tukey HSD, FWER=0.05

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128 group1 group2 meandiff p-adj lower upper reject

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130 25/37-year-old Lens 58-year-old Lens -4.0604 0.0169 -7.5317 -0.5891 True

131 25/37-year-old Lens Zonules 3.7315 0.0263 0.349 7.114 True

132 58-year-old Lens Zonules 7.7919 0.0001 3.5258 12.0579 True

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135 Pairwise comparisons for RNK(MDP):

136 Multiple Comparison of Means - Tukey HSD, FWER=0.05

137 =====

138 group1 group2 meandiff p-adj lower upper reject

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140 25/37-year-old Lens 58-year-old Lens -0.0261 0.018 -0.0487 -0.0036 True

141 25/37-year-old Lens Zonules 0.0415 0.0 0.0195 0.0634 True

142 58-year-old Lens Zonules 0.0676 0.0 0.0399 0.0953 True

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145 Pairwise comparisons for dCDF:

146 Multiple Comparison of Means - Tukey HSD, FWER=0.05

147 =====

148 group1 group2 meandiff p-adj lower upper reject

149 -----

150 25/37-year-old Lens 58-year-old Lens 0.0266 0.0114 0.0049 0.0484 True

151 25/37-year-old Lens Zonules -0.0155 0.1996 -0.0367 0.0057 False

152 58-year-old Lens Zonules -0.0421 0.0007 -0.0688 -0.0154 True

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155 Pairwise comparisons for dCH:

156 Multiple Comparison of Means - Tukey HSD, FWER=0.05

157 =====

158 group1 group2 meandiff p-adj lower upper reject

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160 25/37-year-old Lens 58-year-old Lens -0.0251 0.0039 -0.0434 -0.0067 True

161 25/37-year-old Lens Zonules 0.0226 0.0084 0.0048 0.0405 True

162 58-year-old Lens Zonules 0.0477 0.0 0.0252 0.0702 True

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