

Supplementary Materials: Pro-Oxidant Enzymes, Redox Balance and Oxidative Damage to Proteins, Lipids and DNA in Colorectal Cancer Tissue. Is Oxidative Stress Dependent on Tumour Budding and Inflammatory Infiltration?

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Table S1. Oxidative stress biomarkers in relation to clinical-pathological parameters.

| Parameter | Male vs female | | adenocarcinoma vs mucinous adenocarcinoma | | T2 vs T3 (depth of invasion) | | N0 vs N1+N2 (lymph node metastasis) | | M0 vs M1 (distant metastasis) | | Stage at diagnosis - I+II vs III+IV | | Absent vs present vascular invasion | Absent vs present neural invasion | Inflammatory infiltration in the invasive front: absent and weak vs moderate and strong | Inflammatory infiltration in the tumor center: absent and weak vs moderate and strong | Tumour budding <5 vs tumour budding >5 |
|-----------|---|---|---|--|--|--|---|--|---|--|--|--|---|--|---|---|--|
| | Non-tumour | Tumour | Non-tumour | Tumour | Non-tumour | Tumour | Non-tumour | Tumour | Non-tumour | Tumour | Non-tumour | Tumour | Non-tumour | Tumour | Non-tumour | Tumour | Tumour |
| NOX | p=0.121 4.032 (2.179-5.236) vs 4.925 (1.660-19.79) | p=0.242 5.355 (5.165-9.165) vs 6.414 (4.941-12.06) | p=0.544 5.01 (1.79-17.66) vs 4.54 (3.52-9.31) | p<0.05 6.60 (5.03-11.73) vs 5.24 (4.94-9.57) | p=0.477 4.93 (1.66-9.54) vs 4.77 (3.15-19.79) | p=0.303 5.56 (5.17-9.17) vs 6.41 (4.94-12.06) | p=0.840 5.56 (1.66-19.79) vs 4.77 (3.15-11.26) | p=0.702 4.84 (4.98-12.27) vs 6.41 (4.94-10.75) | p=0.802 4.85 (2.18-11.27) vs 6.04 (4.97-10.75) | p=0.333 4.85 (4.97-10.75) vs 7.51 (3.152-11.26) | p=0.889 5.613 (4.980-10.79) vs 6.271 (5.456-10.11) | p=0.389 5.613 (4.94-12.05) vs 6.41 (5.16-7.49) | p=0.550 5.78 (4.98-10.75) vs 6.41 (5.16-7.49) | p=0.296 6.89 (4.98-10.75) vs 5.86 (5.16-7.49) | p=0.092 6.89 (5.46-12.06) vs 5.47 (4.94-10.75) | p=0.196 6.89 (4.98-12.06) vs 5.51 (4.94-10.72) | p=0.278 7.64 (4.98-12.05) vs 5.96 (4.94-10.72) |
| XO | p=0.297 10.98 (10.20-12.40) vs 12.10 (9.47-18.84) | p=0.039 10.88 (10.19-14.17) vs 13.56 (10.17-21.05) | p=0.665 12.11 (9.48-18.46) vs 11.96 (10.20-13.05) | p=0.126 13.86 (10.18-20.28) vs 12.69 (10.53-14.07) | p=0.396 11.69 (9.59-14.73) vs 12.10 (9.47-18.84) | p=0.176 12.69 (10.15-17.88) vs 14.07 (10.07-21.16) | p=0.357 11.84 (9.47-18.84) vs 12.59 (9.54-14.73) | p=0.946 13.54 (10.19-17.96) vs 13.19 (10.17-21.05) | p=0.802 12.05 (9.54-17.35) vs 11.95 (11.72-13.16) | p=0.957 13.54 (10.19-17.96) vs 13.30 (12.69-14.88) | p=0.718 12.01 (9.47-18.84) vs 12.15 (9.54-14.73) | p=0.454 13.56 (10.19-17.96) vs 12.78 (10.17-14.88) | p<0.05 14.30 (11.23-21.05) vs 12.87 (10.17-16.25) | p=0.296 13.54 (11.23-17.96) vs 12.69 (10.17-16.25) | p<0.05 12.69 (10.19-21.05) vs 14.41 (10.17-17.96) | p=0.346 13.91 (10.17-21.05) vs 13.30 (10.19-15.34) | p=0.549 13.79 (11.23-21.05) vs 13.30 (10.17-16.47) |
| SOD | p=0.681 1.010 (0.835-1.272) vs 0.986 (0.254-2.608) | p=0.658 1.932 (0.939-2.960) vs 2.178 (0.751-4.112) | p=0.751 1.01 (0.29-2.34) vs 0.94 (0.83-1.08) | p=0.654 2.21 (0.76-4.00) vs 1.35 (0.94-3.97) | p=0.836 0.96 (0.47-1.27) vs 1.00 (0.25-2.61) | p=0.251 1.49 (0.94-2.96) vs 2.24 (0.75-4.11) | p=0.458 1.61 (0.47-1.45) vs 3.68 (0.84-0.93-4.11) | p=0.164 1.61 (0.75-3.68) vs 1.45 (0.25-0.93-4.11) | p=0.092 0.93 (0.44-1.45) vs 1.30 (0.99-2.61) | p=0.142 2.21 (0.93-3.97) vs 1.08 (0.75-2.38) | p=0.934 1.871 (0.471-1.447) vs 2.169 (0.254-2.608) | p=0.782 1.871 (0.784-3.676) vs 2.169 (0.751-4.112) | p=0.912 2.02 (0.94-3.97) vs 2.24 (0.75-4.11) | p=0.959 2.14 (0.78-3.676) vs 2.24 (0.93-4.11) | p=0.662 2.21 (0.93-4.11) vs 2.29 (0.75-3.97) | p=0.677 2.14 (0.93-4.11) vs 2.18 (0.75-3.96) | p=0.163 1.61 (0.94-2.79) vs 2.74 (0.75-4.11) |
| CAT | p=0.467 0.044 (0.013-0.097) vs 0.065 (0.015-0.1500) | p=0.635 0.201 (0.056-0.359) vs 0.152 (0.031-0.421) | p=0.795 0.06 (0.01-0.15) vs 0.05 (0.04-0.13) | p<0.05 0.16 (0.06-0.41) vs 0.13 (0.03-0.16) | p=0.094 0.04 (0.01-0.09) vs 0.07 (0.02-0.15) | p=0.371 0.17 (0.06-0.36) vs 0.14 (0.03-0.42) | p=0.669 0.05 (0.01-0.13) vs 0.15 (0.02-0.42) | p=0.158 0.13 (0.05-0.31) vs 0.18 (0.13-0.42) | p=0.591 0.06 (0.02-0.13) vs 0.06 (0.02-0.07) | p=0.391 0.16 (0.05-0.31) vs 0.13 (0.13-0.15) | p=0.934 0.056 (0.012-0.132) vs 0.068 (0.018-0.15) | p=0.858 0.135 (0.052-0.359) vs 0.141 (0.120-0.228) | p=0.492 0.17 (0.03-0.36) vs 0.14 (0.05-0.42) | p=0.898 0.15 (0.05-0.36) vs 0.18 (0.06-0.42) | p<0.05 0.13 (0.03-0.36) vs 0.18 (0.09-0.42) | p<0.05 0.13 (0.03-0.35) vs 0.18 (0.05-0.42) | p=0.223 0.16 (0.13-0.32) vs 0.13 (0.03-0.42) |

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| GPx | p=0.155 0.183 (0.169-0.189) vs 0.232 0.223 (0.137-0.399) | p=0.029 0.166 (0.147-0.194) vs 0.232 (0.127-0.304) | p=0.260 0.23 (0.14-0.39) vs 0.19 0.21 | p=0.236 0.23 (0.13-0.30) vs 0.19 (0.15-0.25) | p=0.836 0.21 (0.16-0.33) vs 0.21 0.39 | p=0.982 0.21 (0.15-0.30) vs 0.30 0.21 (0.13-0.30) | p=0.357 0.22 (0.14-0.30) vs 0.39 0.28 | p=0.544 0.23 (0.15-0.30) vs 0.30 0.19 (0.13-0.30) | p=0.802 0.21 (0.16-0.30) vs 0.22 0.16-0.3 8) | p=0.971 0.21 (0.15-0.30) vs 0.23 0.19-0.2 4) | p=0.114 0.232 (0.169-0.399) vs 0.185 (0.157-0.383) | p=0.760 0.232 (0.147-0.304) vs 0.197 (0.127-0.271) | p=0.438 0.23 (0.15-0.30) vs 0.19 0.13-0.2 7) | p=0.212 0.23 (0.15-0.30) vs 0.19 0.13-0.2 5) | p=0.348 0.23 (0.13-0.30) vs 0.19 (0.15-0.30) | p=0.417 0.23 (0.13-0.30) vs 0.19 (0.15-0.25) | p=0.080 0.24 (0.15-0.30) vs 0.19 (0.13-0.25) |
| GR | p=0.635 23.31 (19.89-27.06) vs 25.41 (18.87-39.97) | p=0.327 23.91 (20.76-27.05) vs 26.74 (19.14-42.75) | p=0.312 25.68 (19.01-39.21) vs 23.50 (19.89-25.97) | p=0.078 26.77 (19.74-41.15) vs 24.21 (20.76-28.16) | p=0.697 25.22 (19.89-33.40) vs 26.73 25.41 (18.87-39.97) | p=0.945 26.76 (20.76-36.34) vs 26.73 (19.14-42.75) | p=0.271 25.70 (19.60-39.97) vs 24.30 (18.87-29.68) | p=0.252 26.80 (20.76-36.34) vs 26.70 (19.14-42.75) | p=0.415 25.18 (19.42-33.40) vs 25.414 (24.36-39.97) | p=0.410 26.77 (20.76-36.34) vs 26.70 (24.21-26.72) | p=0.389 25.71 (19.60-36.34) vs 24.33 (18.87-39.97) | p=0.081 26.81 (20.76-36.34) vs 26.54 (19.14-26.83) | p=0.177 26.91 (21.04-42.75) vs 26.72 (19.14-29.74) | p=0.078 26.78 (21.54-36.34) vs 24.21 (19.14-29.74) | p=0.285 26.77 (19.14-36.34) vs 26.72 (20.76-42.74) | p=0.614 26.75 (19.14-42.75) vs 26.74 (20.76-29.38) | p=0.579 26.76 (21.04-42.75) vs 26.74 (19.14-29.74) |
| GSH | p=0.015 0.668 (0.097-5.493 vs 1.373 (0.558-0.955) | p=0.884 1.491 (1.170-2.267) vs 1.348 (0.332-4.184) | p=0.112 1.33 (0.21-4.97) vs 0.82 (0.53-1.49) | p=0.839 1.61 (0.40-3.88) vs 1.35 (1.13-3.06) | p=0.872 1.43 (0.09-2.46) vs 1.07 (0.56-5.49) | p=0.582 1.26 (0.78-4.18) vs 1.07 (0.33-3.06) | p=0.840 1.26 (0.09-2.98) vs 1.33 (0.33-2.30) | p=0.893 1.91 (0.61-2.98) vs 1.33 (0.33-4.18) | p=0.267 1.07 (0.53-3.49) vs 1.49 (1.06-2.96) | p=0.802 1.48 (0.76-3.0493) vs 1.35 6) vs 1.55 7) | p=0.718 1.156 (0.096-5.184) vs 1.758 (0.558-2.961) | p=0.803 1.310 (0.332-4.184) vs 1.758 (0.606-2.980) | p=0.507 1.24 (0.78-4.184) vs 1.91 6) vs 1.60 9) | p=0.979 1.34 (0.61-3.0493) vs 1.60 (0.79-2.19) | p=0.930 1.46 (0.61-4.184) vs 1.36 (0.33-3.06) | p=0.599 1.54 (0.33-4.26) vs 1.36 (0.77-3.06) | p=0.611 1.25 (0.61-4.184) vs 1.62 (0.33-2.98) |
| GSSG | p=0.681 0.163 (0.093-0.317) vs 0.144 (0.009-0.424) | p=0.327 0.229 (0.170-0.349) vs 0.301 (0.115-0.456) | p=0.874 0.144 (0.009-0.424) vs 0.157 (0.093-0.246) | p=0.635 0.300 (0.127-0.456) vs 0.259 (0.115-0.374) | p=0.396 0.174 (0.077-0.316) vs 0.135 (0.009-0.424) | p=0.477 0.293 (0.115-0.367) vs 0.300 (0.127-0.456) | p=0.291 0.306 (0.118-0.415) vs 0.131 (0.009-0.301) | p=0.312 0.306 (0.115-0.415) vs 0.276 (0.127-0.419) | p=0.971 0.139 (0.009-0.424) vs 0.178 (0.013-0.246) | p=0.163 0.301 (0.127-0.456) vs 0.155 (0.115-0.339) | p=0.085 0.182 (0.035-0.424) vs 0.122 (0.009-0.301) | p=0.058 0.309 (0.170-0.456) vs 0.259 (0.115-0.419) | p=0.674 0.306 (0.127-0.456) vs 0.295 (0.115-0.456) | p=0.832 0.295 (0.127-0.456) vs 0.300 (0.115-0.426) | p=0.983 0.301 (0.134-0.426) vs 0.294 (0.115-0.456) | p=0.368 0.289 (0.127-0.426) vs 0.339 (0.115-0.456) | p=0.177 0.293 (0.115-0.410) vs 0.300 (0.167-0.456) |
| Redox status | p=0.008 2.947 (0.048-4.913) vs 14.77 (1.511-659.7) | p=0.728 11.23 (3.912-22.27) vs 10.08 (0.374-61.67) | p=0.106 14.77 (0.048-659.7) vs 4.311 (3.018-8.946) | p=0.017 0.300 (0.127-0.456) vs 13.35 (3.912-24.96) | p=0.477 10.61 (0.048-53.39) vs 14.58 (1.511-659.7) | p=0.908 7.424 (1.633-61.67) vs 9.7 11.22 (0.374-32.15) | p<0.0001 16.20 (0.048-65.67) vs 9.7 12.97 (0.127-0.15) | p=0.637 10.50 (0.374-61.67) vs 6.7 12.97 (2.379-32.97) | p=0.591 13.43 (0.048-21.41) vs 8.946 (6.381-15.97) | p=0.915 10.28 (0.374-61.67) vs 14.1 (2.379-15.79) | p=0.678 7.406 (0.048-7.14) vs 6.7 (2.545-56.15) | p=0.326 4.736 (0.374-61.67) vs 6.7 (2.379-32.15) | p=0.521 10.92 (1.633-61.67) vs 12.97 (0.374-32.15) | p=0.916 10.28 (0.374-61.67) vs 11.22 (2.733-15.79) | p=0.913 9.316 (2.379-61.67) vs 11.54 (0.374-31.35) | p=0.982 10.65 (0.37-61.67) vs 10.92 (1.63-24.96) | p=0.842 10.50 (2.323-61.67) vs 11.22 (0.374-32.15) |
| TAC | p=0.046 1.103 (0.982-1.157) vs 1.283 (0.898-2.024) | p=0.635 1.316 (1.081-1.712) vs 1.427 (1.049-2.293) | p=0.403 1.25 (0.92-1.98) vs 1.18 1.29 | p=0.126 1.44 (1.05-2.18) vs 1.34 1.44 | p=0.566 1.16 (0.98-1.49) vs 1.22 2.02 | p=0.836 1.41 (1.08-1.74) vs 1.44 (1.05-2.29) | p=0.357 1.24 (0.98-2.02) vs 1.19 (0.89-2.29) | p=0.805 1.43 (1.07-1.83) vs 1.42 (1.05-2.29) | p=0.123 1.19 (0.97-1.69) vs 1.32 (1.29-2.02) | p=0.185 1.44 (1.06-1.83) vs 1.34 (1.19-1.36) | p=0.889 4.195 (0.982-1.851) vs 1.255 (0.898-2.024) | p=0.360 1.430 (1.065-1.737) vs 1.349 (1.049-1.590) | p=0.982 1.43 (1.07-2.29) vs 1.44 (1.05-1.79) | p=0.345 1.43 (1.08-1.83) vs 1.36 (1.05-1.69) | p=0.230 1.45 (1.05-1.83) vs 1.36 (1.06-2.29) | p=0.303 1.44 (1.05-2.29) vs 1.37 (1.08-1.71) | p=0.912 1.41 (1.05-2.29) vs 1.43 (1.17-1.71) |
| TOS | p=0.071 1.195 (1.091-5.035) vs 4.543 (0.601-11.87) | p=0.924 5.228 (4.311-6.198) vs 5.123 (0.401-12.50) | p<0.001 4.39 (0.62-9.88) vs 30.40 (8.17-85.25) | p=0.885 5.16 (0.61-11.74) vs 4.39 (11.87) | p=0.630 4.48 (0.60-10.46) vs 4.39 (11.87) | p=0.422 4.712 (2.13-11.14) vs 5.20 (0.40-12.50) | p=0.770 4.39 (0.60-11.87) vs 5.02 (8.92) | p=0.702 5.02 (1.24-12.50) vs 6.14 (0.40-8.92) | p=0.857 4.67-10.46 vs 4.57 (2.22-7.71) | p=0.333 5.10 (1.24-9.48) vs 7.73 (3.34-11.14) | p=0.637 4.195 (0.601-11.87) vs 4.629 (1.746-7.813) | p=0.063 4.739 (1.238-12.50) vs 5.0 6.394 (3.334-11.14) | p=0.116 4.71 (0.40-12.50) vs 6.39 (3.01-11.14) | p=0.070 4.83 (1.24-9.48) vs 6.39 (4.31-11.14) | p=0.844 5.06 (0.40-12.50) vs 5.12 (1.24-11.14) | p=0.417 4.99 (0.41-9.48) vs 5.72 (3.01-12.56) | p=0.176 4.61 (1.24-11.14) vs 5.72 (0.40-12.50) |
| OSI | p=0.082 1.055 (0.991-5.127) vs 3.257 (0.526-10.03) | p=0.824 3.463 (3.315-5.736) vs 3.740 (1.162-8.640) | p=0.977 3.09 (0.51-8.48) vs 3.55 10.03 | p=0.583 3.35 (0.50-8.10) vs 3.59 (2.54-8.21) | p=0.663 3.24 (0.53-9.04) vs 3.24 10.03 | p=0.909 3.35 (1.23-8.21) vs 3.74 (0.28-8.64) | p=0.911 3.09 (0.53-10.03) vs 3.29 (1.69-6.54) | p=0.515 3.35 (1.16-8.64) vs 4.43 (2.48-6.14) | p=0.971 3.09 (0.99-9.04) vs 3.55 (1.69-3.81) | p=0.299 3.48 (1.23-6.14) vs 6.49 (2.48-8.21) | p=0.560 2.566 (0.526-10.03) vs 3.418 (1.686-6.538) | p=0.056 3.339 (1.162-8.640) vs 5.042 (2.484-8.212) | p=0.223 3.21 (1.16-8.64) vs 4.04 (2.07-8.21) | p<0.05 3.33 (1.23-6.49) vs 5.23 (3.08-8.21) | p=0.948 3.89 (1.23-8.64) vs 3.59 (1.16-8.21) | p=0.245 3.24 (1.16-6.13) vs 3.74 (2.07-8.75) | p<0.05 2.77 (1.16-8.21) vs 4.43 (2.07-8.63) |
| AGE | p=0.054 0.481 (0.336-0.647) vs 0.715 (0.422-1.174) | p=0.242 0.685 (0.541-1.120) vs 0.891 (0.106-2.083) | p=0.839 0.65 (0.36-1.14) vs 0.65 (0.44-0.99) | p=0.112 0.94 (0.20-1.93) vs 0.61 (0.54-1.17) | p=0.069 0.57 (0.34-0.93) vs 0.77 (0.42-1.17) | p=0.449 0.79 (0.11-1.47) vs 0.89 (0.49-2.08) | p=0.200 0.61 (0.34-1.02) vs 0.78 (0.42-1.17) | p=0.170 1.02 (0.54-2.08) vs 0.78 (0.11-1.25) | p=0.915 0.65 (0.37-1.12) vs 0.81 (0.47-0.84) | p=0.410 0.84 (0.24-1.87) vs 1.25 (0.61-1.43) | p=0.802 0.605 (0.336-1.018) vs 0.645 (1.686-6.538) | p=0.233 1.070 (0.541-2.083) vs 0.794 (0.107-1.431) | p=0.465 0.94 (0.55-1.48) vs 0.82 (0.11-2.08) | p<0.05 0.61 (0.49-0.9) vs 1.02 (0.55-1.47) | p=0.879 0.87 (0.11-1.47) vs 0.82 (0.54-2.08) | p=0.742 0.83 (0.07-1.41) vs 0.98 (0.51-2.17) | p=0.739 0.832 (0.107-1.470) vs 0.851 (0.494-2.083) |

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|---------------|--|---|--|---|--|---|---|---|--|---|--|--|---|--|--|--|--|
| AOPP | p=0.429 6.276 (1.676-10.16) vs 7.787 (1.445-18.35) | p=0.027 10.49 (9.095-11.20)) vs 13.32 (7.395-26.37) | p=0.977 7.31 (1.47- 17.83) vs 7.93 (3.86- 10.16) | p=0.285 13.04 (7.47-25.02) vs 10.36 (9.09- 22.35) | p=0.176 6.09 (1.67- 16.27) vs 7.93 (1.45- 18.36) | p<0.05 11.02 (7.39-26. 37) vs 13.61 (7.68- 22.36) | p=0.357 6.28 (1.68- 16.27) vs 11.71 (1.45- 18.35) | p=0.964 12.50 (8.47- 26.37) vs 12.16 (7.39- 20.96) | p=0.857 7.31 (1.55-16. 27) vs 8.52 (2.52-12. 20) | p=0.693 12.20 (7.67-22. 35) vs 14.34 (10.36-15 .52) | p=0.846 6.126 (1.676-16 .27) vs 7.737 (1.445-18 .35) | p=0.739 12.77 (8.469-26 .37) vs 12.55 (7.395-20 .95) | p=0.982 12.20 (10.16-26 .37) vs 13.61 (7.39-22. 35) | p=0.221 12.50 (8.48-22. 34) vs 11.20 (7.68-14. 32) | p=0.727 12.77 (7.39-26.37) vs 12.02 (8.47-22.35) | p=0.154 13.46 (7.39-26.37) vs 11.20 (7.47-22.45) | p=0.808 12.36 (7.39-26.37) vs 12.24 (8.47-20.95) |
| MDA | p=0.062 0.501 (0.421-0.608) vs 0.660 (0.210-2.184) | p=0.728 0.909 (0.641-1.458) vs 0.845 (0.478-1.718) | p=0.665 0.65 (0.25- 1.97) vs 0.57 (0.48- 0.96) | p=0.839 0.87 (0.48- 1.66) vs 0.84 (0.64- 1.05) | p=0.231 0.55 (0.21- 0.72) vs 0.69 (0.38- 2.18) | p=0.836 0.89 (0.59- 1.46) vs 0.85 (0.48- 1.72) | p=0.669 0.61 (0.21- 2.18) vs 0.66 (0.38- 1.21) | p<0.05 0.58 (0.27- 0.93) vs 0.93 (0.85- 1.07) | p=0.858 0.63 (0.38-1.3 4) vs 0.59 (0.48-0.8 3) | p=0.911 0.87 (0.48 1.50) vs 0.85 (0.49- 1.72) | p=0.846 0.608 (0.210-2. 184) vs 0.600 (0.377-0. 828) | p=0.360 0.891 (0.514-1. 458) vs 0.783 (0.477-1. 265) | p=0.465 0.91 (0.51-1.7 2) vs 0.81 (0.48-1.4 6) | p=0.979 0.87 (0.51-1.5 0) vs 0.81 (0.49-1.4 2) | p=0.445 1.02 (0.49-1.50) vs 0.84 (0.48-1.72) | p=0.263 0.92 (0.49-1.72) vs 0.84 (0.48-1.46) | p<0.001 0.61 (0.21-1.21) vs 0.85 (0.48-1.46) |
| 8-OHdG | p=0.359 0.772 (0.736-0.823) vs 0.867 (0.516-1.438) | p=0.071 0.9209 (0.747-1.023) vs 1.119 (0.704-1.684) | p=0.931 0.80 (0.54- 1.40) vs 0.82 (0.73- 0.93) | p<0.05 1.12 (0.73- 1.62) vs 0.96 (0.75- 1.11) | p=0.766 0.81 (0.73- 0.97) vs 0.87 (0.52- 1.44) | p=0.136 1.022 (0.75- 1.15) vs 1.15 (0.70- 1.68) | p=0.271 0.85 (0.65- 1.44) vs 0.78 (0.52- 0.97) | p=0.458 1.04 (0.75- 1.40) vs 1.15 (0.70- 1.68) | p=0.371 0.81 (0.63-1.1 1) vs 0.97 (0.73-1.2 9) | p=0.543 1.07 (0.75-1.4 0) vs 1.12 (0.97-1.4 5) | p=0.305 0.867 (0.654-1. 438) vs 0.776 (0.630-1. 285) | p=0.718 1.023 (0.747-1. 400) vs 1.101 (0.704-1. 446) | p=0.912 1.04 (0.80-1.6 8) vs 1.11 (0.70-1.4 5) | p=0.429 1.09 (0.82-1.4 5) vs 0.97 (0.70-1.4 0) | p=0.169 1.14 (0.70-1.45) vs 1.02 (0.75-1.68) | p=0.181 1.14 (0.70-1.68) vs 1.02 (0.75-1.22) | p=0.808 1.07 (0.70-1.68) vs 1.12 (0.75-1.40) |

Table S2. Comparison of oxidative stress biomarkers between tumour tissue and normal adjacent mucosa.

| Parameter | Tumour vs non-tumour tissue | | p-value |
|-----------|-----------------------------|------------------------|--------------------|
| NOX | 6.128 (4.941-12.06) | 4.774 (1.660-11.26) | 0.0012 |
| XO | 13.53 (10.17-21.05) | 12.01 (9.466-18.84) | 0.0146 |
| SOD | 2.178 (0.751-4.112) | 0.986 (0.254-2.608) | < 0.0001 |
| CAT | 0.152 (0.031-0.422) | 0.057 (0.013-0.150) | < 0.0001 |
| GPx | 0.214 (0.126-0.304) | 0.205 (0.137-0.399) | 0.901 |
| GR | 26.74 (19.14-42.75) | 25.41 (18.87-39.97) | 0.192 |
| GSH | 1.362 (0.332-4.184) | 1.156 (0.097-3.493) | 0.214 |
| TAC | 1.427 (1.049-2.293) | 1.199 (0.898-2.024) | 0.009 |
| TOS | 5.123 (0.601-12.87) | 4.394 (0.401-11.51) | 0.198 |
| OSI | 3.362 (0.281-8.640) | 3.239 (0.101-7.457) | 0.327 |
| AGE | 0.871 (0.106-2.083) | 0.646 (0.336-1.174) | 0.0034 |
| AOPP | 12.24 (7.395-26.37) | 7.675 (1.445-18.35) | 0.0004 |
| MDA | 0.853 (0.477-1.718) | 0.615 (0.210-1.284) | 0.0007 |
| 8-OHdG | 1.083 (0.704-1.684) | 0.823 (0.516-1.438) | < 0.0001 |



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