| variable | levels | 0 | 1 | variable.tbl...HR.. | variable.tbl...95..CI.. | variable.tbl...p.value.. | lrt\_pvalue |
| --- | --- | --- | --- | --- | --- | --- | --- |
| MDI\_quintile | 1 | 880 (34.5) | 174 (35.5) | NA | NA | NA | 0.604 |
|  | 2 | 568 (22.2) | 98 (20.0) | 0.87 | 0.68, 1.11 | 0.3 | 0.604 |
|  | 3 | 421 (16.5) | 89 (18.2) | 1.10 | 0.85, 1.42 | 0.5 | 0.604 |
|  | 4 | 215 (8.4) | 36 (7.3) | 0.85 | 0.59, 1.21 | 0.4 | 0.604 |
|  | 5 | 208 (8.1) | 40 (8.2) | 1.03 | 0.73, 1.46 | 0.9 | 0.604 |
|  | not\_recorded | 262 (10.3) | 53 (10.8) | 0.99 | 0.73, 1.35 | >0.9 | 0.604 |
| owner\_MDI\_quintile | 1 | 963 (37.7) | 196 (40.0) | NA | NA | NA | 0.597 |
|  | 2 | 643 (25.2) | 109 (22.2) | 0.85 | 0.67, 1.08 | 0.2 | 0.597 |
|  | 3 | 461 (18.1) | 83 (16.9) | 0.96 | 0.74, 1.24 | 0.7 | 0.597 |
|  | 4 | 221 (8.7) | 45 (9.2) | 1.02 | 0.74, 1.41 | 0.9 | 0.597 |
|  | 5 | 211 (8.3) | 44 (9.0) | 1.11 | 0.80, 1.54 | 0.5 | 0.597 |
|  | not\_recorded | 55 (2.2) | 13 (2.7) | 1.23 | 0.70, 2.15 | 0.5 | 0.597 |
| area\_type\_mode\_5yrs\_prior | rural | 728 (28.5) | 141 (28.8) | NA | NA | NA | 0.005 |
|  | suburban | 1427 (55.9) | 296 (60.4) | 1.07 | 0.88, 1.31 | 0.5 | 0.005 |
|  | urban | 198 (7.8) | 41 (8.4) | 1.08 | 0.76, 1.52 | 0.7 | 0.005 |
|  | not\_recorded | 201 (7.9) | 12 (2.4) | 0.44 | 0.24, 0.79 | 0.006 | 0.005 |
| house\_type\_mode\_5yrs\_prior | apartment/condo/townhome | 131 (5.1) | 33 (6.7) | NA | NA | NA | 0.002 |
|  | motor home | 2 (0.1) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.002 |
|  | single family | 2220 (86.9) | 445 (90.8) | 0.75 | 0.53, 1.07 | 0.12 | 0.002 |
|  | not\_recorded | 201 (7.9) | 12 (2.4) | 0.32 | 0.16, 0.62 | <0.001 | 0.002 |
| water\_source\_mode\_5yrs\_prior | municipal | 1718 (67.3) | 355 (72.4) | NA | NA | NA | 0.003 |
|  | other | 18 (0.7) | 5 (1.0) | 1.42 | 0.59, 3.44 | 0.4 | 0.003 |
|  | well | 617 (24.2) | 118 (24.1) | 0.90 | 0.73, 1.11 | 0.3 | 0.003 |
|  | not\_recorded | 201 (7.9) | 12 (2.4) | 0.41 | 0.23, 0.72 | 0.002 | 0.003 |
| pipes\_metal\_any\_mode\_5yrs\_prior | 0 | 1115 (43.7) | 220 (44.9) | NA | NA | NA | 0.002 |
|  | 1 | 1238 (48.5) | 258 (52.7) | 1.02 | 0.85, 1.22 | 0.8 | 0.002 |
|  | not\_recorded | 201 (7.9) | 12 (2.4) | 0.42 | 0.23, 0.75 | 0.003 | 0.002 |
| pipes\_plastic\_any\_mode\_5yrs\_prior | 0 | 1159 (45.4) | 240 (49.0) | NA | NA | NA | <0.001 |
|  | 1 | 1194 (46.8) | 238 (48.6) | 0.88 | 0.73, 1.05 | 0.2 | <0.001 |
|  | not\_recorded | 201 (7.9) | 12 (2.4) | 0.39 | 0.22, 0.69 | 0.001 | <0.001 |
| heating\_fuel\_primary\_mode\_5yrs\_prior | electric | 572 (22.4) | 127 (25.9) | NA | NA | NA | 0.006 |
|  | natural\_gas | 1303 (51.0) | 274 (55.9) | 0.92 | 0.75, 1.14 | 0.4 | 0.006 |
|  | oil | 221 (8.7) | 25 (5.1) | 0.59 | 0.38, 0.91 | 0.016 | 0.006 |
|  | other | 18 (0.7) | 2 (0.4) | 0.58 | 0.14, 2.35 | 0.4 | 0.006 |
|  | propane | 176 (6.9) | 34 (6.9) | 0.89 | 0.61, 1.30 | 0.5 | 0.006 |
|  | renewable | 17 (0.7) | 3 (0.6) | 0.56 | 0.18, 1.76 | 0.3 | 0.006 |
|  | wood | 41 (1.6) | 12 (2.4) | 1.24 | 0.69, 2.25 | 0.5 | 0.006 |
|  | not\_recorded | 206 (8.1) | 13 (2.7) | 0.41 | 0.23, 0.72 | 0.002 | 0.006 |
| cooking\_fuel\_primary\_mode\_5yrs\_prior | electric | 1274 (49.9) | 236 (48.2) | NA | NA | NA | 0.003 |
|  | natural gas | 878 (34.4) | 197 (40.2) | 1.14 | 0.94, 1.37 | 0.2 | 0.003 |
|  | propane | 199 (7.8) | 45 (9.2) | 1.08 | 0.79, 1.49 | 0.6 | 0.003 |
|  | not\_recorded | 203 (7.9) | 12 (2.4) | 0.43 | 0.24, 0.78 | 0.005 | 0.003 |
| heating\_fuel\_secondary\_mode\_5yrs\_prior | electric | 375 (14.7) | 72 (14.7) | NA | NA | NA | 0.885 |
|  | natural gas | 133 (5.2) | 23 (4.7) | 0.92 | 0.58, 1.47 | 0.7 | 0.885 |
|  | oil | 23 (0.9) | 6 (1.2) | 1.26 | 0.55, 2.89 | 0.6 | 0.885 |
|  | other | 329 (12.9) | 87 (17.8) | 0.90 | 0.66, 1.23 | 0.5 | 0.885 |
|  | propane | 68 (2.7) | 13 (2.7) | 1.15 | 0.64, 2.09 | 0.6 | 0.885 |
|  | renewable | 1 (0.0) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.885 |
|  | wood | 196 (7.7) | 30 (6.1) | 0.86 | 0.56, 1.32 | 0.5 | 0.885 |
|  | not\_recorded | 1429 (56.0) | 259 (52.9) | 1.05 | 0.81, 1.36 | 0.7 | 0.885 |
| cooking\_fuel\_secondary\_mode\_5yrs\_prior | electric | 576 (22.6) | 130 (26.5) | NA | NA | NA | 0.079 |
|  | natural gas | 62 (2.4) | 11 (2.2) | 0.77 | 0.42, 1.43 | 0.4 | 0.079 |
|  | other | 360 (14.1) | 98 (20.0) | 0.81 | 0.62, 1.05 | 0.12 | 0.079 |
|  | propane | 126 (4.9) | 28 (5.7) | 1.24 | 0.82, 1.86 | 0.3 | 0.079 |
|  | not\_recorded | 1430 (56.0) | 223 (45.5) | 0.79 | 0.63, 0.98 | 0.030 | 0.079 |
| region\_mode\_5y\_prior | midwest | 317 (12.4) | 61 (12.4) | NA | NA | NA | 0.319 |
|  | northeast | 256 (10.0) | 60 (12.2) | 1.27 | 0.89, 1.82 | 0.2 | 0.319 |
|  | south | 438 (17.1) | 104 (21.2) | 1.38 | 1.01, 1.89 | 0.046 | 0.319 |
|  | west | 401 (15.7) | 86 (17.6) | 1.18 | 0.85, 1.63 | 0.3 | 0.319 |
|  | not\_recorded | 1142 (44.7) | 179 (36.5) | 1.14 | 0.85, 1.52 | 0.4 | 0.319 |
| number\_comorbs\_present\_lifetime | 0 | 2468 (96.6) | 469 (95.7) | NA | NA | NA | 0.111 |
|  | 1 | 67 (2.6) | 21 (4.3) | 1.32 | 0.85, 2.04 | 0.2 | 0.111 |
|  | 2 | 13 (0.5) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.111 |
|  | 3 | 6 (0.2) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.111 |
| study\_year\_first\_chronic\_inflam | 0 | 100 (3.9) | 29 (5.9) | NA | NA | NA | 0.790 |
|  | 1 | 38 (1.5) | 9 (1.8) | 0.73 | 0.35, 1.54 | 0.4 | 0.790 |
|  | 2 | 17 (0.7) | 7 (1.4) | 1.06 | 0.46, 2.42 | 0.9 | 0.790 |
|  | 3 | 18 (0.7) | 4 (0.8) | 0.85 | 0.30, 2.43 | 0.8 | 0.790 |
|  | 4 | 21 (0.8) | 3 (0.6) | 0.45 | 0.14, 1.47 | 0.2 | 0.790 |
|  | 5 | 5 (0.2) | 2 (0.4) | 0.97 | 0.23, 4.05 | >0.9 | 0.790 |
|  | 6 | 6 (0.2) | 2 (0.4) | 0.88 | 0.21, 3.67 | 0.9 | 0.790 |
|  | 7 | 1 (0.0) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.790 |
|  | 8 | 2 (0.1) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.790 |
|  | 9 | 1 (0.0) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.790 |
|  | not\_recorded | 2345 (91.8) | 434 (88.6) | 0.72 | 0.49, 1.05 | 0.088 | 0.790 |
| chronic\_inflam\_present\_5y | 0 | 2494 (97.7) | 476 (97.1) | NA | NA | NA | 0.307 |
|  | 1 | 60 (2.3) | 14 (2.9) | 1.34 | 0.78, 2.27 | 0.3 | 0.307 |
| number\_comorbs\_present\_5y | 0 | 2494 (97.7) | 476 (97.1) | NA | NA | NA | 0.092 |
|  | 1 | 44 (1.7) | 14 (2.9) | 1.62 | 0.95, 2.76 | 0.075 | 0.092 |
|  | 2 | 11 (0.4) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.092 |
|  | 3 | 5 (0.2) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.092 |
| chronic\_inflam\_present\_no\_min\_year | 0 | 2455 (96.1) | 477 (97.3) | NA | NA | NA | 0.191 |
|  | 1 | 99 (3.9) | 13 (2.7) | 0.71 | 0.41, 1.23 | 0.2 | 0.191 |
| number\_comorbs\_present\_no\_min\_year | 0 | 2455 (96.1) | 477 (97.3) | NA | NA | NA | 0.536 |
|  | 1 | 97 (3.8) | 13 (2.7) | 0.72 | 0.41, 1.25 | 0.2 | 0.536 |
|  | 2 | 1 (0.0) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.536 |
|  | 3 | 1 (0.0) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.536 |
| diagnosis\_after\_comorb | 1 | 209 (8.2) | 56 (11.4) | NA | NA | NA | 0.211 |
|  | not\_recorded | 2345 (91.8) | 434 (88.6) | 0.83 | 0.63, 1.10 | 0.2 | 0.211 |
| time\_between\_first\_comorb\_and\_endpoint | 1 | 6 (0.2) | 0 (0.0) | NA | NA | NA | 0.306 |
|  | 10 | 8 (0.3) | 5 (1.0) | 573,236 | 0.00, Inf | >0.9 | 0.306 |
|  | 2 | 13 (0.5) | 1 (0.2) | 422,213 | 0.00, Inf | >0.9 | 0.306 |
|  | 3 | 14 (0.5) | 5 (1.0) | 1,430,388 | 0.00, Inf | >0.9 | 0.306 |
|  | 4 | 19 (0.7) | 4 (0.8) | 635,238 | 0.00, Inf | >0.9 | 0.306 |
|  | 5 | 21 (0.8) | 7 (1.4) | 705,860 | 0.00, Inf | >0.9 | 0.306 |
|  | 6 | 20 (0.8) | 9 (1.8) | 829,281 | 0.00, Inf | >0.9 | 0.306 |
|  | 7 | 35 (1.4) | 9 (1.8) | 526,297 | 0.00, Inf | >0.9 | 0.306 |
|  | 8 | 46 (1.8) | 9 (1.8) | 377,367 | 0.00, Inf | >0.9 | 0.306 |
|  | 9 | 27 (1.1) | 7 (1.4) | 346,834 | 0.00, Inf | >0.9 | 0.306 |
|  | not\_recorded | 2345 (91.8) | 434 (88.6) | 447,651 | 0.00, Inf | >0.9 | 0.306 |
| num\_lifetime\_chronic\_inflam | 0 | 2345 (91.8) | 434 (88.6) | NA | NA | NA | 0.439 |
|  | 1 | 88 (3.4) | 20 (4.1) | 1.11 | 0.71, 1.74 | 0.6 | 0.439 |
|  | 2 | 69 (2.7) | 25 (5.1) | 1.45 | 0.97, 2.17 | 0.069 | 0.439 |
|  | 3 | 39 (1.5) | 7 (1.4) | 0.80 | 0.38, 1.68 | 0.5 | 0.439 |
|  | 4 | 11 (0.4) | 2 (0.4) | 1.07 | 0.27, 4.31 | >0.9 | 0.439 |
|  | 5 | 2 (0.1) | 2 (0.4) | 2.53 | 0.63, 10.2 | 0.2 | 0.439 |
| comorb\_intestinal\_parasitism\_chronic | FALSE | 2536 (99.3) | 485 (99.0) | NA | NA | NA | 0.061 |
|  | TRUE | 18 (0.7) | 5 (1.0) | 2.66 | 1.10, 6.41 | 0.030 | 0.061 |
| comorb\_tick\_borne\_parasitism\_chronic | FALSE | 2535 (99.3) | 483 (98.6) | NA | NA | NA | 0.065 |
|  | TRUE | 19 (0.7) | 7 (1.4) | 2.21 | 1.05, 4.67 | 0.037 | 0.065 |
| comorb\_other\_parasitism\_chronic | FALSE | 2551 (99.9) | 490 (100.0) | NA | NA | NA | 0.526 |
|  | TRUE | 3 (0.1) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.526 |
|  | comorb\_other\_parasitism\_chronic | NA | NA | NA | NA | NA | 0.526 |
|  | FALSE | 2551 (99.9) | 490 (100.0) | NA | NA | NA | 0.526 |
|  | TRUE | 3 (0.1) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.526 |
| comorb\_orthopaedic\_chronic | FALSE | 2547 (99.7) | 489 (99.8) | NA | NA | NA | 0.402 |
|  | TRUE | 7 (0.3) | 1 (0.2) | 0.48 | 0.07, 3.41 | 0.5 | 0.402 |
| comorb\_immune\_mediated\_chronic | FALSE | 2541 (99.5) | 490 (100.0) | NA | NA | NA | 0.019 |
|  | TRUE | 13 (0.5) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.019 |
| comorb\_cardiovascular\_chronic | FALSE | 2553 (100.0) | 490 (100.0) | NA | NA | NA | 0.404 |
|  | TRUE | 1 (0.0) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.404 |
| comorb\_gastrointestinal\_chronic | FALSE | 2553 (100.0) | 490 (100.0) | NA | NA | NA | 0.505 |
|  | TRUE | 1 (0.0) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.505 |
| comorb\_inflammatory\_other\_chronic | FALSE | 2542 (99.5) | 489 (99.8) | NA | NA | NA | 0.563 |
|  | TRUE | 12 (0.5) | 1 (0.2) | 0.59 | 0.08, 4.20 | 0.6 | 0.563 |
| comorb\_orthopaedic | FALSE | 2544 (99.6) | 489 (99.8) | NA | NA | NA | 0.185 |
|  | TRUE | 10 (0.4) | 1 (0.2) | 0.34 | 0.05, 2.39 | 0.3 | 0.185 |
| comorb\_immune\_mediated | FALSE | 2525 (98.9) | 486 (99.2) | NA | NA | NA | 0.295 |
|  | TRUE | 29 (1.1) | 4 (0.8) | 0.62 | 0.23, 1.65 | 0.3 | 0.295 |
| comorb\_cardiovascular | FALSE | 2552 (99.9) | 490 (100.0) | NA | NA | NA | 0.309 |
|  | TRUE | 2 (0.1) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.309 |
| comorb\_gastrointestinal | FALSE | 2549 (99.8) | 488 (99.6) | NA | NA | NA | 0.239 |
|  | TRUE | 5 (0.2) | 2 (0.4) | 2.63 | 0.66, 10.5 | 0.2 | 0.239 |
| comorb\_inflammatory\_other | FALSE | 2495 (97.7) | 484 (98.8) | NA | NA | NA | 0.365 |
|  | TRUE | 59 (2.3) | 6 (1.2) | 0.70 | 0.31, 1.57 | 0.4 | 0.365 |
| USDA\_30min\_sy1\_2 | below\_USDA | 936 (36.6) | 191 (39.0) | NA | NA | NA | 0.584 |
|  | more\_than\_USDA | 1576 (61.7) | 294 (60.0) | 0.93 | 0.77, 1.12 | 0.4 | 0.584 |
|  | not\_recorded | 42 (1.6) | 5 (1.0) | 0.72 | 0.29, 1.74 | 0.5 | 0.584 |
| activity\_1h\_min\_sy1\_2 | below\_1h | 2166 (84.8) | 423 (86.3) | NA | NA | NA | 0.727 |
|  | more\_than\_1h | 346 (13.5) | 62 (12.7) | 0.94 | 0.72, 1.23 | 0.7 | 0.727 |
|  | not\_recorded | 42 (1.6) | 5 (1.0) | 0.74 | 0.31, 1.79 | 0.5 | 0.727 |
| activity\_KC\_2h\_min\_sy1\_2 | below\_KC | 2500 (97.9) | 481 (98.2) | NA | NA | NA | 0.646 |
|  | more\_than\_KC | 12 (0.5) | 4 (0.8) | 1.41 | 0.53, 3.76 | 0.5 | 0.646 |
|  | not\_recorded | 42 (1.6) | 5 (1.0) | 0.75 | 0.31, 1.81 | 0.5 | 0.646 |
| avg\_activity\_duration\_sy1\_2\_quartiles | ≥0 - <26.67 | 844 (33.0) | 171 (34.9) | NA | NA | NA | 0.053 |
|  | ≥26.67 - <33.33 | 433 (17.0) | 103 (21.0) | 1.18 | 0.93, 1.51 | 0.2 | 0.053 |
|  | ≥33.33 - <40 | 709 (27.8) | 121 (24.7) | 0.88 | 0.70, 1.12 | 0.3 | 0.053 |
|  | ≥40 - <100 | 568 (22.2) | 95 (19.4) | 0.82 | 0.64, 1.06 | 0.13 | 0.053 |
| avg\_activity\_freq\_sy1\_2\_terciles | ≥20 - <80 | 1197 (46.9) | 219 (44.7) | NA | NA | NA | 0.631 |
|  | ≥80 - <93.33 | 541 (21.2) | 121 (24.7) | 1.11 | 0.89, 1.39 | 0.3 | 0.631 |
|  | ≥93.33 - <100 | 816 (31.9) | 150 (30.6) | 1.03 | 0.83, 1.26 | 0.8 | 0.631 |
| avg\_activity\_freq\_sy3\_terciles | ≥1.1 - <5.41 | 549 (21.5) | 108 (22.0) | NA | NA | NA | <0.001 |
|  | ≥12.65 - <100 | 511 (20.0) | 137 (28.0) | 4.24 | 3.28, 5.48 | <0.001 | <0.001 |
|  | ≥5.41 - <8.4 | 538 (21.1) | 121 (24.7) | 1.28 | 0.98, 1.65 | 0.066 | <0.001 |
|  | ≥8.4 - <12.65 | 540 (21.1) | 114 (23.3) | 1.38 | 1.06, 1.80 | 0.016 | <0.001 |
|  | not\_recorded | 416 (16.3) | 10 (2.0) | 0.56 | 0.29, 1.07 | 0.080 | <0.001 |
| avg\_activity\_intensity\_sy3\_quartiles | ≥0.91 - <4.06 | 278 (10.9) | 54 (11.0) | NA | NA | NA | <0.001 |
|  | ≥4.06 - <5.71 | 325 (12.7) | 70 (14.3) | 1.28 | 0.89, 1.82 | 0.2 | <0.001 |
|  | ≥5.71 - <9.38 | 648 (25.4) | 140 (28.6) | 1.36 | 0.99, 1.86 | 0.058 | <0.001 |
|  | ≥9.38 - <100 | 887 (34.7) | 216 (44.1) | 2.66 | 1.97, 3.60 | <0.001 | <0.001 |
|  | not\_recorded | 416 (16.3) | 10 (2.0) | 0.61 | 0.31, 1.19 | 0.15 | <0.001 |
| avg\_intensity\_5y\_prior\_endpoint\_quartiles | >=50-<61 | 646 (25.3) | 139 (28.4) | NA | NA | NA | <0.001 |
|  | >=61-<68.9 | 671 (26.3) | 81 (16.5) | 0.83 | 0.63, 1.10 | 0.2 | <0.001 |
|  | >=68.9-100 | 634 (24.8) | 132 (26.9) | 1.02 | 0.81, 1.30 | 0.9 | <0.001 |
|  | 0-<50 | 603 (23.6) | 129 (26.3) | 0.81 | 0.64, 1.03 | 0.092 | <0.001 |
|  | not\_recorded | 0 (0.0) | 9 (1.8) | 8.83 | 4.49, 17.4 | <0.001 | <0.001 |
| avg\_frequency\_5y\_prior\_endpoint\_quartiles | ≥20 - <71.67 | 660 (25.8) | 106 (21.6) | NA | NA | NA | <0.001 |
|  | ≥71.67 - <80 | 929 (36.4) | 225 (45.9) | 1.34 | 1.06, 1.68 | 0.014 | <0.001 |
|  | ≥80 - <85 | 299 (11.7) | 64 (13.1) | 1.12 | 0.82, 1.52 | 0.5 | <0.001 |
|  | ≥85 - <100 | 666 (26.1) | 86 (17.6) | 1.13 | 0.85, 1.50 | 0.4 | <0.001 |
|  | not\_recorded | 0 (0.0) | 9 (1.8) | 11.3 | 5.73, 22.5 | <0.001 | <0.001 |
| use\_aerosol\_study\_years\_early\_life | Not within early life | 1122 (43.9) | 230 (46.9) | NA | NA | NA | 0.159 |
|  | Within early life | 1432 (56.1) | 260 (53.1) | 0.88 | 0.74, 1.05 | 0.2 | 0.159 |
| use\_air\_cleaner\_study\_years\_early\_life | Not within early life | 2082 (81.5) | 410 (83.7) | NA | NA | NA | 0.484 |
|  | Within early life | 472 (18.5) | 80 (16.3) | 0.92 | 0.72, 1.17 | 0.5 | 0.484 |
| use\_hepa\_filter\_study\_years\_early\_life | Not within early life | 1459 (57.1) | 279 (56.9) | NA | NA | NA | 0.774 |
|  | Within early life | 1095 (42.9) | 211 (43.1) | 1.03 | 0.86, 1.23 | 0.8 | 0.774 |
| use\_moth\_balls\_study\_years\_early\_life | Not within early life | 2484 (97.3) | 476 (97.1) | NA | NA | NA | 0.886 |
|  | Within early life | 70 (2.7) | 14 (2.9) | 0.96 | 0.57, 1.64 | 0.9 | 0.886 |
| use\_incense\_or\_candles\_study\_years\_early\_life | Not within early life | 983 (38.5) | 199 (40.6) | NA | NA | NA | 0.172 |
|  | Within early life | 1571 (61.5) | 291 (59.4) | 0.88 | 0.74, 1.06 | 0.2 | 0.172 |
| smoke\_exposure\_study\_years\_early\_life | Not within early life | 2282 (89.4) | 451 (92.0) | NA | NA | NA | 0.150 |
|  | Within early life | 272 (10.6) | 39 (8.0) | 0.79 | 0.57, 1.10 | 0.2 | 0.150 |
| use\_aerosol\_study\_years\_rest\_of\_life | Not within rest of life | 1414 (55.4) | 242 (49.4) | NA | NA | NA | 0.334 |
|  | Within rest of life | 1140 (44.6) | 248 (50.6) | 0.92 | 0.77, 1.09 | 0.3 | 0.334 |
| use\_air\_cleaner\_study\_years\_rest\_of\_life | Not within rest of life | 1925 (75.4) | 358 (73.1) | NA | NA | NA | 0.085 |
|  | Within rest of life | 629 (24.6) | 132 (26.9) | 0.84 | 0.69, 1.03 | 0.089 | 0.085 |
| use\_hepa\_filter\_study\_years\_rest\_of\_life | Not within rest of life | 1342 (52.5) | 234 (47.8) | NA | NA | NA | 0.031 |
|  | Within rest of life | 1212 (47.5) | 256 (52.2) | 0.82 | 0.69, 0.98 | 0.030 | 0.031 |
| use\_moth\_balls\_study\_years\_rest\_of\_life | Not within rest of life | 2512 (98.4) | 484 (98.8) | NA | NA | NA | 0.154 |
|  | Within rest of life | 42 (1.6) | 6 (1.2) | 0.59 | 0.26, 1.31 | 0.2 | 0.154 |
| use\_incense\_or\_candles\_study\_years\_rest\_of\_life | Not within rest of life | 1275 (49.9) | 221 (45.1) | NA | NA | NA | 0.139 |
|  | Within rest of life | 1279 (50.1) | 269 (54.9) | 0.87 | 0.73, 1.04 | 0.14 | 0.139 |
| smoke\_exposure\_study\_years\_rest\_of\_life | Not within rest of life | 2275 (89.1) | 434 (88.6) | NA | NA | NA | 0.561 |
|  | Within rest of life | 279 (10.9) | 56 (11.4) | 0.92 | 0.70, 1.22 | 0.6 | 0.561 |
| any\_treated\_weeds\_study\_years\_rest\_of\_life | Not within rest of life | 1133 (44.4) | 159 (32.4) | NA | NA | NA | 0.606 |
|  | Within rest of life | 1421 (55.6) | 331 (67.6) | 1.05 | 0.87, 1.27 | 0.6 | 0.606 |
| any\_treated\_insects\_study\_years\_rest\_of\_life | Not within rest of life | 1215 (47.6) | 185 (37.8) | NA | NA | NA | 0.591 |
|  | Within rest of life | 1339 (52.4) | 305 (62.2) | 0.95 | 0.79, 1.14 | 0.6 | 0.591 |
| any\_treated\_fertilizer\_study\_years\_rest\_of\_life | Not within rest of life | 1022 (40.0) | 134 (27.3) | NA | NA | NA | 0.442 |
|  | Within rest of life | 1532 (60.0) | 356 (72.7) | 1.08 | 0.89, 1.32 | 0.4 | 0.442 |
| use\_aerosol\_study\_years\_whole\_life | Not within whole life | 930 (36.4) | 185 (37.8) | NA | NA | NA | 0.142 |
|  | Within whole life | 1624 (63.6) | 305 (62.2) | 0.87 | 0.73, 1.05 | 0.14 | 0.142 |
| use\_air\_cleaner\_study\_years\_whole\_life | Not within whole life | 1722 (67.4) | 336 (68.6) | NA | NA | NA | 0.042 |
|  | Within whole life | 832 (32.6) | 154 (31.4) | 0.82 | 0.68, 1.0 | 0.044 | 0.042 |
| use\_hepa\_filter\_study\_years\_whole\_life | Not within whole life | 1029 (40.3) | 190 (38.8) | NA | NA | NA | 0.174 |
|  | Within whole life | 1525 (59.7) | 300 (61.2) | 0.88 | 0.73, 1.06 | 0.2 | 0.174 |
| use\_moth\_balls\_study\_years\_whole\_life | Not within whole life | 2468 (96.6) | 476 (97.1) | NA | NA | NA | 0.284 |
|  | Within whole life | 86 (3.4) | 14 (2.9) | 0.76 | 0.45, 1.29 | 0.3 | 0.284 |
| use\_incense\_or\_candles\_study\_years\_whole\_life | Not within whole life | 785 (30.7) | 165 (33.7) | NA | NA | NA | 0.016 |
|  | Within whole life | 1769 (69.3) | 325 (66.3) | 0.79 | 0.66, 0.95 | 0.014 | 0.016 |
| smoke\_exposure\_study\_years\_whole\_life | Not within whole life | 2151 (84.2) | 420 (85.7) | NA | NA | NA | 0.242 |
|  | Within whole life | 403 (15.8) | 70 (14.3) | 0.86 | 0.67, 1.11 | 0.3 | 0.242 |
| any\_treated\_weeds\_study\_years\_whole\_life | Not within whole life | 1133 (44.4) | 159 (32.4) | NA | NA | NA | 0.606 |
|  | Within whole life | 1421 (55.6) | 331 (67.6) | 1.05 | 0.87, 1.27 | 0.6 | 0.606 |
| any\_treated\_insects\_study\_years\_whole\_life | Not within whole life | 1059 (41.5) | 162 (33.1) | NA | NA | NA | 0.928 |
|  | Within whole life | 1495 (58.5) | 328 (66.9) | 1.01 | 0.84, 1.22 | >0.9 | 0.928 |
| any\_treated\_fertilizer\_study\_years\_whole\_life | Not within whole life | 1022 (40.0) | 134 (27.3) | NA | NA | NA | 0.442 |
|  | Within whole life | 1532 (60.0) | 356 (72.7) | 1.08 | 0.89, 1.32 | 0.4 | 0.442 |
| hours\_of\_smoke\_early\_life\_total\_dosage\_terciles | >=2-<7h | 112 (4.4) | 16 (3.3) | NA | NA | NA | 0.449 |
|  | >=7-72h | 90 (3.5) | 15 (3.1) | 1.02 | 0.50, 2.06 | >0.9 | 0.449 |
|  | >0-<2h | 70 (2.7) | 8 (1.6) | 0.75 | 0.32, 1.76 | 0.5 | 0.449 |
|  | no\_smoke | 2282 (89.4) | 451 (92.0) | 1.19 | 0.72, 1.96 | 0.5 | 0.449 |
| hours\_of\_smoke\_rest\_of\_life\_total\_dosage\_terciles | >=2-<9h | 95 (3.7) | 19 (3.9) | NA | NA | NA | 0.881 |
|  | >=9-378h | 96 (3.8) | 17 (3.5) | 0.88 | 0.46, 1.70 | 0.7 | 0.881 |
|  | >0-<2h | 85 (3.3) | 20 (4.1) | 1.09 | 0.58, 2.04 | 0.8 | 0.881 |
|  | no\_smoke | 2278 (89.2) | 434 (88.6) | 1.06 | 0.67, 1.68 | 0.8 | 0.881 |
| hours\_of\_smoke\_whole\_life\_total\_dosage\_terciles | >=10-388h | 132 (5.2) | 28 (5.7) | NA | NA | NA | 0.377 |
|  | >=2-<10h | 160 (6.3) | 19 (3.9) | 0.68 | 0.38, 1.22 | 0.2 | 0.377 |
|  | >0-<2h | 108 (4.2) | 23 (4.7) | 0.94 | 0.54, 1.63 | 0.8 | 0.377 |
|  | no\_smoke | 2154 (84.3) | 420 (85.7) | 1.00 | 0.68, 1.46 | >0.9 | 0.377 |
| in.the.garage\_YN\_study\_years\_early\_life | Not within early life | 2485 (97.3) | 484 (98.8) | NA | NA | NA | 0.128 |
|  | Within early life | 67 (2.6) | 6 (1.2) | 0.49 | 0.22, 1.10 | 0.082 | 0.128 |
|  | not\_recorded | 2 (0.1) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.128 |
| in.the.house\_YN\_study\_years\_early\_life | Not within early life | 37 (1.4) | 4 (0.8) | NA | NA | NA | 0.392 |
|  | Within early life | 2515 (98.5) | 486 (99.2) | 1.78 | 0.67, 4.77 | 0.2 | 0.392 |
|  | not\_recorded | 2 (0.1) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.392 |
| outside\_YN\_study\_years\_early\_life | Not within early life | 2397 (93.9) | 472 (96.3) | NA | NA | NA | 0.055 |
|  | Within early life | 157 (6.1) | 18 (3.7) | 0.65 | 0.41, 1.04 | 0.073 | 0.055 |
| in.the.house\_YN\_sum\_early\_life\_terciles | ≥0 - <3 | 1393 (54.5) | 223 (45.5) | NA | NA | NA | 0.066 |
|  | ≥3 - <4 | 627 (24.5) | 126 (25.7) | 1.07 | 0.86, 1.34 | 0.5 | 0.066 |
|  | ≥4 - <15 | 534 (20.9) | 141 (28.8) | 1.29 | 1.04, 1.59 | 0.019 | 0.066 |
| in.the.garage\_YN\_study\_years\_rest\_of\_life | Not within rest of life | 2490 (97.5) | 479 (97.8) | NA | NA | NA | 0.744 |
|  | Within rest of life | 63 (2.5) | 11 (2.2) | 0.83 | 0.46, 1.50 | 0.5 | 0.744 |
|  | not\_recorded | 1 (0.0) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.744 |
| in.the.house\_YN\_study\_years\_rest\_of\_life | Not within rest of life | 438 (17.1) | 11 (2.2) | NA | NA | NA | <0.001 |
|  | Within rest of life | 2116 (82.9) | 479 (97.8) | 2.74 | 1.51, 4.99 | <0.001 | <0.001 |
| outside\_YN\_study\_years\_rest\_of\_life | Not within rest of life | 2418 (94.7) | 473 (96.5) | NA | NA | NA | 0.023 |
|  | Within rest of life | 135 (5.3) | 17 (3.5) | 0.54 | 0.34, 0.88 | 0.014 | 0.023 |
|  | not\_recorded | 1 (0.0) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.023 |
| in.the.house\_YN\_sum\_rest\_of\_life\_quartiles | ≥0 - <4 | 757 (29.6) | 63 (12.9) | NA | NA | NA | 0.005 |
|  | ≥13 - <60 | 582 (22.8) | 144 (29.4) | 0.73 | 0.54, 0.98 | 0.035 | 0.005 |
|  | ≥4 - <9 | 706 (27.6) | 171 (34.9) | 1.01 | 0.76, 1.35 | >0.9 | 0.005 |
|  | ≥9 - <13 | 509 (19.9) | 112 (22.9) | 0.73 | 0.53, 0.99 | 0.045 | 0.005 |
| in.the.garage\_YN\_study\_years\_whole\_life | Not within whole life | 2454 (96.1) | 479 (97.8) | NA | NA | NA | 0.137 |
|  | Within whole life | 97 (3.8) | 11 (2.2) | 0.59 | 0.32, 1.07 | 0.084 | 0.137 |
|  | not\_recorded | 3 (0.1) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.137 |
| in.the.house\_YN\_study\_years\_whole\_life | Not within whole life | 23 (0.9) | 2 (0.4) | NA | NA | NA | 0.514 |
|  | Within whole life | 2529 (99.0) | 488 (99.6) | 1.93 | 0.48, 7.74 | 0.4 | 0.514 |
|  | not\_recorded | 2 (0.1) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.514 |
| outside\_YN\_study\_years\_whole\_life | Not within whole life | 2343 (91.7) | 466 (95.1) | NA | NA | NA | 0.016 |
|  | Within whole life | 210 (8.2) | 24 (4.9) | 0.58 | 0.38, 0.87 | 0.009 | 0.016 |
|  | not\_recorded | 1 (0.0) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.016 |
| in.the.house\_YN\_sum\_whole\_life\_quartiles | ≥0 - <7 | 727 (28.5) | 64 (13.1) | NA | NA | NA | 0.062 |
|  | ≥12 - <17 | 588 (23.0) | 140 (28.6) | 0.80 | 0.60, 1.08 | 0.15 | 0.062 |
|  | ≥17 - <69 | 586 (22.9) | 146 (29.8) | 0.74 | 0.55, 1.00 | 0.046 | 0.062 |
|  | ≥7 - <12 | 653 (25.6) | 140 (28.6) | 0.97 | 0.72, 1.31 | 0.9 | 0.062 |
| majority\_sleep\_location\_lifetime | in the garage\_YN | 20 (0.8) | 3 (0.6) | NA | NA | NA | 0.223 |
|  | in the house\_YN | 2498 (97.8) | 485 (99.0) | 1.20 | 0.38, 3.72 | 0.8 | 0.223 |
|  | outside\_YN | 36 (1.4) | 2 (0.4) | 0.44 | 0.07, 2.61 | 0.4 | 0.223 |
| main\_lifestyle\_category | breed/showing | 70 (2.7) | 8 (1.6) | NA | NA | NA | 0.028 |
|  | companion/pet | 2222 (87.0) | 444 (90.6) | 0.80 | 0.40, 1.61 | 0.5 | 0.028 |
|  | competitive | 211 (8.3) | 24 (4.9) | 0.49 | 0.22, 1.09 | 0.078 | 0.028 |
|  | miscellaneous | 18 (0.7) | 6 (1.2) | 1.25 | 0.43, 3.62 | 0.7 | 0.028 |
|  | working | 33 (1.3) | 8 (1.6) | 1.50 | 0.56, 4.00 | 0.4 | 0.028 |
| main\_lifestyle\_category\_mode\_5yrs\_prior | breed/showing | 52 (2.0) | 7 (1.4) | NA | NA | NA | <0.001 |
|  | companion/pet | 2062 (80.7) | 435 (88.8) | 0.53 | 0.25, 1.12 | 0.10 | <0.001 |
|  | competitive | 192 (7.5) | 22 (4.5) | 0.31 | 0.13, 0.73 | 0.007 | <0.001 |
|  | miscellaneous | 15 (0.6) | 6 (1.2) | 0.81 | 0.27, 2.41 | 0.7 | <0.001 |
|  | working | 32 (1.3) | 8 (1.6) | 0.98 | 0.35, 2.69 | >0.9 | <0.001 |
|  | not\_recorded | 201 (7.9) | 12 (2.4) | 0.22 | 0.09, 0.55 | 0.001 | <0.001 |
| sleep\_location\_mode\_5yrs\_prior | in the garage | 27 (1.1) | 5 (1.0) | NA | NA | NA | 0.002 |
|  | in the house | 2301 (90.1) | 472 (96.3) | 0.96 | 0.40, 2.31 | >0.9 | 0.002 |
|  | outside | 25 (1.0) | 1 (0.2) | 0.24 | 0.03, 2.03 | 0.2 | 0.002 |
|  | not\_recorded | 201 (7.9) | 12 (2.4) | 0.39 | 0.14, 1.12 | 0.081 | 0.002 |
| use\_aerosol\_exposed\_5yrs\_prior | No | 1288 (50.4) | 243 (49.6) | NA | NA | NA | 0.841 |
|  | Yes | 1266 (49.6) | 247 (50.4) | 1.02 | 0.85, 1.22 | 0.8 | 0.841 |
| use\_air\_cleaner\_exposed\_5yrs\_prior | No | 1916 (75.0) | 373 (76.1) | NA | NA | NA | 0.093 |
|  | Yes | 638 (25.0) | 117 (23.9) | 0.84 | 0.68, 1.03 | 0.10 | 0.093 |
| use\_hepa\_filter\_exposed\_5yrs\_prior | No | 1322 (51.8) | 235 (48.0) | NA | NA | NA | 0.914 |
|  | Yes | 1232 (48.2) | 255 (52.0) | 0.99 | 0.83, 1.18 | >0.9 | 0.914 |
| use\_moth\_balls\_exposed\_5yrs\_prior | No | 2506 (98.1) | 484 (98.8) | NA | NA | NA | 0.180 |
|  | Yes | 48 (1.9) | 6 (1.2) | 0.60 | 0.27, 1.35 | 0.2 | 0.180 |
| use\_incense\_or\_candles\_exposed\_5yrs\_prior | No | 1157 (45.3) | 229 (46.7) | NA | NA | NA | 0.352 |
|  | Yes | 1397 (54.7) | 261 (53.3) | 0.92 | 0.77, 1.10 | 0.4 | 0.352 |
| smoke\_exposure\_exposed\_5yrs\_prior | No | 2263 (88.6) | 436 (89.0) | NA | NA | NA | 0.891 |
|  | Yes | 291 (11.4) | 54 (11.0) | 0.98 | 0.74, 1.30 | 0.9 | 0.891 |
| any\_treated\_weeds\_exposed\_5yrs\_prior | No | 1242 (48.6) | 189 (38.6) | NA | NA | NA | 0.425 |
|  | Yes | 1312 (51.4) | 301 (61.4) | 0.93 | 0.77, 1.11 | 0.4 | 0.425 |
| any\_treated\_insects\_exposed\_5yrs\_prior | No | 1252 (49.0) | 212 (43.3) | NA | NA | NA | 0.257 |
|  | Yes | 1302 (51.0) | 278 (56.7) | 0.90 | 0.75, 1.08 | 0.3 | 0.257 |
| any\_treated\_fertilizer\_exposed\_5yrs\_prior | No | 1148 (44.9) | 163 (33.3) | NA | NA | NA | 0.827 |
|  | Yes | 1406 (55.1) | 327 (66.7) | 0.98 | 0.81, 1.18 | 0.8 | 0.827 |
| hours\_of\_smoke\_exposure\_hours\_5yrs\_prior\_terciles | >=14-368h | 100 (3.9) | 20 (4.1) | NA | NA | NA | 0.975 |
|  | >=4-<14h | 91 (3.6) | 18 (3.7) | 1.05 | 0.55, 1.98 | 0.9 | 0.975 |
|  | >0-<4h | 97 (3.8) | 16 (3.3) | 0.90 | 0.46, 1.73 | 0.7 | 0.975 |
|  | no\_smoke | 2266 (88.7) | 436 (89.0) | 0.99 | 0.63, 1.55 | >0.9 | 0.975 |
| sex | F | 1291 (50.5) | 213 (43.5) | NA | NA | NA | 0.004 |
|  | M | 1263 (49.5) | 277 (56.5) | 1.30 | 1.09, 1.55 | 0.004 | 0.004 |
| neuter | Entire | 527 (20.6) | 75 (15.3) | NA | NA | NA | 0.495 |
|  | Neutered | 2027 (79.4) | 415 (84.7) | 0.92 | 0.72, 1.17 | 0.5 | 0.495 |
| mismating\_ever | 0 | 2541 (99.5) | 490 (100.0) | NA | NA | NA | 0.021 |
|  | 1 | 13 (0.5) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.021 |
| neutered\_reason | Elective | 1772 (69.4) | 374 (76.3) | NA | NA | NA | 0.079 |
|  | Entire | 555 (21.7) | 83 (16.9) | 1.11 | 0.88, 1.41 | 0.4 | 0.079 |
|  | Medical Reason | 156 (6.1) | 23 (4.7) | 0.62 | 0.41, 0.94 | 0.026 | 0.079 |
|  | Unknown | 8 (0.3) | 1 (0.2) | 0.80 | 0.11, 5.72 | 0.8 | 0.079 |
|  | not\_recorded | 63 (2.5) | 9 (1.8) | 0.69 | 0.36, 1.34 | 0.3 | 0.079 |
| neutered\_ever\_bred | 0 | 2549 (99.8) | 489 (99.8) | NA | NA | NA | 0.751 |
|  | 1 | 5 (0.2) | 1 (0.2) | 0.74 | 0.10, 5.26 | 0.8 | 0.751 |
| spayed\_while\_in\_heat | 0 | 883 (34.6) | 162 (33.1) | NA | NA | NA | 0.003 |
|  | 1 | 225 (8.8) | 40 (8.2) | 1.52 | 1.08, 2.15 | 0.018 | 0.003 |
|  | Intact Female | 183 (7.2) | 11 (2.2) | 0.84 | 0.46, 1.55 | 0.6 | 0.003 |
|  | Male | 1263 (49.5) | 277 (56.5) | 1.37 | 1.13, 1.67 | 0.001 | 0.003 |
| spayed\_while\_pregnant | 0 | 2548 (99.8) | 487 (99.4) | NA | NA | NA | 0.402 |
|  | 1 | 6 (0.2) | 3 (0.6) | 1.69 | 0.54, 5.27 | 0.4 | 0.402 |
| prevent\_heat\_ever | 0 | 2549 (99.8) | 490 (100.0) | NA | NA | NA | 0.123 |
|  | 1 | 5 (0.2) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.123 |
| no\_pregnancy\_ever | 0 | 1291 (50.5) | 282 (57.6) | NA | NA | NA | 0.005 |
|  | 1 | 1263 (49.5) | 208 (42.4) | 0.78 | 0.65, 0.93 | 0.005 | 0.005 |
| intact\_sired\_litters\_natural\_ever | 0 | 2523 (98.8) | 482 (98.4) | NA | NA | NA | 0.564 |
|  | 1 | 31 (1.2) | 8 (1.6) | 1.24 | 0.61, 2.49 | 0.6 | 0.564 |
| neutered\_females\_bred\_with\_count\_ever | 0 | 2523 (98.8) | 482 (98.4) | NA | NA | NA | 0.564 |
|  | 1 | 31 (1.2) | 8 (1.6) | 1.24 | 0.61, 2.49 | 0.6 | 0.564 |
| neutered\_sired\_litters\_natural\_ever | 0 | 2550 (99.8) | 489 (99.8) | NA | NA | NA | 0.840 |
|  | 1 | 4 (0.2) | 1 (0.2) | 0.82 | 0.12, 5.85 | 0.8 | 0.840 |
| heats\_before\_neutering | 0 | 676 (26.5) | 114 (23.3) | NA | NA | NA | 0.175 |
|  | 1 | 102 (4.0) | 28 (5.7) | 1.39 | 0.92, 2.09 | 0.12 | 0.175 |
|  | 10 | 1 (0.0) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.175 |
|  | 12 | 1 (0.0) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.175 |
|  | 2 | 63 (2.5) | 10 (2.0) | 0.79 | 0.41, 1.51 | 0.5 | 0.175 |
|  | 3 | 37 (1.4) | 10 (2.0) | 1.32 | 0.69, 2.51 | 0.4 | 0.175 |
|  | 4 | 49 (1.9) | 14 (2.9) | 1.40 | 0.80, 2.44 | 0.2 | 0.175 |
|  | 5 | 67 (2.6) | 10 (2.0) | 0.75 | 0.39, 1.43 | 0.4 | 0.175 |
|  | 6 | 47 (1.8) | 6 (1.2) | 0.54 | 0.24, 1.22 | 0.14 | 0.175 |
|  | 7 | 11 (0.4) | 1 (0.2) | 0.35 | 0.05, 2.51 | 0.3 | 0.175 |
|  | 8 | 2 (0.1) | 1 (0.2) | 1.42 | 0.20, 10.2 | 0.7 | 0.175 |
|  | not\_recorded | 1498 (58.7) | 296 (60.4) | 1.21 | 0.97, 1.50 | 0.085 | 0.175 |
| heats\_before\_neutering\_terciles | >2-<=4 | 86 (3.4) | 24 (4.9) | NA | NA | NA | 0.008 |
|  | >4-12 | 129 (5.1) | 18 (3.7) | 0.47 | 0.25, 0.86 | 0.015 | 0.008 |
|  | 0 | 676 (26.5) | 114 (23.3) | 0.73 | 0.47, 1.14 | 0.2 | 0.008 |
|  | 1-<=2 | 165 (6.5) | 38 (7.8) | 0.85 | 0.51, 1.41 | 0.5 | 0.008 |
|  | Intact Female | 183 (7.2) | 11 (2.2) | 0.57 | 0.28, 1.16 | 0.12 | 0.008 |
|  | Male | 1263 (49.5) | 277 (56.5) | 0.93 | 0.61, 1.41 | 0.7 | 0.008 |
|  | not\_recorded | 52 (2.0) | 8 (1.6) | 0.50 | 0.22, 1.11 | 0.088 | 0.008 |
| preg\_pre\_neuter | 0 | 2481 (97.1) | 478 (97.6) | NA | NA | NA | 0.272 |
|  | 1 | 73 (2.9) | 12 (2.4) | 0.74 | 0.42, 1.31 | 0.3 | 0.272 |
| num\_breeding\_before\_neutering\_quartiles | >=14-142 | 20 (0.8) | 8 (1.6) | NA | NA | NA | 0.140 |
|  | >=3-<6 | 19 (0.7) | 8 (1.6) | 1.19 | 0.45, 3.16 | 0.7 | 0.140 |
|  | >=6-14 | 25 (1.0) | 3 (0.6) | 0.37 | 0.10, 1.38 | 0.14 | 0.140 |
|  | 1-<3 | 15 (0.6) | 5 (1.0) | 1.13 | 0.37, 3.44 | 0.8 | 0.140 |
|  | not\_bred | 2475 (96.9) | 466 (95.1) | 0.61 | 0.30, 1.23 | 0.2 | 0.140 |
| ever\_bred\_from | 0 | 2393 (93.7) | 452 (92.2) | NA | NA | NA | 0.646 |
|  | 1 | 161 (6.3) | 38 (7.8) | 1.08 | 0.78, 1.51 | 0.6 | 0.646 |
| avg\_weight\_5y\_prior\_endpoint\_quartiles | >=21.31-<24.66kg | 647 (25.3) | 99 (20.2) | NA | NA | NA | <0.001 |
|  | >=24.66-<29.37kg | 597 (23.4) | 149 (30.4) | 2.73 | 2.11, 3.52 | <0.001 | <0.001 |
|  | >=29.37-41.52kg | 616 (24.1) | 131 (26.7) | 4.05 | 3.11, 5.27 | <0.001 | <0.001 |
|  | 9.75-<21.31kg | 649 (25.4) | 97 (19.8) | 0.89 | 0.67, 1.18 | 0.4 | <0.001 |
|  | not\_recorded | 45 (1.8) | 14 (2.9) | 2.12 | 1.21, 3.72 | 0.008 | <0.001 |
| avg\_height\_5y\_prior\_endpoint\_quartiles | >=56.07-<58.42cm | 517 (20.2) | 115 (23.5) | NA | NA | NA | 0.032 |
|  | >=58.42-<60.32cm | 514 (20.1) | 118 (24.1) | 1.08 | 0.84, 1.40 | 0.5 | 0.032 |
|  | >=60.32cm-67.73cm | 543 (21.3) | 89 (18.2) | 0.73 | 0.56, 0.97 | 0.029 | 0.032 |
|  | 49.13-<56.07cm | 539 (21.1) | 93 (19.0) | 0.83 | 0.63, 1.09 | 0.2 | 0.032 |
|  | not\_recorded | 441 (17.3) | 75 (15.3) | 0.80 | 0.60, 1.08 | 0.14 | 0.032 |
| avg\_purina\_BCS\_5y\_prior\_endpoint\_quartiles | >=5-<5.28 | 617 (24.2) | 154 (31.4) | NA | NA | NA | <0.001 |
|  | >=5.28-<5.86 | 558 (21.8) | 114 (23.3) | 0.71 | 0.56, 0.90 | 0.005 | <0.001 |
|  | >=5.86 - 9 | 553 (21.7) | 115 (23.5) | 0.86 | 0.67, 1.09 | 0.2 | <0.001 |
|  | 3.3-<5 | 386 (15.1) | 95 (19.4) | 0.88 | 0.68, 1.13 | 0.3 | <0.001 |
|  | not\_recorded | 440 (17.2) | 12 (2.4) | 0.31 | 0.17, 0.55 | <0.001 | <0.001 |
| mode\_purina\_BCS\_5y\_prior\_endpoint | 3 | 3 (0.1) | 0 (0.0) | NA | NA | NA | <0.001 |
|  | 4 | 106 (4.2) | 22 (4.5) | 374,883 | 0.00, Inf | >0.9 | <0.001 |
|  | 5 | 1008 (39.5) | 253 (51.6) | 456,726 | 0.00, Inf | >0.9 | <0.001 |
|  | 6 | 426 (16.7) | 80 (16.3) | 357,573 | 0.00, Inf | >0.9 | <0.001 |
|  | 7 | 151 (5.9) | 44 (9.0) | 511,553 | 0.00, Inf | >0.9 | <0.001 |
|  | 8 | 43 (1.7) | 6 (1.2) | 286,894 | 0.00, Inf | >0.9 | <0.001 |
|  | 9 | 13 (0.5) | 1 (0.2) | 160,591 | 0.00, Inf | >0.9 | <0.001 |
|  | not\_recorded | 804 (31.5) | 84 (17.1) | 842,066 | 0.00, Inf | >0.9 | <0.001 |
| half\_anti\_microbials\_lifetime | drug\_not\_administered | 450 (17.6) | 64 (13.1) | NA | NA | NA | 0.330 |
|  | lower\_half | 1098 (43.0) | 225 (45.9) | 1.01 | 0.77, 1.34 | >0.9 | 0.330 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.61 | 0.30, 1.22 | 0.2 | 0.330 |
|  | upper\_half | 860 (33.7) | 192 (39.2) | 0.91 | 0.69, 1.21 | 0.5 | 0.330 |
| half\_dietary\_supplements\_lifetime | drug\_not\_administered | 1560 (61.1) | 287 (58.6) | NA | NA | NA | 0.377 |
|  | lower\_half | 544 (21.3) | 115 (23.5) | 0.92 | 0.74, 1.15 | 0.5 | 0.377 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.62 | 0.32, 1.20 | 0.2 | 0.377 |
|  | upper\_half | 304 (11.9) | 79 (16.1) | 1.05 | 0.82, 1.34 | 0.7 | 0.377 |
| half\_enteric\_lifetime | drug\_not\_administered | 1734 (67.9) | 326 (66.5) | NA | NA | NA | 0.083 |
|  | lower\_half | 330 (12.9) | 89 (18.2) | 1.22 | 0.96, 1.54 | 0.10 | 0.083 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.63 | 0.33, 1.23 | 0.2 | 0.083 |
|  | upper\_half | 344 (13.5) | 66 (13.5) | 0.87 | 0.67, 1.14 | 0.3 | 0.083 |
| half\_fluid\_metabolites\_lifetime | drug\_not\_administered | 2364 (92.6) | 469 (95.7) | NA | NA | NA | 0.474 |
|  | lower\_half | 37 (1.4) | 9 (1.8) | 1.05 | 0.54, 2.03 | 0.9 | 0.474 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.63 | 0.32, 1.21 | 0.2 | 0.474 |
|  | upper\_half | 7 (0.3) | 3 (0.6) | 1.32 | 0.43, 4.13 | 0.6 | 0.474 |
| half\_hormones\_and\_related\_lifetime | drug\_not\_administered | 2197 (86.0) | 435 (88.8) | NA | NA | NA | 0.475 |
|  | lower\_half | 120 (4.7) | 25 (5.1) | 0.98 | 0.66, 1.47 | >0.9 | 0.475 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.62 | 0.32, 1.20 | 0.2 | 0.475 |
|  | upper\_half | 91 (3.6) | 21 (4.3) | 0.90 | 0.58, 1.40 | 0.6 | 0.475 |
| half\_immunologicals\_lifetime | drug\_not\_administered | 1774 (69.5) | 322 (65.7) | NA | NA | NA | 0.419 |
|  | lower\_half | 401 (15.7) | 94 (19.2) | 1.02 | 0.81, 1.28 | 0.9 | 0.419 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.64 | 0.33, 1.23 | 0.2 | 0.419 |
|  | upper\_half | 233 (9.1) | 65 (13.3) | 1.11 | 0.85, 1.45 | 0.5 | 0.419 |
| half\_misc\_lifetime | drug\_not\_administered | 1796 (70.3) | 338 (69.0) | NA | NA | NA | 0.452 |
|  | lower\_half | 344 (13.5) | 80 (16.3) | 1.01 | 0.79, 1.29 | >0.9 | 0.452 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.62 | 0.32, 1.20 | 0.2 | 0.452 |
|  | upper\_half | 268 (10.5) | 63 (12.9) | 0.93 | 0.71, 1.21 | 0.6 | 0.452 |
| half\_neurological\_lifetime | drug\_not\_administered | 1435 (56.2) | 278 (56.7) | NA | NA | NA | 0.081 |
|  | lower\_half | 622 (24.4) | 125 (25.5) | 0.84 | 0.68, 1.04 | 0.11 | 0.081 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.57 | 0.30, 1.12 | 0.10 | 0.081 |
|  | upper\_half | 351 (13.7) | 78 (15.9) | 0.80 | 0.62, 1.03 | 0.082 | 0.081 |
| half\_anti\_parasites\_lifetime | drug\_not\_administered | 229 (9.0) | 32 (6.5) | NA | NA | NA | 0.401 |
|  | lower\_half | 1249 (48.9) | 217 (44.3) | 1.04 | 0.72, 1.51 | 0.8 | 0.401 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.67 | 0.32, 1.40 | 0.3 | 0.401 |
|  | upper\_half | 930 (36.4) | 232 (47.3) | 1.11 | 0.77, 1.61 | 0.6 | 0.401 |
| half\_anti\_septics\_lifetime | drug\_not\_administered | 2237 (87.6) | 454 (92.7) | NA | NA | NA | 0.130 |
|  | lower\_half | 126 (4.9) | 19 (3.9) | 0.71 | 0.45, 1.12 | 0.14 | 0.130 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.61 | 0.32, 1.18 | 0.14 | 0.130 |
|  | upper\_half | 45 (1.8) | 8 (1.6) | 0.71 | 0.35, 1.43 | 0.3 | 0.130 |
| half\_cardio\_respiratory\_lifetime | drug\_not\_administered | 2256 (88.3) | 449 (91.6) | NA | NA | NA | 0.157 |
|  | lower\_half | 96 (3.8) | 24 (4.9) | 1.06 | 0.71, 1.60 | 0.8 | 0.157 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.62 | 0.32, 1.20 | 0.2 | 0.157 |
|  | upper\_half | 56 (2.2) | 8 (1.6) | 0.58 | 0.29, 1.17 | 0.13 | 0.157 |
| half\_diuretics\_lifetime | drug\_not\_administered | 2391 (93.6) | 479 (97.8) | NA | NA | NA | 0.315 |
|  | lower\_half | 16 (0.6) | 2 (0.4) | 0.56 | 0.14, 2.25 | 0.4 | 0.315 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.62 | 0.32, 1.20 | 0.2 | 0.315 |
|  | upper\_half | 1 (0.0) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.315 |
| half\_anti\_hist\_lifetime | drug\_not\_administered | 2342 (91.7) | 464 (94.7) | NA | NA | NA | 0.426 |
|  | lower\_half | 43 (1.7) | 10 (2.0) | 1.23 | 0.66, 2.30 | 0.5 | 0.426 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.63 | 0.33, 1.22 | 0.2 | 0.426 |
|  | upper\_half | 23 (0.9) | 7 (1.4) | 1.15 | 0.55, 2.43 | 0.7 | 0.426 |
| quartile\_anti\_inflam\_lifetime | drug\_not\_administered | 689 (27.0) | 105 (21.4) | NA | NA | NA | 0.302 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.60 | 0.31, 1.20 | 0.15 | 0.302 |
|  | Q1 | 501 (19.6) | 101 (20.6) | 1.05 | 0.80, 1.39 | 0.7 | 0.302 |
|  | Q2 | 608 (23.8) | 138 (28.2) | 1.01 | 0.79, 1.31 | >0.9 | 0.302 |
|  | Q3 | 196 (7.7) | 46 (9.4) | 0.92 | 0.65, 1.30 | 0.6 | 0.302 |
|  | Q4 | 414 (16.2) | 91 (18.6) | 0.82 | 0.62, 1.09 | 0.2 | 0.302 |
| quartile\_anti\_microbials\_lifetime | drug\_not\_administered | 450 (17.6) | 64 (13.1) | NA | NA | NA | 0.253 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.61 | 0.30, 1.22 | 0.2 | 0.253 |
|  | Q1 | 671 (26.3) | 136 (27.8) | 1.06 | 0.79, 1.43 | 0.7 | 0.253 |
|  | Q2 | 427 (16.7) | 89 (18.2) | 0.95 | 0.69, 1.31 | 0.7 | 0.253 |
|  | Q3 | 405 (15.9) | 98 (20.0) | 1.03 | 0.75, 1.41 | 0.9 | 0.253 |
|  | Q4 | 455 (17.8) | 94 (19.2) | 0.82 | 0.60, 1.13 | 0.2 | 0.253 |
| quartile\_dietary\_supplements\_lifetime | drug\_not\_administered | 1560 (61.1) | 287 (58.6) | NA | NA | NA | 0.474 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.62 | 0.32, 1.20 | 0.2 | 0.474 |
|  | Q1 | 358 (14.0) | 80 (16.3) | 1.00 | 0.78, 1.28 | >0.9 | 0.474 |
|  | Q2 | 186 (7.3) | 35 (7.1) | 0.79 | 0.56, 1.13 | 0.2 | 0.474 |
|  | Q3 | 156 (6.1) | 41 (8.4) | 1.09 | 0.79, 1.52 | 0.6 | 0.474 |
|  | Q4 | 148 (5.8) | 38 (7.8) | 1.00 | 0.71, 1.41 | >0.9 | 0.474 |
| quartile\_hormones\_and\_related\_lifetime | drug\_not\_administered | 2197 (86.0) | 435 (88.8) | NA | NA | NA | 0.702 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.62 | 0.32, 1.20 | 0.2 | 0.702 |
|  | Q1 | 81 (3.2) | 15 (3.1) | 0.91 | 0.55, 1.53 | 0.7 | 0.702 |
|  | Q2 | 39 (1.5) | 10 (2.0) | 1.11 | 0.59, 2.07 | 0.8 | 0.702 |
|  | Q3 | 42 (1.6) | 10 (2.0) | 1.02 | 0.55, 1.92 | >0.9 | 0.702 |
|  | Q4 | 49 (1.9) | 11 (2.2) | 0.81 | 0.45, 1.48 | 0.5 | 0.702 |
| quartile\_immunologicals\_lifetime | drug\_not\_administered | 1774 (69.5) | 322 (65.7) | NA | NA | NA | 0.378 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.64 | 0.33, 1.23 | 0.2 | 0.378 |
|  | Q1 | 289 (11.3) | 62 (12.7) | 0.94 | 0.72, 1.24 | 0.7 | 0.378 |
|  | Q2 | 112 (4.4) | 32 (6.5) | 1.20 | 0.84, 1.73 | 0.3 | 0.378 |
|  | Q3 | 116 (4.5) | 37 (7.6) | 1.26 | 0.90, 1.78 | 0.2 | 0.378 |
|  | Q4 | 117 (4.6) | 28 (5.7) | 0.95 | 0.65, 1.40 | 0.8 | 0.378 |
| quartile\_misc\_lifetime | drug\_not\_administered | 1796 (70.3) | 338 (69.0) | NA | NA | NA | 0.477 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.62 | 0.32, 1.20 | 0.2 | 0.477 |
|  | Q1 | 344 (13.5) | 80 (16.3) | 1.01 | 0.79, 1.29 | >0.9 | 0.477 |
|  | Q3 | 139 (5.4) | 26 (5.3) | 0.81 | 0.54, 1.21 | 0.3 | 0.477 |
|  | Q4 | 129 (5.1) | 37 (7.6) | 1.03 | 0.73, 1.44 | 0.9 | 0.477 |
| quartile\_neurological\_lifetime | drug\_not\_administered | 1435 (56.2) | 278 (56.7) | NA | NA | NA | 0.215 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.57 | 0.30, 1.12 | 0.10 | 0.215 |
|  | Q1 | 430 (16.8) | 82 (16.7) | 0.82 | 0.64, 1.04 | 0.11 | 0.215 |
|  | Q2 | 192 (7.5) | 43 (8.8) | 0.90 | 0.65, 1.24 | 0.5 | 0.215 |
|  | Q3 | 122 (4.8) | 27 (5.5) | 0.84 | 0.57, 1.25 | 0.4 | 0.215 |
|  | Q4 | 229 (9.0) | 51 (10.4) | 0.78 | 0.58, 1.05 | 0.10 | 0.215 |
| quartile\_anti\_parasites\_lifetime | drug\_not\_administered | 229 (9.0) | 32 (6.5) | NA | NA | NA | 0.418 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.67 | 0.32, 1.40 | 0.3 | 0.418 |
|  | Q1 | 680 (26.6) | 100 (20.4) | 0.97 | 0.65, 1.44 | 0.9 | 0.418 |
|  | Q2 | 569 (22.3) | 117 (23.9) | 1.11 | 0.75, 1.64 | 0.6 | 0.418 |
|  | Q3 | 453 (17.7) | 116 (23.7) | 1.19 | 0.81, 1.76 | 0.4 | 0.418 |
|  | Q4 | 477 (18.7) | 116 (23.7) | 1.04 | 0.70, 1.54 | 0.8 | 0.418 |
| half\_anti\_inflam\_5y\_prior\_endpoint | drug\_not\_administered | 858 (33.6) | 145 (29.6) | NA | NA | NA | 0.130 |
|  | lower\_half | 881 (34.5) | 194 (39.6) | 1.09 | 0.88, 1.35 | 0.5 | 0.130 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.62 | 0.32, 1.22 | 0.2 | 0.130 |
|  | upper\_half | 669 (26.2) | 142 (29.0) | 0.89 | 0.70, 1.12 | 0.3 | 0.130 |
| half\_anti\_microbials\_5y\_prior\_endpoint | drug\_not\_administered | 630 (24.7) | 112 (22.9) | NA | NA | NA | 0.228 |
|  | lower\_half | 1038 (40.6) | 222 (45.3) | 1.07 | 0.85, 1.34 | 0.6 | 0.228 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.63 | 0.32, 1.24 | 0.2 | 0.228 |
|  | upper\_half | 740 (29.0) | 147 (30.0) | 0.92 | 0.72, 1.17 | 0.5 | 0.228 |
| half\_enteric\_5y\_prior\_endpoint | drug\_not\_administered | 1885 (73.8) | 353 (72.0) | NA | NA | NA | 0.091 |
|  | lower\_half | 275 (10.8) | 76 (15.5) | 1.31 | 1.02, 1.67 | 0.035 | 0.091 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.65 | 0.34, 1.26 | 0.2 | 0.091 |
|  | upper\_half | 248 (9.7) | 52 (10.6) | 1.05 | 0.78, 1.40 | 0.8 | 0.091 |
| half\_immunologicals\_5y\_prior\_endpoint | drug\_not\_administered | 1791 (70.1) | 331 (67.6) | NA | NA | NA | 0.385 |
|  | lower\_half | 398 (15.6) | 88 (18.0) | 0.97 | 0.77, 1.23 | 0.8 | 0.385 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.63 | 0.33, 1.22 | 0.2 | 0.385 |
|  | upper\_half | 219 (8.6) | 62 (12.7) | 1.12 | 0.85, 1.47 | 0.4 | 0.385 |
| half\_misc\_5y\_prior\_endpoint | drug\_not\_administered | 1931 (75.6) | 370 (75.5) | NA | NA | NA | 0.437 |
|  | lower\_half | 281 (11.0) | 58 (11.8) | 0.96 | 0.73, 1.27 | 0.8 | 0.437 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.63 | 0.32, 1.22 | 0.2 | 0.437 |
|  | upper\_half | 196 (7.7) | 53 (10.8) | 1.09 | 0.82, 1.45 | 0.6 | 0.437 |
| half\_neurological\_5y\_prior\_endpoint | drug\_not\_administered | 1585 (62.1) | 311 (63.5) | NA | NA | NA | 0.209 |
|  | lower\_half | 564 (22.1) | 111 (22.7) | 0.86 | 0.69, 1.07 | 0.2 | 0.209 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.59 | 0.31, 1.15 | 0.12 | 0.209 |
|  | upper\_half | 259 (10.1) | 59 (12.0) | 0.88 | 0.66, 1.16 | 0.3 | 0.209 |
| half\_anti\_parasites\_5y\_prior\_endpoint | drug\_not\_administered | 363 (14.2) | 76 (15.5) | NA | NA | NA | 0.001 |
|  | lower\_half | 1263 (49.5) | 218 (44.5) | 0.80 | 0.61, 1.04 | 0.089 | 0.001 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.59 | 0.29, 1.17 | 0.13 | 0.001 |
|  | upper\_half | 782 (30.6) | 187 (38.2) | 1.15 | 0.88, 1.50 | 0.3 | 0.001 |
| half\_dietary\_supplements\_5y\_prior\_endpoint | drug\_not\_administered | 1707 (66.8) | 319 (65.1) | NA | NA | NA | 0.343 |
|  | lower\_half | 476 (18.6) | 103 (21.0) | 0.99 | 0.79, 1.23 | >0.9 | 0.343 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.63 | 0.33, 1.23 | 0.2 | 0.343 |
|  | upper\_half | 225 (8.8) | 59 (12.0) | 1.15 | 0.87, 1.52 | 0.3 | 0.343 |
| half\_anti\_septics\_5y\_prior\_endpoint | drug\_not\_administered | 2289 (89.6) | 462 (94.3) | NA | NA | NA | 0.306 |
|  | lower\_half | 94 (3.7) | 14 (2.9) | 0.74 | 0.44, 1.27 | 0.3 | 0.306 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.62 | 0.32, 1.20 | 0.2 | 0.306 |
|  | upper\_half | 25 (1.0) | 5 (1.0) | 0.90 | 0.37, 2.17 | 0.8 | 0.306 |
| half\_hormones\_and\_related\_5y\_prior\_endpoint | drug\_not\_administered | 2212 (86.6) | 439 (89.6) | NA | NA | NA | 0.492 |
|  | lower\_half | 108 (4.2) | 21 (4.3) | 0.95 | 0.62, 1.48 | 0.8 | 0.492 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.62 | 0.32, 1.20 | 0.2 | 0.492 |
|  | upper\_half | 88 (3.4) | 21 (4.3) | 0.93 | 0.60, 1.45 | 0.8 | 0.492 |
| half\_cardio\_respiratory\_5y\_prior\_endpoint | drug\_not\_administered | 2288 (89.6) | 458 (93.5) | NA | NA | NA | 0.268 |
|  | lower\_half | 79 (3.1) | 17 (3.5) | 0.97 | 0.60, 1.58 | >0.9 | 0.268 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.62 | 0.32, 1.20 | 0.2 | 0.268 |
|  | upper\_half | 41 (1.6) | 6 (1.2) | 0.61 | 0.27, 1.37 | 0.2 | 0.268 |
| half\_fluid\_metabolites\_5y\_prior\_endpoint | drug\_not\_administered | 2383 (93.3) | 471 (96.1) | NA | NA | NA | 0.194 |
|  | lower\_half | 21 (0.8) | 8 (1.6) | 1.71 | 0.85, 3.45 | 0.13 | 0.194 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.63 | 0.33, 1.22 | 0.2 | 0.194 |
|  | upper\_half | 4 (0.2) | 2 (0.4) | 1.75 | 0.44, 7.01 | 0.4 | 0.194 |
| half\_diuretics\_5y\_prior\_endpoint | drug\_not\_administered | 2392 (93.7) | 479 (97.8) | NA | NA | NA | 0.341 |
|  | lower\_half | 15 (0.6) | 2 (0.4) | 0.60 | 0.15, 2.41 | 0.5 | 0.341 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.62 | 0.32, 1.21 | 0.2 | 0.341 |
|  | upper\_half | 1 (0.0) | 0 (0.0) | 0.00 | 0.00, Inf | >0.9 | 0.341 |
| half\_anti\_hist\_5y\_prior\_endpoint | drug\_not\_administered | 2362 (92.5) | 470 (95.9) | NA | NA | NA | 0.412 |
|  | lower\_half | 32 (1.3) | 7 (1.4) | 1.26 | 0.60, 2.66 | 0.5 | 0.412 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.63 | 0.32, 1.22 | 0.2 | 0.412 |
|  | upper\_half | 14 (0.5) | 4 (0.8) | 1.30 | 0.49, 3.49 | 0.6 | 0.412 |
| quartile\_anti\_inflam\_5y\_prior\_endpoint | drug\_not\_administered | 858 (33.6) | 145 (29.6) | NA | NA | NA | 0.277 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.62 | 0.32, 1.22 | 0.2 | 0.277 |
|  | Q1 | 538 (21.1) | 109 (22.2) | 1.05 | 0.82, 1.34 | 0.7 | 0.277 |
|  | Q2 | 343 (13.4) | 85 (17.3) | 1.14 | 0.87, 1.49 | 0.3 | 0.277 |
|  | Q3 | 425 (16.6) | 92 (18.8) | 0.92 | 0.71, 1.19 | 0.5 | 0.277 |
|  | Q4 | 244 (9.6) | 50 (10.2) | 0.84 | 0.61, 1.15 | 0.3 | 0.277 |
| quartile\_anti\_microbials\_5y\_prior\_endpoint | drug\_not\_administered | 630 (24.7) | 112 (22.9) | NA | NA | NA | 0.450 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.63 | 0.32, 1.24 | 0.2 | 0.450 |
|  | Q1 | 455 (17.8) | 98 (20.0) | 1.11 | 0.85, 1.46 | 0.4 | 0.450 |
|  | Q2 | 583 (22.8) | 124 (25.3) | 1.04 | 0.80, 1.34 | 0.8 | 0.450 |
|  | Q3 | 326 (12.8) | 67 (13.7) | 0.95 | 0.70, 1.28 | 0.7 | 0.450 |
|  | Q4 | 414 (16.2) | 80 (16.3) | 0.89 | 0.67, 1.19 | 0.4 | 0.450 |
| quartile\_immunologicals\_5y\_prior\_endpoint | drug\_not\_administered | 1791 (70.1) | 331 (67.6) | NA | NA | NA | 0.317 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.63 | 0.33, 1.22 | 0.2 | 0.317 |
|  | Q1 | 287 (11.2) | 58 (11.8) | 0.90 | 0.68, 1.19 | 0.4 | 0.317 |
|  | Q2 | 111 (4.3) | 30 (6.1) | 1.16 | 0.80, 1.68 | 0.4 | 0.317 |
|  | Q3 | 116 (4.5) | 38 (7.8) | 1.28 | 0.92, 1.80 | 0.14 | 0.317 |
|  | Q4 | 103 (4.0) | 24 (4.9) | 0.93 | 0.61, 1.40 | 0.7 | 0.317 |
| quartile\_misc\_5y\_prior\_endpoint | drug\_not\_administered | 1931 (75.6) | 370 (75.5) | NA | NA | NA | 0.564 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.63 | 0.32, 1.22 | 0.2 | 0.564 |
|  | Q1 | 281 (11.0) | 58 (11.8) | 0.96 | 0.73, 1.27 | 0.8 | 0.564 |
|  | Q3 | 109 (4.3) | 27 (5.5) | 1.02 | 0.69, 1.51 | >0.9 | 0.564 |
|  | Q4 | 87 (3.4) | 26 (5.3) | 1.17 | 0.78, 1.74 | 0.4 | 0.564 |
| quartile\_neurological\_5y\_prior\_endpoint | drug\_not\_administered | 1585 (62.1) | 311 (63.5) | NA | NA | NA | 0.291 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.59 | 0.31, 1.15 | 0.12 | 0.291 |
|  | Q1 | 387 (15.2) | 68 (13.9) | 0.79 | 0.61, 1.03 | 0.079 | 0.291 |
|  | Q2 | 177 (6.9) | 43 (8.8) | 1.01 | 0.73, 1.39 | >0.9 | 0.291 |
|  | Q3 | 94 (3.7) | 20 (4.1) | 0.84 | 0.53, 1.31 | 0.4 | 0.291 |
|  | Q4 | 165 (6.5) | 39 (8.0) | 0.90 | 0.64, 1.25 | 0.5 | 0.291 |
| quartile\_anti\_parasites\_5y\_prior\_endpoint | drug\_not\_administered | 363 (14.2) | 76 (15.5) | NA | NA | NA | <0.001 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.59 | 0.30, 1.18 | 0.13 | <0.001 |
|  | Q1 | 668 (26.2) | 111 (22.7) | 0.78 | 0.58, 1.05 | 0.10 | <0.001 |
|  | Q2 | 595 (23.3) | 107 (21.8) | 0.81 | 0.61, 1.09 | 0.2 | <0.001 |
|  | Q3 | 463 (18.1) | 72 (14.7) | 0.69 | 0.50, 0.95 | 0.023 | <0.001 |
|  | Q4 | 319 (12.5) | 115 (23.5) | 2.00 | 1.49, 2.67 | <0.001 | <0.001 |
| quartile\_dietary\_supplements\_5y\_prior\_endpoint | drug\_not\_administered | 1707 (66.8) | 319 (65.1) | NA | NA | NA | 0.565 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.63 | 0.33, 1.23 | 0.2 | 0.565 |
|  | Q1 | 322 (12.6) | 67 (13.7) | 0.96 | 0.73, 1.24 | 0.7 | 0.565 |
|  | Q2 | 154 (6.0) | 36 (7.3) | 1.05 | 0.75, 1.49 | 0.8 | 0.565 |
|  | Q3 | 75 (2.9) | 21 (4.3) | 1.28 | 0.82, 1.99 | 0.3 | 0.565 |
|  | Q4 | 150 (5.9) | 38 (7.8) | 1.09 | 0.78, 1.53 | 0.6 | 0.565 |
| quartile\_hormones\_and\_related\_5y\_prior\_endpoint | drug\_not\_administered | 2212 (86.6) | 439 (89.6) | NA | NA | NA | 0.693 |
|  | medication\_use\_not\_recorded | 146 (5.7) | 9 (1.8) | 0.62 | 0.32, 1.20 | 0.2 | 0.693 |
|  | Q1 | 69 (2.7) | 13 (2.7) | 0.97 | 0.56, 1.68 | >0.9 | 0.693 |
|  | Q2 | 39 (1.5) | 8 (1.6) | 0.93 | 0.46, 1.87 | 0.8 | 0.693 |
|  | Q3 | 45 (1.8) | 12 (2.4) | 1.10 | 0.62, 1.95 | 0.7 | 0.693 |
|  | Q4 | 43 (1.7) | 9 (1.8) | 0.78 | 0.40, 1.51 | 0.5 | 0.693 |
| age\_at\_neuter\_years\_quartiles | >=0.52-<0.83y | 272 (10.6) | 40 (8.2) | NA | NA | NA | 0.038 |
|  | >=0.83-2.44y | 250 (9.8) | 63 (12.9) | 1.64 | 1.10, 2.44 | 0.015 | 0.038 |
|  | >=2.44-9.59y | 261 (10.2) | 52 (10.6) | 1.13 | 0.75, 1.70 | 0.6 | 0.038 |
|  | 0.15-<0.52y | 273 (10.7) | 39 (8.0) | 1.06 | 0.68, 1.64 | 0.8 | 0.038 |
|  | Entire | 527 (20.6) | 75 (15.3) | 1.44 | 0.98, 2.11 | 0.064 | 0.038 |
|  | not\_recorded | 971 (38.0) | 221 (45.1) | 1.44 | 1.03, 2.02 | 0.033 | 0.038 |