# Table 1A. Baseline Characteristics by ABG Group

Table 1A: ABG cohorts

| **Variable** | **No ABG**  N = 635,7781 | **ABG\_NoHypercapnia**  N = 137,1181 | **ABG\_Hypercapnia**  N = 60,5801 |
| --- | --- | --- | --- |
| Age (years) | 57.1 ± 17.6; 0.0/635,778.0 missing (0.0%) | 60.8 ± 17.0; 0.0/137,118.0 missing (0.0%) | 62.1 ± 16.3; 0.0/60,580.0 missing (0.0%) |
| Current BMI kg/m2 | 34.9 ± 8.7; 333,519.0/635,778.0 missing (52.5%) | 28.6 ± 6.8; 81,672.0/137,118.0 missing (59.6%) | 29.8 ± 7.9; 35,524.0/60,580.0 missing (58.6%) |
| sex\_label |  |  |  |
| Female | 349,843 (55%) | 61,135 (45%) | 28,335 (47%) |
| Male | 285,935 (45%) | 75,983 (55%) | 32,245 (53%) |
| race\_ethnicity\_label |  |  |  |
| White | 389,840 (61%) | 85,933 (63%) | 41,520 (69%) |
| Black or African American | 108,476 (17%) | 19,894 (15%) | 8,398 (14%) |
| Hispanic | 42,986 (6.8%) | 7,805 (5.7%) | 2,880 (4.8%) |
| Asian | 8,404 (1.3%) | 2,889 (2.1%) | 835 (1.4%) |
| American Indian | 4,503 (0.7%) | 1,945 (1.4%) | 358 (0.6%) |
| Pacific Islander | 968 (0.2%) | 166 (0.1%) | 58 (<0.1%) |
| Unknown | 80,601 (13%) | 18,486 (13%) | 6,531 (11%) |
| location\_label |  |  |  |
| South | 276,505 (43%) | 73,634 (54%) | 33,609 (55%) |
| Northeast | 159,345 (25%) | 24,731 (18%) | 13,728 (23%) |
| Midwest | 59,926 (9.4%) | 11,943 (8.7%) | 5,328 (8.8%) |
| West | 140,002 (22%) | 26,810 (20%) | 7,915 (13%) |
| osa\_label | 152,809 (24%) | 19,574 (14%) | 12,830 (21%) |
| asthma\_label | 102,248 (16%) | 14,076 (10%) | 8,704 (14%) |
| copd\_label | 105,391 (17%) | 22,798 (17%) | 19,790 (33%) |
| chf\_label | 100,760 (16%) | 27,087 (20%) | 17,097 (28%) |
| nmd\_label | 25,187 (4.0%) | 6,175 (4.5%) | 2,601 (4.3%) |
| phtn\_label | 40,606 (6.4%) | 11,440 (8.3%) | 7,878 (13%) |
| ckd\_label | 91,830 (14%) | 26,117 (19%) | 12,331 (20%) |
| diabetes\_label | 188,371 (30%) | 39,487 (29%) | 19,431 (32%) |
| VBG PCO2 | 45.5 ± 10.4; 535,921.0/635,778.0 missing (84.3%) | 41.9 ± 11.2; 98,287.0/137,118.0 missing (71.7%) | 57.3 ± 18.2; 42,801.0/60,580.0 missing (70.7%) |
| Arterial PCO2 | NA ± NA; 635,778.0/635,778.0 missing (100.0%) | 35.6 ± 6.1; 0.0/137,118.0 missing (0.0%) | 58.2 ± 20.0; 0.0/60,580.0 missing (0.0%) |
| 1Mean ± SD; N Missing/No. obs. missing (% Missing); n (%) | | | |

# Table 1B. Baseline Characteristics by VBG Group

Table 1B: VBG cohorts

| **Variable** | **No VBG**  N = 677,0091 | **VBG\_NoHypercapnia**  N = 110,5241 | **VBG\_Hypercapnia**  N = 45,9431 |
| --- | --- | --- | --- |
| Age (years) | 57.9 ± 17.5; 0.0/677,009.0 missing (0.0%) | 58.0 ± 17.8; 0.0/110,524.0 missing (0.0%) | 60.9 ± 16.7; 0.0/45,943.0 missing (0.0%) |
| Current BMI kg/m2 | 34.4 ± 8.7; 344,231.0/677,009.0 missing (50.8%) | 28.7 ± 7.1; 73,719.0/110,524.0 missing (66.7%) | 29.3 ± 7.9; 32,765.0/45,943.0 missing (71.3%) |
| sex\_label |  |  |  |
| Female | 366,682 (54%) | 51,350 (46%) | 21,281 (46%) |
| Male | 310,327 (46%) | 59,174 (54%) | 24,662 (54%) |
| race\_ethnicity\_label |  |  |  |
| White | 434,680 (64%) | 56,806 (51%) | 25,807 (56%) |
| Black or African American | 108,566 (16%) | 19,433 (18%) | 8,769 (19%) |
| Hispanic | 42,507 (6.3%) | 8,609 (7.8%) | 2,555 (5.6%) |
| Asian | 8,992 (1.3%) | 2,420 (2.2%) | 716 (1.6%) |
| American Indian | 4,701 (0.7%) | 1,839 (1.7%) | 266 (0.6%) |
| Pacific Islander | 1,051 (0.2%) | 112 (0.1%) | 29 (<0.1%) |
| Unknown | 76,512 (11%) | 21,305 (19%) | 7,801 (17%) |
| location\_label |  |  |  |
| South | 338,056 (50%) | 30,555 (28%) | 15,137 (33%) |
| Northeast | 129,850 (19%) | 47,118 (43%) | 20,836 (45%) |
| Midwest | 62,803 (9.3%) | 9,723 (8.8%) | 4,671 (10%) |
| West | 146,300 (22%) | 23,128 (21%) | 5,299 (12%) |
| osa\_label | 159,156 (24%) | 16,627 (15%) | 9,430 (21%) |
| asthma\_label | 103,907 (15%) | 14,188 (13%) | 6,933 (15%) |
| copd\_label | 117,454 (17%) | 17,165 (16%) | 13,360 (29%) |
| chf\_label | 110,887 (16%) | 21,574 (20%) | 12,483 (27%) |
| nmd\_label | 28,289 (4.2%) | 3,906 (3.5%) | 1,768 (3.8%) |
| phtn\_label | 45,122 (6.7%) | 9,048 (8.2%) | 5,754 (13%) |
| ckd\_label | 98,631 (15%) | 22,407 (20%) | 9,240 (20%) |
| diabetes\_label | 197,317 (29%) | 35,204 (32%) | 14,768 (32%) |
| VBG PCO2 | NA ± NA; 677,009.0/677,009.0 missing (100.0%) | 40.1 ± 6.5; 0.0/110,524.0 missing (0.0%) | 60.0 ± 12.4; 0.0/45,943.0 missing (0.0%) |
| Arterial PCO2 | 42.3 ± 15.2; 535,921.0/677,009.0 missing (79.2%) | 38.5 ± 15.2; 71,896.0/110,524.0 missing (65.1%) | 52.7 ± 19.5; 27,961.0/45,943.0 missing (60.9%) |
| 1Mean ± SD; N Missing/No. obs. missing (% Missing); n (%) | | | |