**SUPPLEMENTAL MATERIALS**

**Table S1. Demographic and Clinical Characteristics During the 12-Month Baseline Period**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Unweighted populations** | | | | | |  | **Weighted populations1** | | | | |
|  | **CANA** | | **GLP-1** | | | **Standardized difference (%)** |  | **CANA** | | **GLP-1** | | **Standardized difference (%)** |
|  | **N = 5,540** | | **N = 17,477** | | |  | **N(Eff) = 11,435** | | **N(Eff) = 11,582** | |
| **Year of index date, n (%)** |  |  |  |  | |  |  |  |  |  |  |  |
| 2013 | 564 | (10.2) | 4,771 | (27.3) | | 45.0% |  | 2,492 | (21.8) | 2,686 | (23.2) | 3.4% |
| 2014 | 2,120 | (38.3) | 5,796 | (33.2) | | 10.7% |  | 3,992 | (34.9) | 3,983 | (34.4) | 1.1% |
| 2015 | 2,264 | (40.9) | 5,165 | (29.6) | | 23.9% |  | 3,751 | (32.8) | 3,743 | (32.3) | 1.0% |
| 2016 | 592 | (10.7) | 1,745 | (10.0) | | 2.3% |  | 1,201 | (10.5) | 1,169 | (10.1) | 1.3% |
| **Demographics** |  |  |  |  | |  |  |  |  |  |  |  |
| **Gender, female, n (%)** | 2,323 | (41.9) | 9,415 | (53.9) | | 24.1% |  | 5,744 | (50.2) | 5,902 | (51.0) | 1.5% |
| **Age, mean ± SD [median]** | 57.6 ± | 10.6 [58.0] | 56.5 ± | 11.2 [57.0] | | 10.0% |  | 57.0 ± | 10.9 [58.0] | 56.8 ± | 11.1 [57.0] | 2.2% |
| **Age category, n (%)** |  |  |  |  | |  |  |  |  |  |  |  |
| 18-44 years | 616 | (11.1) | 2,606 | (14.9) | | 11.3% |  | 1,521 | (13.3) | 1,616 | (14.0) | 1.9% |
| 45-64 years | 3,463 | (62.5) | 10,436 | (59.7) | | 5.7% |  | 7,032 | (61.5) | 6,992 | (60.4) | 2.3% |
| 65-74 years | 1,188 | (21.4) | 3,671 | (21.0) | | 1.1% |  | 2,367 | (20.7) | 2,451 | (21.2) | 1.1% |
| ≥ 75 years | 273 | (4.9) | 764 | (4.4) | | 2.6% |  | 515 | (4.5) | 523 | (4.5) | 0.1% |
| **Race/Ethnicity, n (%)** |  |  |  |  | |  |  |  |  |  |  |  |
| White | 4,190 | (75.6) | 13,145 | (75.2) | | 1.0% |  | 8,634 | (75.5) | 8,725 | (75.3) | 0.4% |
| Asian | 123 | (2.2) | 211 | (1.2) | | 7.8% |  | 159 | (1.4) | 167 | (1.4) | 0.4% |
| Black or African American | 451 | (8.1) | 1,651 | (9.4) | | 4.6% |  | 1,013 | (8.9) | 1,054 | (9.1) | 0.9% |
| Hispanic or Latino | 91 | (1.6) | 324 | (1.9) | | 1.6% |  | 198 | (1.7) | 209 | (1.8) | 0.5% |
| Other | 85 | (1.5) | 230 | (1.3) | | 1.8% |  | 158 | (1.4) | 159 | (1.4) | 0.1% |
| Unknown | 600 | (10.8) | 1,916 | (11.0) | | 0.4% |  | 1,273 | (11.1) | 1,268 | (11.0) | 0.6% |
| **US Region, n (%)** |  |  |  |  | |  |  |  |  |  |  |  |
| Northeast | 1,102 | (19.9) | 3,896 | (22.3) | | 5.9% |  | 2,471 | (21.6) | 2,511 | (21.7) | 0.2% |
| South | 2,685 | (48.5) | 7,652 | (43.8) | | 9.4% |  | 5,018 | (43.9) | 5,193 | (44.8) | 1.9% |
| Midwest | 1,010 | (18.2) | 3,791 | (21.7) | | 8.7% |  | 2,378 | (20.8) | 2,416 | (20.9) | 0.2% |
| West | 742 | (13.4) | 2,133 | (12.2) | | 3.6% |  | 1,565 | (13.7) | 1,459 | (12.6) | 3.2% |
| Unknown | 1 | (0.0) | 5 | (0.0) | | 0.7% |  | 3 | (0.0) | 3 | (0.0) | 0.0% |
| **Clinical characteristics** |  |  |  |  | |  |  |  |  |  |  |  |
| **GLP-1 agent prescribed at index date3, n (%)** |  |  |  |  | |  |  |  |  |  |  |  |
| Albiglutide | - | - | 598 | | (3.4) | - |  | - | - | 440 | (3.8) | - |
| Dulaglutide | - | - | 1,326 | | (7.6) | - |  | - | - | 948 | (8.2) | - |
| Exenatide | - | - | 4,454 | | (25.5) | - |  | - | - | 2,938 | (25.4) | - |
| Liraglutide | - | - | 11,099 | | (63.5) | - |  | - | - | 7,256 | (62.6) | - |
| **Number of antihyperglycemic agents, mean ± SD [median]** | 2.5 ± | 1.3 [2.0] | 2.4 ± | 1.3 [2.0] | | 6.8% |  | 2.5 ± | 1.3 [2.0] | 2.4 ± | 1.3 [2.0] | 4.8% |
| **Number of antihyperglycemic agents, n (%)** |  |  |  |  | |  |  |  |  |  |  |  |
| 0 | 262 | (4.7) | 1,240 | (7.1) | | 10.0% |  | 610 | (5.3) | 801 | (6.9) | 6.6% |
| 1 | 999 | (18.0) | 3,180 | (18.2) | | 0.4% |  | 2,077 | (18.2) | 2,051 | (17.7) | 1.2% |
| 2 | 1,605 | (29.0) | 4,861 | (27.8) | | 2.6% |  | 3,233 | (28.3) | 3,218 | (27.8) | 1.1% |
| 3 | 1,542 | (27.8) | 4,846 | (27.7) | | 0.2% |  | 3,091 | (27.0) | 3,237 | (27.9) | 2.1% |
| 4 | 784 | (14.2) | 2,373 | (13.6) | | 1.7% |  | 1,683 | (14.7) | 1,607 | (13.9) | 2.4% |
| 5+ | 348 | (6.3) | 977 | (5.6) | | 2.9% |  | 742 | (6.5) | 669 | (5.8) | 3.0% |
| **Quan-Charlson comorbidity index, mean ± SD [median]** | 1.4 ± | 1.0 [1.0] | 1.5 ± | 1.1 [1.0] | | 6.2% |  | 1.4 ± | 1.1 [1.0] | 1.4 ± | 1.1 [1.0] | 1.4% |
| **DCSI, n (%)** |  |  |  |  | |  |  |  |  |  |  |  |
| 0 | 3,815 | (68.9) | 11,401 | (65.2) | | 7.7% |  | 7,700 | (67.3) | 7,606 | (65.7) | 3.5% |
| 1 | 1,027 | (18.5) | 3,322 | (19.0) | | 1.2% |  | 2,113 | (18.5) | 2,195 | (19.0) | 1.2% |
| 2 | 443 | (8.0) | 1,615 | (9.2) | | 4.4% |  | 1,007 | (8.8) | 1,058 | (9.1) | 1.1% |
| 3 | 169 | (3.1) | 699 | (4.0) | | 5.1% |  | 392 | (3.4) | 449 | (3.9) | 2.4% |
| 4 | 57 | (1.0) | 275 | (1.6) | | 4.8% |  | 158 | (1.4) | 172 | (1.5) | 0.9% |
| 5+ | 29 | (0.5) | 165 | (0.9) | | 4.9% |  | 66 | (0.6) | 101 | (0.9) | 3.5% |
| **DCSI main complications, N (%)** |  |  |  |  | |  |  |  |  |  |  |  |
| Neuropathy | 879 | (15.9) | 3,177 | (18.2) | | 6.2% |  | 1,933 | (16.9) | 2,057 | (17.8) | 2.3% |
| Cardiovascular complications | 745 | (13.4) | 2,510 | (14.4) | | 2.6% |  | 1,579 | (13.8) | 1,664 | (14.4) | 1.6% |
| Nephropathy | 250 | (4.5) | 1,155 | (6.6) | | 9.2% |  | 652 | (5.7) | 725 | (6.3) | 2.4% |
| Peripheral vascular disease | 125 | (2.3) | 446 | (2.6) | | 1.9% |  | 261 | (2.3) | 288 | (2.5) | 1.3% |
| Retinopathy | 74 | (1.3) | 257 | (1.5) | | 1.1% |  | 152 | (1.3) | 164 | (1.4) | 0.8% |
| Cerebrovascular complications | 149 | (2.7) | 551 | (3.2) | | 2.8% |  | 318 | (2.8) | 363 | (3.1) | 2.1% |
| Metabolic complications | 2 | (0.0) | 25 | (0.1) | | 3.6% |  | 5 | (0.0) | 17 | (0.1) | 3.3% |
| **Number of visits, mean ± SD [median]** | 6.0 ± | 4.9 [5.0] | 6.7 ± | 5.5 [5.0] | | 13.7% |  | 6.5 ± | 5.6 [5.0] | 6.5 ± | 5.3 [5.0] | 0.2% |
| **Number of patients with UTI, n (%)** | 289 | (5.2) | 1,226 | (7.0) | | 7.5% |  | 695 | (6.1) | 779 | (6.7) | 2.7% |
| **Number of patients with GMI, n (%)** | 99 | (1.8) | 510 | (2.9) | | 7.5% |  | 243 | (2.1) | 311 | (2.7) | 3.7% |
| **HbA1C** |  |  |  |  | |  |  |  |  |  |  |  |
| Number of patients with ≥1 measurement, n (%) | 5,540 | (100.0) | 17,477 | (100.0) | | - |  | 11,435 | (100.0) | 11,582 | (100.0) | - |
| Value, %, mean ± SD [median]2 | 8.5 ± | 1.7 [8.2] | 8.5 ± | 1.7 [8.2] | | 0.9% |  | 8.5 ± | 1.7 [8.2] | 8.5 ± | 1.7 [8.2] | 1.5% |
| Value, mmol/mol, mean ± SD [median]2 | 69 ± | 18.6 [66] | 69 ± | 18.6 [66] | | 0.9% |  | 69 ± | 18.6 [66] | 69 ± | 18.6 [66] | - |
| < 7.0% (53 mmol/mol), n (%) | 803 | (14.5) | 3,040 | (17.4) | | 7.9% |  | 1,814 | (15.9) | 1,923 | (16.6) | 2.0% |
| < 8.0% (64 mmol/mol), n (%) | 2,432 | (43.9) | 7,517 | (43.0) | | 1.8% |  | 4,876 | (42.6) | 4,990 | (43.1) | 0.9% |
| > 9.0% (75 mmol/mol), n (%) | 1,676 | (30.3) | 5,567 | (31.9) | | 3.5% |  | 3,698 | (32.3) | 3,657 | (31.6) | 1.6% |
| **Systolic BP** |  |  |  |  | |  |  |  |  |  |  |  |
| Number of patients with ≥1 measurement, n (%) | 5,509 | (99.4) | 17,359 | (99.3) | | 1.5% |  | 11,331 | (99.1) | 11,508 | (99.4) | 3.2% |
| Value, mmHg, mean ± SD [median]2 | 130.3 ± | 15.1 [130.0] | 130.4 ± | 15.2 [130.0] | | 0.5% |  | 130.1 ± | 15.1 [129.0] | 130.3 ± | 15.2 [130.0] | 1.2% |
| < 140 mmHg, n (%) | 4,130 | (75.0) | 12,897 | (74.3) | | 1.5% |  | 8,539 | (75.4) | 8,556 | (74.4) | 2.3% |
| **Diastolic BP** |  |  |  |  | |  |  |  |  |  |  |  |
| Number of patients with ≥1 measurement, n (%) | 5,509 | (99.4) | 17,359 | (99.3) | | 1.5% |  | 11,331 | (99.1) | 11,508 | (99.4) | 3.2% |
| Value, mmHg, mean ± SD [median]2 | 77.7 ± | 9.5 [78.0] | 77.7 ± | 9.6 [78.0] | | 0.1% |  | 77.6 ± | 9.6 [78.0] | 77.7 ± | 9.5 [78.0] | 0.5% |
| < 90 mmHg, n (%) | 4,895 | (88.9) | 15,436 | (88.9) | | 0.2% |  | 10,071 | (88.9) | 10,241 | (89.0) | 0.3% |
| **BMI** |  |  |  |  | |  |  |  |  |  |  |  |
| Number of patients with ≥1 measurement, n (%) | 5,460 | (98.6) | 17,012 | (97.3) | | 8.6% |  | 11,154 | (97.5) | 11,308 | (97.6) | 0.6% |
| Value, kg/m2, mean ± SD [median]2 | 34.6 ± | 6.1 [34.1] | 36.5 ± | 6.0 [36.3] | | 30.5% |  | 35.8 ± | 6.0 [35.6] | 36.1 ± | 6.1 [35.7] | 4.2% |
| < 25 kg/m2, n (%) | 250 | (4.6) | 362 | (2.1) | | 13.6% |  | 300 | (2.7) | 310 | (2.7) | 0.4% |
| < 30 kg/m2, n (%) | 1,337 | (24.5) | 2,615 | (15.4) | | 23.0% |  | 1,978 | (17.7) | 1,996 | (17.7) | 0.2% |
| 30 to < 35 kg/m2, n (%) | 1,686 | (30.9) | 4,683 | (27.5) | | 7.4% |  | 3,243 | (29.1) | 3,207 | (28.4) | 1.6% |
| ≥ 35 kg/m2, n (%) | 2,437 | (44.6) | 9,714 | (57.1) | | 25.1% |  | 5,933 | (53.2) | 6,104 | (54.0) | 1.6% |
| **eGFR** |  |  |  |  | |  |  |  |  |  |  |  |
| Number of patients with ≥1 measurement, n (%) | 3,438 | (62.1) | 10,365 | (59.3) | | 5.6% |  | 7,398 | (64.7) | 6,795 | (58.7) | 12.4% |
| Value, mL/min/1.73 m2, mean ± SD [median] | 89.3 ± | 22.1 [89.0] | 86.7 ± | 23.7 [86.0] | | 11.4% |  | 88.7 ± | 23.0 [87.5] | 86.8 ± | 23.4 [86.3] | 8.5% |
| > 60 ml/min/1.73m2, n (%) | 3,083 | (89.7) | 8,903 | (85.9) | | 11.6% |  | 6,557 | (88.6) | 5,848 | (86.1) | 7.8% |
| **LDL-C** |  |  |  |  | |  |  |  |  |  |  |  |
| Number of patients with ≥1 measurement, n (%) | 4,260 | (76.9) | 13,089 | (74.9) | | 4.7% |  | 8,831 | (77.2) | 8,666 | (74.8) | 5.6% |
| Value, mg/dL, mean ± SD [median]2 | 92.8 ± | 34.7 [87.6] | 92.6 ± | 34.4 [88.0] | | 0.5% |  | 93.6 ± | 35.1 [88.0] | 92.2 ± | 34.2 [88.0] | 4.0% |
| < 100 mg/dL | 2,720 | (63.8) | 8,373 | (64.0) | | 0.2% |  | 5,539 | (62.7) | 5,579 | (64.4) | 3.4% |
| **HDL-C** |  |  |  |  | |  |  |  |  |  |  |  |
| Number of patients with ≥1 measurement, n (%) | 4,301 | (77.6) | 13,128 | (75.1) | | 5.9% |  | 8,902 | (77.8) | 8,692 | (75.0) | 6.6% |
| Value, mg/dL, mean ± SD [median]2 | 42.6 ± | 11.7 [41.0] | 42.5 ± | 11.8 [41.0] | | 0.9% |  | 42.8 ± | 11.7 [41.0] | 42.4 ± | 11.8 [41.0] | 3.3% |
| > 50 mg/dL | 942 | (21.9) | 2,681 | (20.4) | | 3.6% |  | 1,961 | (22.0) | 1,750 | (20.1) | 4.6% |
| **Other antihyperglycemic agents5, n (%)** | 5,278 | (95.3) | 16,237 | (92.9) | | 10.0% |  | 10,825 | (94.7) | 10,781 | (93.1) | 6.6% |
| Biguanides | 4,647 | (83.9) | 13,975 | (80.0) | | 10.2% |  | 9,193 | (80.4) | 9,366 | (80.9) | 1.2% |
| Dipeptidyl peptidase-4 (DPP-4) inhibitors | 2,528 | (45.6) | 6,280 | (35.9) | | 19.8% |  | 4,615 | (40.4) | 4,453 | (38.5) | 3.9% |
| Sulfonylurea derivatives | 2,618 | (47.3) | 7,844 | (44.9) | | 4.8% |  | 5,233 | (45.8) | 5,269 | (45.5) | 0.5% |
| Thiazolidinediones | 752 | (13.6) | 2,089 | (12.0) | | 4.9% |  | 1,444 | (12.6) | 1,434 | (12.4) | 0.8% |
| Insulins | 1,428 | (25.8) | 6,131 | (35.1) | | 20.3% |  | 3,868 | (33.8) | 3,811 | (32.9) | 1.9% |
| Sodium-glucose co-transporter 2 (SGLT2) inhibitors | 381 | (6.9) | 650 | (3.7) | | 14.1% |  | 551 | (4.8) | 528 | (4.6) | 1.2% |
| Other antihyperglycemics6 | 173 | (3.1) | 534 | (3.1) | | 0.4% |  | 386 | (3.4) | 363 | (3.1) | 1.4% |
| **Antihyperlipidemic agent5, n (%)** | 3,977 | (71.8) | 12,499 | (71.5) | | 0.6% |  | 8,115 | (71.0) | 8,345 | (72.1) | 2.4% |
| HMG CoA reductase inhibitors | 3,653 | (65.9) | 11,554 | (66.1) | | 0.4% |  | 7,436 | (65.0) | 7,719 | (66.6) | 3.4% |
| Fibric acid derivatives | 764 | (13.8) | 2,267 | (13.0) | | 2.4% |  | 1,549 | (13.5) | 1,519 | (13.1) | 1.3% |
| Intestinal cholesterol absorption inhibitors | 276 | (5.0) | 868 | (5.0) | | 0.1% |  | 568 | (5.0) | 584 | (5.0) | 0.3% |
| Other antihyperlipidemics7 | 431 | (7.8) | 1,279 | (7.3) | | 1.7% |  | 993 | (8.7) | 856 | (7.4) | 4.8% |
| **Antihypertensive agents5, n (%)** | 4,388 | (79.2) | 13,983 | (80.0) | | 2.0% |  | 9,213 | (80.6) | 9,240 | (79.8) | 1.9% |
| ACE inhibitors | 2,690 | (48.6) | 8,713 | (49.9) | | 2.6% |  | 5,617 | (49.1) | 5,775 | (49.9) | 1.5% |
| Diuretics | 2,156 | (38.9) | 7,528 | (43.1) | | 8.5% |  | 4,885 | (42.7) | 4,882 | (42.2) | 1.1% |
| Beta blockers | 1,582 | (28.6) | 5,390 | (30.8) | | 5.0% |  | 3,396 | (29.7) | 3,527 | (30.5) | 1.6% |
| Angiotensin II receptor antagonists | 1,435 | (25.9) | 4,320 | (24.7) | | 2.7% |  | 3,041 | (26.6) | 2,857 | (24.7) | 4.4% |
| Calcium channel blockers | 1,172 | (21.2) | 3,786 | (21.7) | | 1.2% |  | 2,512 | (22.0) | 2,492 | (21.5) | 1.1% |
| Other Antihypertensive Agents8 | 250 | (4.5) | 991 | (5.7) | | 5.3% |  | 535 | (4.7) | 637 | (5.5) | 3.7% |
| CANA: canagliflozin 300mg; DCSI: Diabetes Complications Severity Index; GLPI-1: Glucagon-like peptide-1 receptor agonist; GMI: genital mycotic infection; UTI: urinary tract infection; SD: standard deviation. | | | | | | | | | | | | |
| **Notes:** | | | | | | | | | | |  |  |
| 1. Weighted populations were obtained using inverse probability of treatment weighting based on the propensity score of being treated with CANA. The propensity score was estimated using a multivariate logit regression and baseline covariates included age, gender, US region, race/ethnicity, Quan-Charlson comorbidity index, use of fixed-dose combination at index date, number of visits, closest HbA1c measurement to index date, closest BMI measurement to index date, obesity diagnosis, and quarter of the index date. The same patients are included in the weighted and unweighted populations. Even though the total number of patients in the study remains unchanged, the sum of weights assigned to patients within a cohort makes the effective number of patients different. | | | | | | | | | | | | |
| 2. Closest value from the index date. | | | | | | | | | | | | |
| 3. There may be more than one prescription at the index date; therefore, categories are not mutually exclusive. | | | | | | | | | | | | |
| 4. (n) is the number of values of eGFR that were used to estimate mean, median and SD. Values reported as >60 or <60 were used to estimate the number of patients with ≥1 measurement and the number of patients who attained the goal, but were not used to estimate the mean, median and SD. | | | | | | | | | | | | |
| 5. Does not include prescriptions occurring on the index date. | | | | | | | | | | | | |
| 6. Includes alpha-glucosidase inhibitors, aldose reductase inhibitors, amylin analog, dopamine receptor agonists, and meglitinide analogs. | | | | | | | | | | | | |
| 7. Includes bile acid sequestrants, nicotinic acid derivatives, microsomal triglyceride transfer protein (MTP) inhibitors and proprotein convertase subtilisin kexin 9 (PCSK9) inhibitors. | | | | | | | | | | | | |
| 8. Include antiadrenergic antihypertensives, vasodilators, direct renin inhibitors, selective aldosterone receptor antagonists and agents for pheochromocytoma. | | | | | | | | | | | | |