**Supplementary table 1 Change in fear of hypoglycemia in the DIAMOND trial**

|  |  |  |
| --- | --- | --- |
|  | **CGM group** | **Control group** |
| **Mean (SD) FoH (worry subscale of HFS-II)** |  |  |
| Baseline | 15.75 (12.30) | 17.30 (13.22) |
| Week 24 | 13.48 (10.63) | 17.73 (14.92) |
| **Model 1** |  |  |
| Mean (95% CI) difference between arms | 3.17 (0.19 to 6.14) |  |
| **Model 2** |  |  |
| Mean (95% CI) difference between arms | 2.46 (−0.58 to 5.51) |  |

Adapted from Polonsky et al. Diabetes Care. 2017;40(6):736–741

CGM, continuous glucose monitoring; CI, confidence interval; FoH, fear of hypoglycemia; HFS-II, Hypoglycemia Fear Survey II; SD, standard deviation

Model 1: From mixed linear regression models adjusted for baseline levels of the outcome and clinical site as a random effect.

Model 2: Further adjusted for the participant demographic factors of age, sex and number of years since diagnosis

**Supplementary table 2 Baseline cohort characteristics (overall T1D patient cohort)**

|  | **CGM group** | **Control group** | **Combined cohort** |  |
| --- | --- | --- | --- | --- |
| **Characteristic** | **Baseline value** | **Baseline value** | **Baseline value** | **Reference** |
| **Patient demographics** | N=105 | N=53 | N=158 |  |
| Mean age, years | 45.7 (13.6) | 51.4 (10.9) | 47.6 (12.7) | Beck et al. JAMA. 2017 24;317(4):371–8 |
| Duration of diabetes, years | 19.0 (13.1) | 23.0 (14.5) | 20.3 (13.6) | Beck et al. JAMA. 2017 24;317(4):371–8 |
| Proportion Male, % | 55 | 57 | 56 | Beck et al. JAMA. 2017 24;317(4):371–8 |
| **Risk factors** |  |  |  |  |
| HbA1c, mmol/mol | 70 | 70 | 70 | Beck et al. JAMA. 2017 24;317(4):371–8 |
| HbA1c, % | 8.6 (0.7) | 8.6 (0.6) | 8.6 (0.65) | Beck et al. JAMA. 2017 24;317(4):371–8 |
| Body mass index, kg/m2 | 27.9 (5.9) | 26.8 (4.6) | 27.5 (5.5) | Beck et al. JAMA. 2017 24;317(4):371–8 |
| Systolic blood pressure, mmHg |  |  | 122.4 (15.4) | Nathan et al. Diabetes Care. 2014;37(1):9–16 |
| Diastolic blood pressure, mmHg |  |  | 71.4 (9.0) | Nathan et al. Diabetes Care. 2014;37(1):9–16 |
| Total cholesterol, mg/dL |  |  | 174.8 (35.4) | Nathan et al. Diabetes Care. 2014;37(1):9–16 |
| High density lipoprotein cholesterol, mg/dL |  |  | 61.9 (19.4) | Nathan et al. Diabetes Care. 2014;37(1):9–16 |
| Low density lipoprotein cholesterol, mg/dL |  |  | 96.7 (29.2) | Nathan et al. Diabetes Care. 2014;37(1):9–16 |
| Triglycerides, mg/dL |  |  | 81 (50.6) | Nathan et al. Diabetes Care. 2014;37(1):9–16 |
| Heart rate, beats/min |  |  | 70 (12) | Nathan et al. N Engl J Med. 2005;353(25):2643–53 |
| Smoking status, % |  |  | 19% | NHS Digital Services 2015 |
| **Racial/ethnic group** |  |  |  |  |
| White European | 90% | 94% | 91% | Beck et al. JAMA. 2017 24;317(4):371–8 |
| African-American | 6% | 6% | 6% | Beck et al. JAMA. 2017 24;317(4):371–8 |
| Hispanic | 4% | 0% | 3% | Beck et al. JAMA. 2017 24;317(4):371–8 |
| **Cardiovascular disease** |  |  |  |  |
| Angina pectoris |  |  | 1.9% | Nathan et al. N Engl J Med. 2005;353(25):2643–53 |
| Myocardial infarction |  |  | 1.2% | Nathan et al. N Engl J Med. 2005;353(25):2643–53 |
| Congestive heart failure |  |  | 3.0% | Lind et al. Lancet 2011;378(9786):140–6 |
| Stroke |  |  | 0.17% | Nathan et al. N Engl J Med. 2005;353(25):2643–53 |
| Peripheral vascular disease |  |  | 20% | Elhadd et al. Pract Diabetes Int. 1999;16(6):163–6 |
| Atrial fibrillation |  |  | 2.0% | Dahqvist et al. Lancet Diabetes Endocrinol. 2017;5(10):799–807 |
| Left ventricular hypertrophy detected by ECG |  |  | 3.4% | Giunti et al. Diabetes Care. 2005;28(9):2255–7 |
| **Renal disease** |  |  |  |  |
| Microalbuminuria |  |  | 6.8% | EDIC study group. JAMA. 2003;290(16):2159–67 |
| Gross proteinuria |  |  | 1.4% | EDIC study group. JAMA. 2003;290(16):2159–67 |
| eGFR (mL/min/1.73 m2) |  |  | 93.3 (18.1) | Nathan et al. Diabetes Care. 2014;37(1):9–16 |
| End-stage renal disease |  |  | 1.3% | Nathan et al. Diabetes Care. 2014;37(1):9–16; de Boer et al. Diabetes Care. 2014;37(1):24–30 |
| **Retinopathy** |  |  |  |  |
| Background diabetic retinopathy |  |  | 36.9% | Nathan et al. Diabetes Care. 2014;37(1):9–16 |
| Proliferative diabetic retinopathy |  |  | 14.7% | Nathan et al. Diabetes Care. 2014;37(1):9–16 |
| **Foot ulcer complications** |  |  |  |  |
| Peripheral neuropathy |  |  | 23.6% | Nathan et al. Diabetes Care. 2014;37(1):9–16 |
| Uninfected ulcer |  |  | 4.5% | Rasmussen et al. Diabetes Res Clin Pract. 2017;130:221–8 |
| Infected ulcer |  |  | 9.1% | Lavery et al. Diabetes Care. 2006 Jun;29(6):1288–93 |
| Healed ulcer |  |  | 10.4% | Iversen et al. The University of Bergen; 2010 |
| Amputation |  |  | 1.5% | Jonasson et al. Diabetes Care. 2008;31(8):1536–40 |
| **Other eye complications** |  |  |  |  |
| Macular edema |  |  | 17% | Lachin et al. Diabetes. 2015;64(2):631–42 |
| Cataract |  |  | 8.3% | Klein et al. Am J Ophthalmol. 1995;119(3):295–300 |
| **Patient management of type 1 diabetes** |  |  |  |  |
| Taking ACE-I/ARB: primary prevention |  |  | 21.3% | EUROASPIRE II Study Group Eur Heart J. 2001;22(7):554–72 |
| Taking ACE-I/ARB: secondary prevention |  |  | 75.7% | EUROASPIRE II Study Group Eur Heart J. 2001;22(7):554–72 |
| Taking statins: primary prevention |  |  | 47.4% | EUROASPIRE II Study Group Eur Heart J. 2001;22(7):554–72 |
| Taking statins: secondary prevention |  |  | 84.1% | EUROASPIRE II Study Group Eur Heart J. 2001;22(7):554–72 |
| Taking aspirin: primary prevention |  |  | 59.0% | EUROASPIRE II Study Group Eur Heart J. 2001;22(7):554–72 |
| Taking aspirin: secondary prevention |  |  | 88.7% | EUROASPIRE II Study Group Eur Heart J. 2001;22(7):554–72 |
| Screened for retinopathy (assumed to be treated with LASER if detected) |  |  | 63% | Wilson et al. Diabet Med J Br Diabet Assoc. 2004;21(3):271–8 |
| Screened for renal disease (assumed to be treated with ACE-I or ARB if detected) |  |  | 100% | NICE NG17 2015 |
| Screened for diabetic foot disease |  |  | 100% | NICE NG19 2015 |

Values presented are mean (standard deviation) unless otherwise stated

ACE I, angiotensin converting enzyme inhibitors; ARB, angiotensin receptor blocker; CGM, continuous glucose monitoring, ECG, electrocardiogram; EDIC, Epidemiology of Diabetes Interventions and Complications; eGFR, estimated glomerular filtration rate; HbA1c, glycated hemoglobin; NICE, National Institute for Health and Care Excellence; T1D, type 1 diabetes

**Supplementary table 3 Baseline cohort characteristics (patients with T1D with HbA1c ≥8.5% at baseline)**

|  | **CGM group** | **Control group** | **Combined cohort** |  |
| --- | --- | --- | --- | --- |
| **Characteristic** | **Baseline value** | **Baseline value** | **Baseline value** | **Reference** |
| **Patient demographics** | N=59 | N=30 | N=87 |  |
| Mean age, years | 44 (14) | 50 (10) | 46 (13) | Dexcom, data on file |
| Duration of diabetes, years | 18 (13) | 24 (15) | 20 (14) | Dexcom, data on file |
| Proportion male, % | 57 | 45 | 49 | Dexcom, data on file |
| **Risk Factors** |  |  |  |  |
| HbA1c, mmol/mol | 76.4 (4.6) | 75.3 (4.3) | 76.0 (4.5) | Dexcom, data on file |
| HbA1c, % | 9.1 (0.4) | 9.0 (0.4) | 9.1 (0.4) | Dexcom, data on file |
| Body mass index, kg/m2 | 27 | 26 (4) | 26 (4) | Dexcom, data on file |
| Systolic blood pressure, mmHg |  |  | 122.4 (15.4) | Nathan et al. Diabetes Care. 2014;37(1):9–16 |
| Diastolic blood pressure, mmHg |  |  | 71.4 (9.0) | Nathan et al. Diabetes Care. 2014;37(1):9–16 |
| Total cholesterol, mg/dL |  |  | 174.8 (35.4) | Nathan et al. Diabetes Care. 2014;37(1):9–16 |
| High density lipoprotein cholesterol, mg/dL |  |  | 61.9 (19.4) | Nathan et al. Diabetes Care. 2014;37(1):9–16 |
| Low density lipoprotein cholesterol, mg/dL |  |  | 96.7 (29.2) | Nathan et al. Diabetes Care. 2014;37(1):9–16 |
| Triglycerides, mg/dL |  |  | 81 (50.6) | Nathan et al. Diabetes Care. 2014;37(1):9–16 |
| Heart rate, beats/min |  |  | 70 (12) | Nathan et al. N Engl J Med. 2005;353(25):2643–53 |
| Smoking status, % |  |  | 19% | NHS Digital Services 2015 |
| **Racial/ethnic group** |  |  |  |  |
| White European | 86% | 83% | 86% | Dexcom, data on file |
| African-American | 5% | 10% | 8% | Dexcom, data on file |
| Hispanic | 5% | 7% | 6% | Dexcom, data on file |
| **Cardiovascular disease** |  |  |  |  |
| Angina pectoris |  |  | 1.9% | Nathan et al. N Engl J Med. 2005;353(25):2643–53 |
| Myocardial infarction |  |  | 1.2% | Nathan et al. N Engl J Med. 2005;353(25):2643–53 |
| Congestive heart failure |  |  | 3.0% | Lind et al. Lancet. 2011;378(9786):140–6 |
| Stroke |  |  | 0.17% | Nathan et al. N Engl J Med. 2005;353(25):2643–53 |
| Peripheral vascular disease |  |  | 20% | Elhadd et al. Pract Diabetes Int. 1999;16(6):163–6 |
| Atrial fibrillation |  |  | 2.0% | Dahlqvist et al. Lancet Diabetes Endocrinol. 2017;5(10):799–807 |
| Left ventricular hypertrophy, detected by ECG |  |  | 3.4% | Giunti et al. Diabetes Care. 2005;28(9):2255–7 |
| **Renal disease** |  |  |  |  |
| Microalbuminuria |  |  | 6.8% | EDIC Study Group. JAMA. 2003;290(16):2159–67 |
| Gross proteinuria |  |  | 1.4% | EDIC Study Group. JAMA. 2003;290(16):2159–67 |
| eGFR (mL/min/1.73 m2) |  |  | 93.3 (18.1) | Nathan et al. Diabetes Care. 2014;37(1):9–16 |
| End-stage renal disease |  |  | 1.3% | Nathan et al. Diabetes Care. 2014;37(1):9–16; de Boer et al. Diabetes Care. 2014;37(1):24–30 |
| **Retinopathy** |  |  |  |  |
| Background diabetic retinopathy |  |  | 36.9% | Nathan et al. Diabetes Care. 2014;37(1):9–16 |
| Proliferative diabetic retinopathy |  |  | 14.7% | Nathan et al. Diabetes Care. 2014;37(1):9–16 |
| **Foot ulcer complications** |  |  |  |  |
| Peripheral neuropathy |  |  | 23.6% | Nathan et al. Diabetes Care. 2014;37(1):9–16 |
| Uninfected ulcer |  |  | 4.5% | Rasmussen et al. Diabetes Res Clin Pract. 2017;130:221–8 |
| Infected ulcer |  |  | 9.1% | Lavery et al. Diabetes Care. 2006 Jun;29(6):1288–93 |
| Healed ulcer |  |  | 10.4% | Iversen et al. The University of Bergen; 2010 |
| Amputation |  |  | 1.5% | Jonasson et al. Diabetes Care. 2008;31(8):1536–40 |
| **Other eye complications** |  |  |  |  |
| Macular edema |  |  | 17% | Lachin et al. Diabetes. 2015;64(2):631–42 |
| Cataract |  |  | 8.3% | Klein et al. Am J Ophthalmol. 1995;119(3):295–300 |
| **Patient management of type 1 diabetes** |  |  |  |  |
| Taking ACE-I/ARB: primary prevention |  |  | 21.3% | EUROASPIRE II Study Group Eur Heart J. 2001;22(7):554–72 |
| Taking ACE-I/ARB: secondary prevention |  |  | 75.7% | EUROASPIRE II Study Group Eur Heart J. 2001;22(7):554–72 |
| Taking statins: primary prevention |  |  | 47.4% | EUROASPIRE II Study Group Eur Heart J. 2001;22(7):554–72 |
| Taking statins: secondary prevention |  |  | 84.1% | EUROASPIRE II Study Group Eur Heart J. 2001;22(7):554–72 |
| Taking aspirin: primary prevention |  |  | 59.0% | EUROASPIRE II Study Group Eur Heart J. 2001;22(7):554–72 |
| Taking aspirin: secondary prevention |  |  | 88.7% | EUROASPIRE II Study Group Eur Heart J. 2001;22(7):554–72 |
| Screened for retinopathy (assumed to be treated with LASER if detected) |  |  | 63% | Wilson et al. Diabet Med J Br Diabet Assoc. 2004;21(3):271–8 |
| Screened for renal disease (assumed to be treated with ACE-I or ARB if detected) |  |  | 100% | NICE NG17 2015 |
| Screened for diabetic foot disease |  |  | 100% | NICE NG19 2015 |

Values presented are mean (standard deviation) unless otherwise stated

ACE I, angiotensin converting enzyme inhibitors; ARB, angiotensin receptor blocker; CGM, continuous glucose monitoring, ECG, electrocardiogram; EDIC, Epidemiology of Diabetes Interventions and Complications; eGFR, estimated glomerular filtration rate; HbA1c, glycated hemoglobin; NICE, National Institute for Health and Care Excellence; T1D, type 1 diabetes

**Supplementary table 4 Health state utility values**

|  |  |  |
| --- | --- | --- |
| **Event/state** | **Utility/disutility** | **Reference** |
| Type 1 diabetes, no complications | 0.90 (0.11) | Polonsky et al. Diabetes Care. 2017;40(6):736–41 |
| Angina disutility, year of event | −0.09 (0.01) | Beaudet et al. Value Health. 2014;17(4):462–70 |
| Congestive heart failure disutility, year of event | −0.108 (0.01) | Beaudet et al. Value Health. 2014;17(4):462–70 |
| Myocardial infarction disutility, year of event | −0.055 (0.01) | Beaudet et al. Value Health. 2014;17(4):462–70 |
| Stroke disutility, year of event | −0.164 (0.01) | Beaudet et al. Value Health. 2014;17(4):462–70 |
| Peripheral vascular disease disutility, year of event | −0.061 (0.01) | Beaudet et al. Value Health. 2014;17(4):462–70 |
| Gross proteinuria disutility, year of event | −0.048 (0.01) | Beaudet et al. Value Health. 2014;17(4):462–70 |
| Hemodialysis disutility, year of event | −0.164 (0.03) | Beaudet et al. Value Health. 2014;17(4):462–70 |
| Peritoneal dialysis disutility, year of event | −0.204 (0.03) | Beaudet et al. Value Health. 2014;17(4):462–70 |
| Kidney transplant disutility, year of event | −0.023 (0.12) | Beaudet et al. Value Health. 2014;17(4):462–70 |
| Background diabetic retinopathy disutility, year of event | −0.04 (0.02) | Beaudet et al. Value Health. 2014;17(4):462–70 |
| Proliferative diabetic retinopathy disutility, year of event | −0.07 (0.02) | Beaudet et al. Value Health. 2014;17(4):462–70 |
| Cataract disutility, year of event | −0.016 (0.02) | Beaudet et al. Value Health. 2014;17(4):462–70 |
| Macular edema disutility, year of event | −0.04 (0.02) | Beaudet et al. Value Health. 2014;17(4):462–70 |
| Severe vision loss/blindness disutility, year of event | −0.074 (0.01) | Beaudet et al. Value Health. 2014;17(4):462–70 |
| Neuropathy disutility, year of event | −0.084 (0.01) | Beaudet et al. Value Health. 2014;17(4):462–70 |
| Active foot ulcer disutility, year of event | −0.17 (0.01) | Beaudet et al. Value Health. 2014;17(4):462–70 |
| Amputation disutility, year of event | −0.28 (0.01) | Beaudet et al. Value Health. 2014;17(4):462–70 |
| Diurnal non-severe hypoglycemia event (NSHE) disutility | −0.004 (0.003) | Evans et al. Health Qual Life Outcomes. 2013;11:90 |
| Nocturnal non-severe hypoglycemia event (NSHE) disutility | −0.008 (0.003) | Evans et al. Health Qual Life Outcomes. 2013;11:90 |
| Diurnal severe hypoglycemia event (SHE1 and SHE2) requiring any 3rd party medical assistance | −0.047 (0.014) | Evans et al. Health Qual Life Outcomes. 2013;11:90 |
| Nocturnal severe hypoglycemia event (SHE1 and SHE2) requiring any 3rd party medical assistance | −0.051 (0.014) | Evans et al. Health Qual Life Outcomes. 2013;11:90 |
| Reduced FoH utility with RT-CGM | 0.02536 | Polonsky et al. Diabetes Care. 2017 Jun;40(6):736-741, Currie et al. Curr Med Res Opin. 2006 Aug;22(8):1523-34. |
| Utility benefit with no fingerstick testing | 0.03 | Matza et al. [Value Health.](https://www.ncbi.nlm.nih.gov/pubmed/?term=Health+State+Utilities+Associated+with+Glucose+Monitoring+Devices) 2017 Mar;20(3):507-511. |

FoH, fear of hypoglycemia; NSHE, non-severe hypoglycemic event; RT-CGM, real-time continuous glucose monitoring; SHE, severe hypoglycemic event

**Supplementary table 5 Cost of diabetes-related complications**

|  |  |  |
| --- | --- | --- |
| **Complication** | **Cost, GBP** | **Reference** |
| Myocardial infarction, year of event | 7,757 | Walker et al. Eur Heart J Qual Care Clin Outcomes. 2016 Apr;2(2):125–40 |
| Myocardial infarction, each subsequent year | 2,010 | Walker et al. Eur Heart J Qual Care Clin Outcomes. 2016 Apr;2(2):125–40 |
| Angina, year of onset | 2,946 | Beaudet et al. J Med Econ. 2011;14(3):357–66 |
| Angina, each subsequent year | 973 | Beaudet et al. J Med Econ. 2011;14(3):357–66 |
| Congestive heart failure, year of onset | 3,191 | Alva et al. Diabet Med J Br Diabet Assoc. 2015 Apr;32(4):459–66 |
| Congestive heart failure, each subsequent year | 1,473 | Alva et al. Diabet Med J Br Diabet Assoc. 2015 Apr;32(4):459–66 |
| Stroke, year of event | 23,610 | Xu et al. Eur Stroke J. 2018 Mar;3(1):82–91 |
| Stroke, each subsequent year | 5,903 | Xu et al. Eur Stroke J. 2018 Mar;3(1):82–91 |
| Stroke death within 30 days | 3,954 | Alva et al. Diabet Med J Br Diabet Assoc. 2015 Apr;32(4):459–66 |
| Peripheral vascular disease each year | 1,691 | Beaudet et al. J Med Econ. 2011;14(3):357–66 |
| Haemodialysis each year | 37,365 | Beaudet et al. J Med Econ. 2011;14(3):357–66 |
| Peritoneal dialysis each year | 20,549 | Beaudet et al. J Med Econ. 2011;14(3):357–66 |
| Renal transplant, year of event | 22,080 | Beaudet et al. J Med Econ. 2011;14(3):357–66 |
| Renal transplant, each subsequent year | 7,176 | Beaudet et al. J Med Econ. 2011;14(3):357–66 |
| LASER Treatment | 137 | National tariff. Available at: https://www.gov.uk/government/publications/national-tariff-payment-system-2014-to-2015 |
| Severe vision loss/blindness each year | 6,066 | Meads et al. Br J Ophthalmol. 2003 Oct;87(10):1201–4 |
| Cataract extraction | 2,366 | Beaudet et al. J Med Econ. 2011;14(3):357–66 |
| Cataract treatment each subsequent year | 400 | Beaudet et al. J Med Econ. 2011;14(3):357–66 |
| Neuropathy each year | 348 | MIMS. Available at: Available from: https://www.mims.co.uk/drugs/pain/pain-fever/duloxetine |
| Standard uninfected ulcer | 792 | Kerr et al. Diabet Med J Br Diabet Assoc. 2014 Dec;31(12):1498–504  Zimny et al. Diabetes Care. 2003 Mar;26(3):959–60 |
| Infected foot ulcer | 2,625 | Kerr et al. Diabet Med J Br Diabet Assoc. 2014 Dec;31(12):1498–504 |
| Gangrene treatment | 3,577 | Ghatnekar et al. J Wound Care. 2002  Feb;11(2):70-4 |
| Healed ulcer with/without a history of amputation | 173 | Ghatnekar et al. J Wound Care. 2002  Feb;11(2):70-4 |
| Amputation, year of event | 4,606 | Beaudet et al. J Med Econ. 2011;14(3):357–66 |
| Amputation, prosthesis | 1,748 | Beaudet et al. J Med Econ. 2011;14(3):357–66 |
| Severe hypoglycemic event, not requiring medical assistance (SHE1) | 4 | Evans et al. Diabetes Obes Metab. 2014 Apr;16(4):366–75 |
| Severe hypoglycemic event requiring medical assistance (SHE2) | 1,380 | Evans et al. Diabetes Obes Metab. 2014 Apr;16(4):366–75 |

MIMS, monthly index of medical specialties; SHE, severe hypoglycemic event

**Supplementary table 6 Annual intervention costs**

|  |  |  |  |
| --- | --- | --- | --- |
| **Item** | **Unit cost, GBP** | **Units** | **Net cost, 2018 GBP** |
| **RT-CGMa** |  |  |  |
| 1. Receiver | 290 | 1 |  |
| a. 13% patients require a receiver | 290 x 0.13 |  | 37.70 |
| 2. Sensor (replaced every 10 days) | 51.25 | 36 | 1,845 |
| 3. Transmitter (replaced every 3 months) | 200 | 4 | 800 |
| 4. SMBG strips required for RT-CGM calibration | 0.2897 | 55 | 15.93 |
| Sub-total |  |  | 2,698.63 |
| 5. RT-CGM utilization required to achieve HbA1c results in DIAMOND trial: 93% |  |  |  |
| **Total adjusted annual cost per patient using RT-CGM** |  |  | **2,509.73** |
| **SMBGb** |  |  |  |
| Single use lancets and blood glucose test strips, based on testing frequency of 4.6 tests per day | 0.2897 | 1,679 | 486.41 |
| **Total annual cost per patient for SMBG** |  |  | **486.41** |

aData sourced from manufacturer

bData sourced from Beck et al. JAMA. 2017 24;317(4):371–8, NICE guidance NG17 and The East of England Priorities Advisory Committee, FreeStyle Libre® Glucose Monitoring System 1.0, in Guidance Statement. 2017, PrescQIPP

**Supplementary table 7 Cumulative incidence of diabetes-related complications, overall T1D patient cohort**

|  |  |  |
| --- | --- | --- |
| **Complication** | **Cumulative incidence RT-CGM arm, %** | **Cumulative incidence SMBG arm, %** |
| **Eye disease** |  |  |
| Background diabetic retinopathy | 70.04 | 79.60 |
| Proliferative diabetic retinopathy | 35.18 | 46.19 |
| Macula edema | 45.30 | 56.87 |
| Severe vision loss | 46.54 | 52.49 |
| Cataract | 20.10 | 19.78 |
| **Renal disease** |  |  |
| Microalbuminuria | 45.61 | 57.52 |
| Gross proteinuria | 27.38 | 36.25 |
| End-stage renal disease | 10.48 | 13.97 |
| **Ulcer/amputation** |  |  |
| Ulcer | 36.85 | 41.45 |
| Amputation | 39.90 | 42.51 |
| Neuropathy | 56.97 | 65.70 |
| **Cardiovascular disease** |  |  |
| Congestive heart failure | 7.18 | 7.57 |
| Peripheral vascular disease | 21.52 | 23.41 |
| Angina | 8.00 | 8.44 |
| Stroke event | 3.79 | 3.95 |
| Myocardial infarction event | 8.52 | 8.98 |
| **Adverse events (events per patient)** |  |  |
| Non-severe hypoglycemia | 1,880 | 3,472 |
| Severe hypoglycemia requiring medical assistance | 1.36 | 3.87 |

RT-CGM, real time continuous glucose monitoring; SMBG, self-monitoring of blood glucose; T1D, type 1 diabetes

**Supplementary table 8 Cumulative incidence of diabetes-related complications, patients with T1D with HbA1c ≥8.5% at baseline**

|  |  |  |
| --- | --- | --- |
| **Complication** | **Cumulative incidence RT-CGM arm, %** | **Cumulative incidence SMBG arm, %** |
| **Eye disease** |  |  |
| Background diabetic retinopathy | 75.58 | 86.96 |
| Proliferative diabetic retinopathy | 39.72 | 55.34 |
| Macula edema | 50.75 | 66.85 |
| Severe vision loss | 50.14 | 58.52 |
| Cataract | 21.48 | 20.99 |
| **Renal disease** |  |  |
| Microalbuminuria | 51.12 | 67.79 |
| Gross proteinuria | 31.05 | 44.41 |
| End-stage renal disease | 11.90 | 17.39 |
| **Ulcer/amputation** |  |  |
| Ulcer | 39.45 | 45.84 |
| Amputation | 42.03 | 45.82 |
| Neuropathy | 61.46 | 73.16 |
| **Cardiovascular disease** |  |  |
| Congestive heart failure | 6.47 | 6.86 |
| Peripheral vascular disease | 22.06 | 24.66 |
| Angina | 8.04 | 8.62 |
| Stroke event | 3.50 | 3.74 |
| Myocardial infarction event | 7.96 | 8.50 |
| **Adverse events (events per patient)** |  |  |
| Non-severe hypoglycemia | 3,283 | 4,397 |
| Severe hypoglycemia requiring medical assistance | 1.27 | 0 |

HbA1c, glycated hemoglobin; RT-CGM, real-time continuous glucose monitoring; SMBG, self-monitoring of blood glucose; T1D, type 1 diabetes