

Trial record **1 of 1** for: 28431754DIA3012[Previous Study](#) | [Return to List](#) | [Next Study](#)**The CANTATA-MP Trial (CANagliflozin Treatment and Trial Analysis - Metformin and Pioglitazone)****This study has been completed.****Sponsor:**

Janssen Research & Development, LLC

Information provided by (Responsible Party):

Janssen Research & Development, LLC

ClinicalTrials.gov Identifier:

NCT01106690

First received: April 1, 2010

Last updated: June 26, 2013

Last verified: June 2013

[History of Changes](#)[Full Text View](#)[Tabular View](#)[Study Results](#)[Disclaimer](#)[How to Read a Study Record](#)

Results First Received: April 2, 2013

| | |
|-----------------------|---|
| Study Type: | Interventional |
| Study Design: | Allocation: Randomized; Endpoint Classification: Safety/Efficacy Study; Intervention Model: Parallel Assignment; Masking: Double Blind (Subject, Caregiver, Investigator); Primary Purpose: Treatment |
| Condition: | Diabetes Mellitus, Type 2 |
| Interventions: | Drug: Placebo Drug: Canagliflozin Drug: Sitagliptin Drug: Metformin Drug: Pioglitazone |

▶ Participant Flow [Hide Participant Flow](#)**Recruitment Details****Key information relevant to the recruitment process for the overall study, such as dates of the recruitment period and locations**

This study evaluated the efficacy and safety of canagliflozin in patients with type 2 diabetes mellitus with inadequate control despite treatment with metformin and pioglitazone. The study was conducted between 13 April 2010 and 20 November 2011 and recruited patients from 74 study centers in 11 countries worldwide.

Pre-Assignment Details**Significant events and approaches for the overall study following participant enrollment, but prior to group assignment**

344 patients were randomly allocated to the 3 treatment arms. 342 patients received at least 1 dose of study drug and were included in the modified intent-to-treat (mITT) analysis set (used for the Week 26 efficacy analysis) and safety analysis set (used for the Week 26 and Week 52 safety analyses).

Reporting Groups

| | Description |
|----------------------------|--|
| Placebo/Sitagliptin | Each patient received matching placebo once daily for 26 weeks with stable doses of metformin and pioglitazone. At Week 26, patients were switched from placebo to 100 mg of sitagliptin once daily with stable doses of metformin and pioglitazone until Week 52. |

| | |
|-----------------------------|--|
| Canagliflozin 100 mg | Each patient received 100 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. |
| Canagliflozin 300 mg | Each patient received 300 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. |

Participant Flow for 2 periods**Period 1: Core Period: Baseline to Week 26**

| | Placebo/Sitagliptin | Canagliflozin 100 mg | Canagliflozin 300 mg |
|--|---------------------|----------------------|----------------------|
| STARTED | 115 | 113 | 114 |
| COMPLETED | 91 | 104 | 101 |
| NOT COMPLETED | 24 | 9 | 13 |
| Adverse Event | 6 | 1 | 4 |
| Lost to Follow-up | 1 | 1 | 2 |
| Protocol Violation | 1 | 0 | 0 |
| Withdrawal by Subject | 4 | 1 | 0 |
| Creatinine or eGFR withdrawal criteria | 0 | 3 | 1 |
| Noncompliance with study drug | 0 | 1 | 0 |
| Unable to take rescue therapy | 1 | 0 | 0 |
| Lack of efficacy on rescue therapy | 1 | 0 | 0 |
| Not specified | 10 | 2 | 6 |

Period 2: Extension Period: Week 26 to Week 52

| | Placebo/Sitagliptin | Canagliflozin 100 mg | Canagliflozin 300 mg |
|-------------------------------|---------------------|----------------------|----------------------|
| STARTED | 90 [1] | 103 [1] | 96 [2] |
| COMPLETED | 78 | 96 | 89 |
| NOT COMPLETED | 12 | 7 | 7 |
| Adverse Event | 1 | 1 | 0 |
| Withdrawal by Subject | 1 | 0 | 0 |
| Physician Decision | 0 | 2 | 2 |
| Noncompliance with study drug | 0 | 0 | 1 |
| Unable to take rescue therapy | 1 | 1 | 0 |
| Not specified | 8 | 3 | 4 |
| Lost to Follow-up | 1 | 0 | 0 |

[1] 1 pt completed core but did not enter ext: physician decision(1).

[2] 5 pts completed core but did not enter ext: lost to f/u(1), not spec(2), AE(1), eGFR criteria(1).

Baseline Characteristics Hide Baseline Characteristics**Population Description**

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.

No text entered.

Reporting Groups

| | Description |
|-----------------------------|--|
| Placebo/Sitagliptin | Each patient received matching placebo once daily for 26 weeks with stable doses of metformin and pioglitazone. At Week 26, patients were switched from placebo to 100 mg of sitagliptin once daily with stable doses of metformin and pioglitazone until Week 52. |
| Canagliflozin 100 mg | Each patient received 100 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. |
| Canagliflozin 300 mg | Each patient received 300 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. |
| Total | Total of all reporting groups |

Baseline Measures

| | Placebo/Sitagliptin | Canagliflozin 100 mg | Canagliflozin 300 mg | Total |
|---|---------------------|----------------------|----------------------|---------------------|
| Number of Participants [units: participants] | 115 | 113 | 114 | 342 |
| Age [units: participants] | | | | |
| <=18 years | 0 | 0 | 0 | 0 |
| Between 18 and 65 years | 83 | 83 | 83 | 249 |
| >=65 years | 32 | 30 | 31 | 93 |
| Age [units: years] Mean (Standard Deviation) | 58.3 (9.56) | 56.7 (10.36) | 57 (10.19) | 57.4 (10.03) |
| Gender [units: participants] | | | | |
| Female | 39 | 36 | 51 | 126 |
| Male | 76 | 77 | 63 | 216 |
| Region of Enrollment [units: participants] | | | | |
| CANADA | 24 | 22 | 21 | 67 |
| FINLAND | 7 | 3 | 3 | 13 |
| FRANCE | 1 | 0 | 1 | 2 |
| GERMANY | 7 | 5 | 7 | 19 |
| GREECE | 0 | 0 | 1 | 1 |
| INDIA | 10 | 10 | 5 | 25 |
| MEXICO | 7 | 3 | 11 | 21 |
| SPAIN | 8 | 5 | 2 | 15 |
| THAILAND | 5 | 8 | 4 | 17 |
| UNITED KINGDOM | 3 | 2 | 3 | 8 |
| UNITED STATES | 43 | 55 | 56 | 154 |

Outcome Measures
 [Hide All Outcome Measures](#)

1. Primary: Change in HbA1c From Baseline to Week 26 [Time Frame: Day 1 (Baseline) and Week 26]

| | |
|----------------------------|--|
| Measure Type | Primary |
| Measure Title | Change in HbA1c From Baseline to Week 26 |
| Measure Description | The table below shows the least-squares (LS) mean change in HbA1c from Baseline to Week 26 for each treatment group. The statistical analyses show the treatment differences (ie, each canagliflozin group minus placebo) in the LS mean change. |
| Time Frame | Day 1 (Baseline) and Week 26 |
| Safety Issue | No |

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.

Analysis used mITT analysis set (all randomized patients who received at least 1 dose of study drug). Last-observation-carried-forward method used for missing Week 26 values. Measurements taken pre-rescue used as last observation in patients receiving glycemic rescue therapy. Table includes only patients with both baseline and post baseline values.

Reporting Groups

| | Description |
|-----------------------------|--|
| Placebo/Sitagliptin | Each patient received matching placebo once daily for 26 weeks with stable doses of metformin and pioglitazone. At Week 26, patients were switched from placebo to 100 mg of sitagliptin once daily with stable doses of metformin and pioglitazone until Week 52. |
| Canagliflozin 100 mg | Each patient received 100 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. |
| Canagliflozin 300 mg | Each patient received 300 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. |

Measured Values

| | Placebo/Sitagliptin | Canagliflozin 100 mg | Canagliflozin 300 mg |
|--|---------------------|----------------------|----------------------|
| Number of Participants Analyzed [units: participants] | 114 | 113 | 112 |
| Change in HbA1c From Baseline to Week 26 [units: Percent] Least Squares Mean (Standard Error) | -0.26 (0.069) | -0.89 (0.069) | -1.03 (0.070) |

Statistical Analysis 1 for Change in HbA1c From Baseline to Week 26

| | |
|--|--|
| Groups [1] | Placebo/Sitagliptin vs. Canagliflozin 100 mg |
| Method [2] | ANCOVA |
| P Value [3] | <0.001 |
| Least-Squares Mean Difference [4] | -0.62 |
| Standard Error of the mean | (0.095) |
| 95% Confidence Interval | -0.811 to -0.437 |

[1] Additional details about the analysis, such as null hypothesis and power calculation:

No text entered.

[2] Other relevant method information, such as adjustments or degrees of freedom:

No text entered.

[3] Additional information, such as whether or not the p-value is adjusted for multiple comparisons and the a priori threshold for statistical significance:

| | |
|------------|--|
| | No text entered. |
| [4] | Other relevant estimation information: |
| | No text entered. |

Statistical Analysis 2 for Change in HbA1c From Baseline to Week 26

| | |
|--|--|
| Groups [1] | Placebo/Sitagliptin vs. Canagliflozin 300 mg |
| Method [2] | ANCOVA |
| P Value [3] | <0.001 |
| Least-Squares Mean Difference [4] | -0.76 |
| Standard Error of the mean | (0.096) |
| 95% Confidence Interval | -0.951 to -0.575 |

| | |
|------------|--|
| [1] | Additional details about the analysis, such as null hypothesis and power calculation: |
| | No text entered. |
| [2] | Other relevant method information, such as adjustments or degrees of freedom: |
| | No text entered. |
| [3] | Additional information, such as whether or not the p-value is adjusted for multiple comparisons and the a priori threshold for statistical significance: |
| | No text entered. |
| [4] | Other relevant estimation information: |
| | No text entered. |

2. Secondary: Percentage of Patients With HbA1c <7% at Week 26 [Time Frame: Week 26]

| | |
|----------------------------|--|
| Measure Type | Secondary |
| Measure Title | Percentage of Patients With HbA1c <7% at Week 26 |
| Measure Description | The table below shows the percentage of patients with HbA1c<7% at Week 26 in each treatment group. The statistical analyses show the treatment differences (ie, each canagliflozin group minus placebo) in the percentage. |
| Time Frame | Week 26 |
| Safety Issue | No |

Population Description

| |
|--|
| Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate. |
| Analysis used mITT analysis set (all randomized patients who received at least 1 dose of study drug). Last-observation-carried-forward method used for missing Week 26 values. Measurements taken pre-rescue used as last observation in patients receiving glycemic rescue therapy. Table includes only patients with both baseline and post baseline values. |

Reporting Groups

| | Description |
|-----------------------------|--|
| Placebo/Sitagliptin | Each patient received matching placebo once daily for 26 weeks with stable doses of metformin and pioglitazone. At Week 26, patients were switched from placebo to 100 mg of sitagliptin once daily with stable doses of metformin and pioglitazone until Week 52. |
| Canagliflozin 100 mg | Each patient received 100 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. |

| | |
|-----------------------------|--|
| Canagliflozin 300 mg | Each patient received 300 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. |
|-----------------------------|--|

Measured Values

| | Placebo/Sitagliptin | Canagliflozin 100 mg | Canagliflozin 300 mg |
|---|---------------------|----------------------|----------------------|
| Number of Participants Analyzed [units: participants] | 114 | 113 | 112 |
| Percentage of Patients With HbA1c <7% at Week 26 [units: Percentage of patients] | 32.5 | 46.9 | 64.3 |

Statistical Analysis 1 for Percentage of Patients With HbA1c <7% at Week 26

| | |
|---------------------------------------|--|
| Groups ^[1] | Placebo/Sitagliptin vs. Canagliflozin 100 mg |
| Method ^[2] | Regression, Logistic |
| P Value ^[3] | 0.007 |
| Odds Ratio (OR) ^[4] | 2.40 |
| 95% Confidence Interval | 1.26 to 4.57 |

| | |
|------------|--|
| [1] | Additional details about the analysis, such as null hypothesis and power calculation: |
| | No text entered. |
| [2] | Other relevant method information, such as adjustments or degrees of freedom: |
| | No text entered. |
| [3] | Additional information, such as whether or not the p-value is adjusted for multiple comparisons and the a priori threshold for statistical significance: |
| | No text entered. |
| [4] | Other relevant estimation information: |
| | No text entered. |

Statistical Analysis 2 for Percentage of Patients With HbA1c <7% at Week 26

| | |
|---------------------------------------|--|
| Groups ^[1] | Placebo/Sitagliptin vs. Canagliflozin 300 mg |
| Method ^[2] | Regression, Logistic |
| P Value ^[3] | <0.001 |
| Odds Ratio (OR) ^[4] | 5.38 |
| 95% Confidence Interval | 2.73 to 10.60 |

| | |
|------------|--|
| [1] | Additional details about the analysis, such as null hypothesis and power calculation: |
| | No text entered. |
| [2] | Other relevant method information, such as adjustments or degrees of freedom: |
| | No text entered. |
| [3] | Additional information, such as whether or not the p-value is adjusted for multiple comparisons and the a priori threshold for statistical significance: |
| | No text entered. |
| [4] | Other relevant estimation information: |
| | No text entered. |

3. Secondary: Change in Fasting Plasma Glucose (FPG) From Baseline to Week 26 [Time Frame: Day 1 (Baseline) and Week 26]

| | |
|----------------------------|--|
| Measure Type | Secondary |
| Measure Title | Change in Fasting Plasma Glucose (FPG) From Baseline to Week 26 |
| Measure Description | The table below shows the least-squares (LS) mean change in FPG from Baseline to Week 26 for each treatment group. The statistical analyses show the treatment differences (ie, each canagliflozin group minus placebo) in the LS mean change. |
| Time Frame | Day 1 (Baseline) and Week 26 |
| Safety Issue | No |

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.

Analysis used mITT analysis set (all randomized patients who received at least 1 dose of study drug). Last-observation-carried-forward method used for missing Week 26 values. Measurements taken pre-rescue used as last observation in patients receiving glycemic rescue therapy. Table includes only patients with both baseline and post baseline values.

Reporting Groups

| | Description |
|-----------------------------|--|
| Placebo/Sitagliptin | Each patient received matching placebo once daily for 26 weeks with stable doses of metformin and pioglitazone. At Week 26, patients were switched from placebo to 100 mg of sitagliptin once daily with stable doses of metformin and pioglitazone until Week 52. |
| Canagliflozin 100 mg | Each patient received 100 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. |
| Canagliflozin 300 mg | Each patient received 300 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. |

Measured Values

| | Placebo/Sitagliptin | Canagliflozin 100 mg | Canagliflozin 300 mg |
|---|---------------------|----------------------|----------------------|
| Number of Participants Analyzed [units: participants] | 114 | 113 | 112 |
| Change in Fasting Plasma Glucose (FPG) From Baseline to Week 26 [units: mg/dL] Least Squares Mean (Standard Error) | 2.54 (2.785) | -26.8 (2.796) | -33.2 (2.817) |

Statistical Analysis 1 for Change in Fasting Plasma Glucose (FPG) From Baseline to Week 26

| | |
|---|--|
| Groups ^[1] | Placebo/Sitagliptin vs. Canagliflozin 100 mg |
| Method ^[2] | ANCOVA |
| P Value ^[3] | <0.001 |
| Least-Squares Mean Difference ^[4] | -29.4 |
| Standard Error of the mean | (3.857) |
| 95% Confidence Interval | -36.96 to -21.78 |

^[1] Additional details about the analysis, such as null hypothesis and power calculation:

| | |
|-----|--|
| | No text entered. |
| [2] | Other relevant method information, such as adjustments or degrees of freedom: |
| | No text entered. |
| [3] | Additional information, such as whether or not the p-value is adjusted for multiple comparisons and the a priori threshold for statistical significance: |
| | No text entered. |
| [4] | Other relevant estimation information: |
| | No text entered. |

Statistical Analysis 2 for Change in Fasting Plasma Glucose (FPG) From Baseline to Week 26

| | |
|--|--|
| Groups [1] | Placebo/Sitagliptin vs. Canagliflozin 300 mg |
| Method [2] | ANCOVA |
| P Value [3] | <0.001 |
| Least-Squares Mean Difference [4] | -35.7 |
| Standard Error of the mean | (3.861) |
| 95% Confidence Interval | -43.30 to -28.11 |

| | |
|-----|--|
| [1] | Additional details about the analysis, such as null hypothesis and power calculation: |
| | No text entered. |
| [2] | Other relevant method information, such as adjustments or degrees of freedom: |
| | No text entered. |
| [3] | Additional information, such as whether or not the p-value is adjusted for multiple comparisons and the a priori threshold for statistical significance: |
| | No text entered. |
| [4] | Other relevant estimation information: |
| | No text entered. |

4. Secondary: Change in Homeostasis Model Assessment (HOMA2-%B) From Baseline to Week 26 [Time Frame: Day 1 (Baseline) and Week 26]

| | |
|----------------------------|---|
| Measure Type | Secondary |
| Measure Title | Change in Homeostasis Model Assessment (HOMA2-%B) From Baseline to Week 26 |
| Measure Description | HOMA2-%B is a measure of beta cell function (the cells in the pancreas that produce and store insulin). The table below shows the least-squares (LS) mean change in HOMA2-%B from Baseline to Week 26 for each treatment group. The statistical analyses show the treatment differences (ie, each canagliflozin group minus placebo) in the LS mean change. |
| Time Frame | Day 1 (Baseline) and Week 26 |
| Safety Issue | No |

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.

Analysis used mITT analysis set (all randomized patients who received at least 1 dose of study drug). Last-observation-carried-forward method used for missing Week 26 values. Measurements taken pre-rescue used as last observation in patients receiving glycemic rescue

therapy. Table includes only patients with both baseline and post baseline values.

Reporting Groups

| | Description |
|-----------------------------|--|
| Placebo/Sitagliptin | Each patient received matching placebo once daily for 26 weeks with stable doses of metformin and pioglitazone. At Week 26, patients were switched from placebo to 100 mg of sitagliptin once daily with stable doses of metformin and pioglitazone until Week 52. |
| Canagliflozin 100 mg | Each patient received 100 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. |
| Canagliflozin 300 mg | Each patient received 300 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. |

Measured Values

| | Placebo/Sitagliptin | Canagliflozin 100 mg | Canagliflozin 300 mg |
|---|---------------------|----------------------|----------------------|
| Number of Participants Analyzed [units: participants] | 100 | 103 | 105 |
| Change in Homeostasis Model Assessment (HOMA2-%B) From Baseline to Week 26 [units: HOMA2-%B] Least Squares Mean (Standard Error) | 0.91 (1.833) | 15.19 (1.809) | 18.14 (1.790) |

Statistical Analysis 1 for Change in Homeostasis Model Assessment (HOMA2-%B) From Baseline to Week 26

| | |
|---|--|
| Groups ^[1] | Placebo/Sitagliptin vs. Canagliflozin 100 mg |
| Method ^[2] | ANCOVA |
| P Value ^[3] | <0.001 |
| Least-Squares Mean Difference ^[4] | 14.28 |
| Standard Error of the mean | (2.521) |
| 95% Confidence Interval | 9.315 to 19.236 |

| | |
|------------|--|
| [1] | Additional details about the analysis, such as null hypothesis and power calculation: |
| | No text entered. |
| [2] | Other relevant method information, such as adjustments or degrees of freedom: |
| | No text entered. |
| [3] | Additional information, such as whether or not the p-value is adjusted for multiple comparisons and the a priori threshold for statistical significance: |
| | No text entered. |
| [4] | Other relevant estimation information: |
| | No text entered. |

Statistical Analysis 2 for Change in Homeostasis Model Assessment (HOMA2-%B) From Baseline to Week 26

| | |
|-------------------------------|--|
| Groups ^[1] | Placebo/Sitagliptin vs. Canagliflozin 300 mg |
| Method ^[2] | ANCOVA |
| P Value ^[3] | <0.001 |
| | |

| | |
|--|------------------|
| Least-Squares Mean Difference [4] | 17.23 |
| Standard Error of the mean | (2.509) |
| 95% Confidence Interval | 12.293 to 22.166 |

| | |
|------------|--|
| [1] | Additional details about the analysis, such as null hypothesis and power calculation: |
| | No text entered. |
| [2] | Other relevant method information, such as adjustments or degrees of freedom: |
| | No text entered. |
| [3] | Additional information, such as whether or not the p-value is adjusted for multiple comparisons and the a priori threshold for statistical significance: |
| | No text entered. |
| [4] | Other relevant estimation information: |
| | No text entered. |

5. Secondary: Percent Change in Body Weight From Baseline to Week 26 [Time Frame: Day 1 (Baseline) and Week 26]

| | |
|----------------------------|--|
| Measure Type | Secondary |
| Measure Title | Percent Change in Body Weight From Baseline to Week 26 |
| Measure Description | The table below shows the least-squares (LS) mean percent change in body weight from Baseline to Week 26 for each treatment group. The statistical analyses show the treatment differences (ie, each canagliflozin group minus placebo) in the LS mean percent change. |
| Time Frame | Day 1 (Baseline) and Week 26 |
| Safety Issue | No |

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.

Analysis used mITT analysis set (all randomized patients who received at least 1 dose of study drug). Last-observation-carried-forward method used for missing Week 26 values. Measurements taken pre-rescue used as last observation in patients receiving glycemic rescue therapy. Table includes only patients with both baseline and post baseline values.

Reporting Groups

| | Description |
|-----------------------------|--|
| Placebo/Sitagliptin | Each patient received matching placebo once daily for 26 weeks with stable doses of metformin and pioglitazone. At Week 26, patients were switched from placebo to 100 mg of sitagliptin once daily with stable doses of metformin and pioglitazone until Week 52. |
| Canagliflozin 100 mg | Each patient received 100 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. |
| Canagliflozin 300 mg | Each patient received 300 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. |

Measured Values

| | Placebo/Sitagliptin | Canagliflozin 100 mg | Canagliflozin 300 mg |
|--|---------------------|----------------------|----------------------|
| Number of Participants Analyzed [units: participants] | 114 | 113 | 112 |
| Percent Change in Body Weight From Baseline to Week 26 [units: Percent change] | -0.1 (0.3) | -2.8 (0.3) | -3.8 (0.3) |

| | | | |
|-------------------------------------|--|--|--|
| Least Squares Mean (Standard Error) | | | |
|-------------------------------------|--|--|--|

Statistical Analysis 1 for Percent Change in Body Weight From Baseline to Week 26

| | |
|--|--|
| Groups ^[1] | Placebo/Sitagliptin vs. Canagliflozin 100 mg |
| Method ^[2] | ANCOVA |
| P Value ^[3] | <0.001 |
| Least-Squares Mean Difference ^[4] | -2.7 |
| Standard Error of the mean | (0.4) |
| 95% Confidence Interval | -3.6 to -1.8 |

^[1] Additional details about the analysis, such as null hypothesis and power calculation:

No text entered.

^[2] Other relevant method information, such as adjustments or degrees of freedom:

No text entered.

^[3] Additional information, such as whether or not the p-value is adjusted for multiple comparisons and the a priori threshold for statistical significance:

No text entered.

^[4] Other relevant estimation information:

No text entered.

Statistical Analysis 2 for Percent Change in Body Weight From Baseline to Week 26

| | |
|--|--|
| Groups ^[1] | Placebo/Sitagliptin vs. Canagliflozin 300 mg |
| Method ^[2] | ANCOVA |
| P Value ^[3] | <0.001 |
| Least-Squares Mean Difference ^[4] | -3.7 |
| Standard Error of the mean | (0.4) |
| 95% Confidence Interval | -4.6 to -2.8 |

^[1] Additional details about the analysis, such as null hypothesis and power calculation:

No text entered.

^[2] Other relevant method information, such as adjustments or degrees of freedom:

No text entered.

^[3] Additional information, such as whether or not the p-value is adjusted for multiple comparisons and the a priori threshold for statistical significance:

No text entered.

^[4] Other relevant estimation information:

No text entered.

6. Secondary: Change in Systolic Blood Pressure (SBP) From Baseline to Week 26 [Time Frame: Day 1 (Baseline) and Week 26]

| | |
|--------------|-----------|
| Measure Type | Secondary |
|--------------|-----------|

| | |
|----------------------------|--|
| Measure Title | Change in Systolic Blood Pressure (SBP) From Baseline to Week 26 |
| Measure Description | The table below shows the least-squares (LS) mean change in SBP from Baseline to Week 26 for each treatment group. The statistical analyses show the treatment differences (ie, each canagliflozin group minus placebo) in the LS mean change. |
| Time Frame | Day 1 (Baseline) and Week 26 |
| Safety Issue | No |

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.

Analysis used mITT analysis set (all randomized patients who received at least 1 dose of study drug). Last-observation-carried-forward method used for missing Week 26 values. Measurements taken pre-rescue used as last observation in patients receiving glycemic rescue therapy. Table includes only patients with both baseline and post baseline values.

Reporting Groups

| | Description |
|-----------------------------|--|
| Placebo/Sitagliptin | Each patient received matching placebo once daily for 26 weeks with stable doses of metformin and pioglitazone. At Week 26, patients were switched from placebo to 100 mg of sitagliptin once daily with stable doses of metformin and pioglitazone until Week 52. |
| Canagliflozin 100 mg | Each patient received 100 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. |
| Canagliflozin 300 mg | Each patient received 300 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. |

Measured Values

| | Placebo/Sitagliptin | Canagliflozin 100 mg | Canagliflozin 300 mg |
|---|---------------------|----------------------|----------------------|
| Number of Participants Analyzed [units: participants] | 114 | 113 | 112 |
| Change in Systolic Blood Pressure (SBP) From Baseline to Week 26 [units: mmHg] Least Squares Mean (Standard Error) | -1.24 (1.033) | -5.30 (1.036) | -4.70 (1.044) |

Statistical Analysis 1 for Change in Systolic Blood Pressure (SBP) From Baseline to Week 26

| | |
|--|--|
| Groups [1] | Placebo/Sitagliptin vs. Canagliflozin 100 mg |
| Method [2] | ANCOVA |
| P Value [3] | 0.005 |
| Least-Squares Mean Difference [4] | -4.07 |
| Standard Error of the mean | (1.430) |
| 95% Confidence Interval | -6.879 to -1.251 |

| | |
|------------|--|
| [1] | Additional details about the analysis, such as null hypothesis and power calculation: |
| | No text entered. |
| [2] | Other relevant method information, such as adjustments or degrees of freedom: |
| | No text entered. |
| [3] | Additional information, such as whether or not the p-value is adjusted for multiple comparisons and the a priori threshold for statistical significance: |

| | |
|------------|--|
| | No text entered. |
| [4] | Other relevant estimation information: |
| | No text entered. |

Statistical Analysis 2 for Change in Systolic Blood Pressure (SBP) From Baseline to Week 26

| | |
|---|--|
| Groups ^[1] | Placebo/Sitagliptin vs. Canagliflozin 300 mg |
| Method ^[2] | ANCOVA |
| P Value ^[3] | 0.016 |
| Least-Squares Mean Difference ^[4] | -3.46 |
| Standard Error of the mean | (1.433) |
| 95% Confidence Interval | -6.281 to -0.643 |

| | |
|------------|--|
| [1] | Additional details about the analysis, such as null hypothesis and power calculation: |
| | No text entered. |
| [2] | Other relevant method information, such as adjustments or degrees of freedom: |
| | No text entered. |
| [3] | Additional information, such as whether or not the p-value is adjusted for multiple comparisons and the a priori threshold for statistical significance: |
| | No text entered. |
| [4] | Other relevant estimation information: |
| | No text entered. |

7. Secondary: Percent Change in Triglycerides From Baseline to Week 26 [Time Frame: Day 1 (Baseline) and Week 26]

| | |
|----------------------------|--|
| Measure Type | Secondary |
| Measure Title | Percent Change in Triglycerides From Baseline to Week 26 |
| Measure Description | The table below shows the least-squares (LS) mean percent change in triglycerides from Baseline to Week 26 for each treatment group. The statistical analyses show the treatment differences (ie, each canagliflozin group minus placebo) in the LS mean percent change. |
| Time Frame | Day 1 (Baseline) and Week 26 |
| Safety Issue | No |

Population Description

| |
|--|
| Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate. |
| Analysis used mITT analysis set (all randomized patients who received at least 1 dose of study drug). Last-observation-carried-forward method used for missing Week 26 values. Measurements taken pre-rescue used as last observation in patients receiving glycemic rescue therapy. Table includes only patients with both baseline and post baseline values. |

Reporting Groups

| | Description |
|-----------------------------|--|
| Placebo/Sitagliptin | Each patient received matching placebo once daily for 26 weeks with stable doses of metformin and pioglitazone. At Week 26, patients were switched from placebo to 100 mg of sitagliptin once daily with stable doses of metformin and pioglitazone until Week 52. |
| Canagliflozin 100 mg | Each patient received 100 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and |

| | |
|-----------------------------|--|
| | pioglitazone. |
| Canagliflozin 300 mg | Each patient received 300 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. |

Measured Values

| | Placebo/Sitagliptin | Canagliflozin 100 mg | Canagliflozin 300 mg |
|--|---------------------|----------------------|----------------------|
| Number of Participants Analyzed [units: participants] | 105 | 108 | 109 |
| Percent Change in Triglycerides From Baseline to Week 26 [units: Percent change] Least Squares Mean (Standard Error) | 15.2 (4.1) | 3.2 (4.1) | -1.7 (4.1) |

Statistical Analysis 1 for Percent Change in Triglycerides From Baseline to Week 26

| | |
|---|--|
| Groups ^[1] | Placebo/Sitagliptin vs. Canagliflozin 100 mg |
| Method ^[2] | ANCOVA |
| P Value ^[3] | 0.034 |
| Least-Squares Mean Difference ^[4] | -12.1 |
| Standard Error of the mean | (5.7) |
| 95% Confidence Interval | -12.1 to -0.9 |

| | |
|------------|--|
| [1] | Additional details about the analysis, such as null hypothesis and power calculation: |
| | No text entered. |
| [2] | Other relevant method information, such as adjustments or degrees of freedom: |
| | No text entered. |
| [3] | Additional information, such as whether or not the p-value is adjusted for multiple comparisons and the a priori threshold for statistical significance: |
| | No text entered. |
| [4] | Other relevant estimation information: |
| | No text entered. |

Statistical Analysis 2 for Percent Change in Triglycerides From Baseline to Week 26

| | |
|---|--|
| Groups ^[1] | Placebo/Sitagliptin vs. Canagliflozin 300 mg |
| Method ^[2] | ANCOVA |
| P Value ^[3] | 0.003 |
| Least-Squares Mean Difference ^[4] | -16.9 |
| Standard Error of the mean | (5.7) |
| 95% Confidence Interval | -28.1 to -5.8 |

| | |
|------------|--|
| [1] | Additional details about the analysis, such as null hypothesis and power calculation: |
| | No text entered. |
| [2] | Other relevant method information, such as adjustments or degrees of freedom: |
| | No text entered. |
| [3] | Additional information, such as whether or not the p-value is adjusted for multiple comparisons and the a priori threshold for statistical significance: |

| | |
|---------------------|--|
| | No text entered. |
| [4] | Other relevant estimation information: |
| | No text entered. |

8. Secondary: Percent Change in High-density Lipoprotein Cholesterol (HDL-C) From Baseline to Week 26 [Time Frame: Day 1 (Baseline) and Week 26]

| | |
|----------------------------|--|
| Measure Type | Secondary |
| Measure Title | Percent Change in High-density Lipoprotein Cholesterol (HDL-C) From Baseline to Week 26 |
| Measure Description | The table below shows the least-squares (LS) mean percent change in HDL-C from Baseline to Week 26 for each treatment group. The statistical analyses show the treatment differences (ie, each canagliflozin group minus placebo) in the LS mean percent change. |
| Time Frame | Day 1 (Baseline) and Week 26 |
| Safety Issue | No |

Population Description

Explanation of how the number of participants for analysis was determined. Includes whether analysis was per protocol, intention to treat, or another method. Also provides relevant details such as imputation technique, as appropriate.

Analysis used mITT analysis set (all randomized patients who received at least 1 dose of study drug). Last-observation-carried-forward method used for missing Week 26 values. Measurements taken pre-rescue used as last observation in patients receiving glycemic rescue therapy. Table includes only patients with both baseline and post baseline values.

Reporting Groups

| | Description |
|-----------------------------|--|
| Placebo/Sitagliptin | Each patient received matching placebo once daily for 26 weeks with stable doses of metformin and pioglitazone. At Week 26, patients were switched from placebo to 100 mg of sitagliptin once daily with stable doses of metformin and pioglitazone until Week 52. |
| Canagliflozin 100 mg | Each patient received 100 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. |
| Canagliflozin 300 mg | Each patient received 300 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. |

Measured Values

| | Placebo/Sitagliptin | Canagliflozin 100 mg | Canagliflozin 300 mg |
|--|---------------------|----------------------|----------------------|
| Number of Participants Analyzed [units: participants] | 105 | 107 | 109 |
| Percent Change in High-density Lipoprotein Cholesterol (HDL-C) From Baseline to Week 26 [units: Percent change] Least Squares Mean (Standard Error) | 2.4 (1.4) | 7.2 (1.3) | 8.9 (1.3) |

Statistical Analysis 1 for Percent Change in High-density Lipoprotein Cholesterol (HDL-C) From Baseline to Week 26

| | |
|------------------------------------|--|
| Groups [1] | Placebo/Sitagliptin vs. Canagliflozin 100 mg |
| Method [2] | ANCOVA |
| P Value [3] | 0.010 |

| | |
|--|------------|
| Least-Squares Mean Difference [4] | 4.8 |
| Standard Error of the mean | (1.9) |
| 95% Confidence Interval | 1.2 to 8.5 |

| | |
|-----|--|
| [1] | Additional details about the analysis, such as null hypothesis and power calculation: |
| | No text entered. |
| [2] | Other relevant method information, such as adjustments or degrees of freedom: |
| | No text entered. |
| [3] | Additional information, such as whether or not the p-value is adjusted for multiple comparisons and the a priori threshold for statistical significance: |
| | No text entered. |
| [4] | Other relevant estimation information: |
| | No text entered. |

Statistical Analysis 2 for Percent Change in High-density Lipoprotein Cholesterol (HDL-C) From Baseline to Week 26

| | |
|--|--|
| Groups [1] | Placebo/Sitagliptin vs. Canagliflozin 300 mg |
| Method [2] | ANCOVA |
| P Value [3] | <0.001 |
| Least-Squares Mean Difference [4] | 6.5 |
| Standard Error of the mean | (1.9) |
| 95% Confidence Interval | 2.8 to 10.2 |

| | |
|-----|--|
| [1] | Additional details about the analysis, such as null hypothesis and power calculation: |
| | No text entered. |
| [2] | Other relevant method information, such as adjustments or degrees of freedom: |
| | No text entered. |
| [3] | Additional information, such as whether or not the p-value is adjusted for multiple comparisons and the a priori threshold for statistical significance: |
| | No text entered. |
| [4] | Other relevant estimation information: |
| | No text entered. |

Serious Adverse Events

 Hide Serious Adverse Events

| | |
|-------------------------------|---|
| Time Frame | Adverse event data were collected for the duration of study (52 weeks). |
| Additional Description | The total number of adverse events listed in the "Other (non-Serious) Adverse Events" table are based upon a cut-off of greater than or equal to 5 percent of patients experiencing the adverse event in any treatment arm either during the 26-week period or entire 52-week period. |

Reporting Groups

| | Description |
|---|---|
| Placebo/Sitagliptin: Baseline to Week 26 | Each patient received matching placebo once daily for 26 weeks with stable doses of metformin |

| | |
|--|--|
| | and pioglitazone. At Week 26, patients were switched from placebo to 100 mg of sitagliptin once daily with stable doses of metformin and pioglitazone until Week 52. Data are presented for Baseline to Week 26. |
| Canagliflozin 100 mg: Baseline to Week 26 | Each patient received 100 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. Data are presented for Baseline to Week 26. |
| Canagliflozin 300 mg: Baseline to Week 26 | Each patient received 300 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. Data are presented for Baseline to Week 26. |
| Placebo/Sitagliptin: Baseline to Week 52 | Each patient received matching placebo once daily for 26 weeks with stable doses of metformin and pioglitazone. At Week 26, patients were switched from placebo to 100 mg of sitagliptin once daily with stable doses of metformin and pioglitazone until Week 52. Data are presented for Baseline to Week 52. |
| Canagliflozin 100 mg: Baseline to Week 52 | Each patient received 100 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. Data are presented for Baseline to Week 52. |
| Canagliflozin 300 mg: Baseline to Week 52 | Each patient received 300 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. Data are presented for Baseline to Week 52. |

Serious Adverse Events

| | Placebo/Sitagliptin: Baseline to Week 26 | Canagliflozin 100 mg: Baseline to Week 26 | Canagliflozin 300 mg: Baseline to Week 26 | Placebo/Sitagliptin: Baseline to Week 52 | Canagliflozin 100 mg: Baseline to Week 52 | Canagliflozin 300 mg: Baseline to Week 52 |
|--|--|--|--|--|--|--|
| Total, serious adverse events | | | | | | |
| # participants affected / at risk | 5/115 (4.35%) | 3/113 (2.65%) | 4/114 (3.51%) | 6/115 (5.22%) | 8/113 (7.08%) | 7/114 (6.14%) |
| Cardiac disorders | | | | | | |
| Acute coronary syndrome * 1 [3] | | | | | | |
| # participants affected / at risk | 1/115 (0.87%) | 0/113 (0.00%) | 0/114 (0.00%) | 1/115 (0.87%) | 0/113 (0.00%) | 0/114 (0.00%) |
| Gastrointestinal disorders | | | | | | |
| Dyspepsia * 1 [3] | | | | | | |
| # participants affected / at risk | 1/115 (0.87%) | 0/113 (0.00%) | 0/114 (0.00%) | 1/115 (0.87%) | 0/113 (0.00%) | 0/114 (0.00%) |
| General disorders | | | | | | |
| Chest pain * 1 [3] | | | | | | |
| # participants affected / at risk | 0/115 (0.00%) | 1/113 (0.88%) | 0/114 (0.00%) | 0/115 (0.00%) | 1/113 (0.88%) | 0/114 (0.00%) |
| Hepatobiliary disorders | | | | | | |
| Cholecystitis acute * 1 [3] | | | | | | |
| # participants affected / at risk | 0/115 (0.00%) | 1/113 (0.88%) | 0/114 (0.00%) | 0/115 (0.00%) | 1/113 (0.88%) | 0/114 (0.00%) |
| Infections and infestations | | | | | | |
| Anal abscess * 1 [3] | | | | | | |
| # participants affected / at risk | 0/115 (0.00%) | 1/113 (0.88%) | 0/114 (0.00%) | 0/115 (0.00%) | 1/113 (0.88%) | 0/114 (0.00%) |
| Escherichia bacteraemia * 1 [3] | | | | | | |
| # participants | | | | | 0/113 (0.00%) | 0/114 (0.00%) |

| affected / at risk | 1/115 (0.87%) | 0/113 (0.00%) | 0/114 (0.00%) | 1/115 (0.87%) | | |
|--|---------------|---------------|---------------|---------------|---------------|---------------|
| Gastrointestinal infection * 1 [3] | | | | | | |
| # participants affected / at risk | 1/115 (0.87%) | 0/113 (0.00%) | 0/114 (0.00%) | 1/115 (0.87%) | 0/113 (0.00%) | 0/114 (0.00%) |
| Osteomyelitis * 1 [3] | | | | | | |
| # participants affected / at risk | 0/115 (0.00%) | 0/113 (0.00%) | 1/114 (0.88%) | 0/115 (0.00%) | 0/113 (0.00%) | 1/114 (0.88%) |
| Sepsis syndrome * 1 [3] | | | | | | |
| # participants affected / at risk | 1/115 (0.87%) | 0/113 (0.00%) | 0/114 (0.00%) | 1/115 (0.87%) | 0/113 (0.00%) | 0/114 (0.00%) |
| Bacterial Sepsis * 1 [3] | | | | | | |
| # participants affected / at risk | 0/115 (0.00%) | 0/113 (0.00%) | 0/114 (0.00%) | 0/115 (0.00%) | 1/113 (0.88%) | 0/114 (0.00%) |
| Bronchopneumonia * 1 [3] | | | | | | |
| # participants affected / at risk | 0/115 (0.00%) | 0/113 (0.00%) | 0/114 (0.00%) | 0/115 (0.00%) | 1/113 (0.88%) | 0/114 (0.00%) |
| Cellulitis * 1 [3] | | | | | | |
| # participants affected / at risk | 0/115 (0.00%) | 0/113 (0.00%) | 0/114 (0.00%) | 0/115 (0.00%) | 0/113 (0.00%) | 1/114 (0.88%) |
| Injury, poisoning and procedural complications | | | | | | |
| Concussion * 1 [3] | | | | | | |
| # participants affected / at risk | 0/115 (0.00%) | 0/113 (0.00%) | 1/114 (0.88%) | 0/115 (0.00%) | 0/113 (0.00%) | 1/114 (0.88%) |
| Laceration * 1 [3] | | | | | | |
| # participants affected / at risk | 0/115 (0.00%) | 0/113 (0.00%) | 1/114 (0.88%) | 0/115 (0.00%) | 0/113 (0.00%) | 1/114 (0.88%) |
| Periprosthetic fracture * 1 [3] | | | | | | |
| # participants affected / at risk | 0/115 (0.00%) | 1/113 (0.88%) | 0/114 (0.00%) | 0/115 (0.00%) | 1/113 (0.88%) | 0/114 (0.00%) |
| Subdural haematoma * 1 [3] | | | | | | |
| # participants affected / at risk | 0/115 (0.00%) | 0/113 (0.00%) | 1/114 (0.88%) | 0/115 (0.00%) | 0/113 (0.00%) | 1/114 (0.88%) |
| Tibia fracture * 1 [3] | | | | | | |
| # participants affected / at risk | 0/115 (0.00%) | 0/113 (0.00%) | 0/114 (0.00%) | 0/115 (0.00%) | 0/113 (0.00%) | 1/114 (0.88%) |
| Investigations | | | | | | |
| Arteriogram coronary * 1 [3] | | | | | | |
| # participants affected / at risk | 0/115 (0.00%) | 0/113 (0.00%) | 0/114 (0.00%) | 0/115 (0.00%) | 1/113 (0.88%) | 0/114 (0.00%) |
| Musculoskeletal and connective tissue disorders | | | | | | |
| Spinal column stenosis * 1 [3] | | | | | | |
| # participants | | | | | 0/113 (0.00%) | 0/114 (0.00%) |

| affected / at risk | 1/115 (0.87%) | 0/113 (0.00%) | 0/114 (0.00%) | 1/115 (0.87%) | | |
|---|---------------|---------------|---------------|---------------|---------------|---------------|
| Dupuytren's contracture * 1 [3] | | | | | | |
| # participants affected / at risk | 0/115 (0.00%) | 0/113 (0.00%) | 0/114 (0.00%) | 1/115 (0.87%) | 0/113 (0.00%) | 0/114 (0.00%) |
| Osteoarthritis * 1 [3] | | | | | | |
| # participants affected / at risk | 0/115 (0.00%) | 0/113 (0.00%) | 0/114 (0.00%) | 0/115 (0.00%) | 1/113 (0.88%) | 0/114 (0.00%) |
| Neoplasms benign, malignant and unspecified (incl cysts and polyps) | | | | | | |
| Breast cancer * 1 [3] | | | | | | |
| # participants affected / at risk | 0/115 (0.00%) | 0/113 (0.00%) | 1/114 (0.88%) | 0/115 (0.00%) | 0/113 (0.00%) | 1/114 (0.88%) |
| Nervous system disorders | | | | | | |
| Cerebrovascular accident * 1 [3] | | | | | | |
| # participants affected / at risk | 0/115 (0.00%) | 0/113 (0.00%) | 0/114 (0.00%) | 0/115 (0.00%) | 0/113 (0.00%) | 1/114 (0.88%) |
| Dizziness postural * 1 [3] | | | | | | |
| # participants affected / at risk | 0/115 (0.00%) | 0/113 (0.00%) | 0/114 (0.00%) | 0/115 (0.00%) | 1/113 (0.88%) | 0/114 (0.00%) |
| Reproductive system and breast disorders | | | | | | |
| Pelvic prolapse * 1 [3] | | | | | | |
| # participants affected / at risk | 0/115 (0.00%) | 0/113 (0.00%) | 0/114 (0.00%) | 0/115 (0.00%) | 1/113 (0.88%) | 0/114 (0.00%) |
| Respiratory, thoracic and mediastinal disorders | | | | | | |
| Chronic obstructive pulmonary disease * 1 [3] | | | | | | |
| # participants affected / at risk | 1/115 (0.87%) | 0/113 (0.00%) | 0/114 (0.00%) | 1/115 (0.87%) | 0/113 (0.00%) | 0/114 (0.00%) |
| Dyspnoea * 1 [3] | | | | | | |
| # participants affected / at risk | 1/115 (0.87%) | 0/113 (0.00%) | 0/114 (0.00%) | 1/115 (0.87%) | 0/113 (0.00%) | 0/114 (0.00%) |
| Hypercapnia * 1 [4] | | | | | | |
| # participants affected / at risk | 1/115 (0.87%) | 0/113 (0.00%) | 0/114 (0.00%) | 1/115 (0.87%) | 0/113 (0.00%) | 0/114 (0.00%) |
| Restrictive pulmonary disease * 1 [3] | | | | | | |
| # participants affected / at risk | 1/115 (0.87%) | 0/113 (0.00%) | 0/114 (0.00%) | 1/115 (0.87%) | 0/113 (0.00%) | 0/114 (0.00%) |
| Vascular disorders | | | | | | |
| Hypotension * 1 [3] | | | | | | |
| # participants affected / at risk | 1/115 (0.87%) | 0/113 (0.00%) | 0/114 (0.00%) | 1/115 (0.87%) | 1/113 (0.88%) | 0/114 (0.00%) |

* Events were collected by non-systematic assessment

1 Term from vocabulary, MEDDRA 14.1 / 15.0

[3] MEDDRA 14.1 used for Week 26/MEDDRA 15.0 for Week 52

[4] MEDDRA 14.1 used for Week 26/MEDDRA 15.0 for Week 52.

Other Adverse Events

 Hide Other Adverse Events

| | |
|-------------------------------|---|
| Time Frame | Adverse event data were collected for the duration of study (52 weeks). |
| Additional Description | The total number of adverse events listed in the "Other (non-Serious) Adverse Events" table are based upon a cut-off of greater than or equal to 5 percent of patients experiencing the adverse event in any treatment arm either during the 26-week period or entire 52-week period. |

Frequency Threshold

| | |
|---|----|
| Threshold above which other adverse events are reported | 5% |
|---|----|

Reporting Groups

| | Description |
|--|--|
| Placebo/Sitagliptin: Baseline to Week 26 | Each patient received matching placebo once daily for 26 weeks with stable doses of metformin and pioglitazone. At Week 26, patients were switched from placebo to 100 mg of sitagliptin once daily with stable doses of metformin and pioglitazone until Week 52. Data are presented for Baseline to Week 26. |
| Canagliflozin 100 mg: Baseline to Week 26 | Each patient received 100 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. Data are presented for Baseline to Week 26. |
| Canagliflozin 300 mg: Baseline to Week 26 | Each patient received 300 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. Data are presented for Baseline to Week 26. |
| Placebo/Sitagliptin: Baseline to Week 52 | Each patient received matching placebo once daily for 26 weeks with stable doses of metformin and pioglitazone. At Week 26, patients were switched from placebo to 100 mg of sitagliptin once daily with stable doses of metformin and pioglitazone until Week 52. Data are presented for Baseline to Week 52. |
| Canagliflozin 100 mg: Baseline to Week 52 | Each patient received 100 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. Data are presented for Baseline to Week 52. |
| Canagliflozin 300 mg: Baseline to Week 52 | Each patient received 300 mg of canagliflozin once daily for 52 weeks with stable doses of metformin and pioglitazone. Data are presented for Baseline to Week 52. |

Other Adverse Events

| | Placebo/Sitagliptin: Baseline to Week 26 | Canagliflozin 100 mg: Baseline to Week 26 | Canagliflozin 300 mg: Baseline to Week 26 | Placebo/Sitagliptin: Baseline to Week 52 | Canagliflozin 100 mg: Baseline to Week 52 | Canagliflozin 300 mg: Baseline to Week 52 |
|--|--|---|---|--|--|--|
| Total, other (not including serious) adverse events | | | | | | |
| # participants affected / at risk | 31/115 (26.96%) | 35/113 (30.97%) | 40/114 (35.09%) | 49/115 (42.61%) | 48/113 (42.48%) | 57/114 (50.00%) |
| Gastrointestinal disorders | | | | | | |
| Diarrhoea * 1 [3] | | | | | | |
| # participants affected / at risk | 6/115 (5.22%) | 4/113 (3.54%) | 4/114 (3.51%) | 7/115 (6.09%) | 7/113 (6.19%) | 6/114 (5.26%) |
| General disorders | | | | | | |
| Oedema peripheral * 1 [4] | | | | | | |
| # participants | | | | | | |

| affected / at risk | 2/115 (1.74%) | 2/113 (1.77%) | 4/114 (3.51%) | 4/115 (3.48%) | 2/113 (1.77%) | 6/114 (5.26%) |
|---|---------------|---------------|----------------|-----------------|-----------------|-----------------|
| Infections and infestations | | | | | | |
| Nasopharyngitis * 1 [3] | | | | | | |
| # participants affected / at risk | 6/115 (5.22%) | 6/113 (5.31%) | 11/114 (9.65%) | 13/115 (11.30%) | 11/113 (9.73%) | 15/114 (13.16%) |
| Upper respiratory tract infection * 1 [3] | | | | | | |
| # participants affected / at risk | 7/115 (6.09%) | 9/113 (7.96%) | 5/114 (4.39%) | 9/115 (7.83%) | 14/113 (12.39%) | 8/114 (7.02%) |
| Urinary tract infection * 1 [3] | | | | | | |
| # participants affected / at risk | 6/115 (5.22%) | 4/113 (3.54%) | 4/114 (3.51%) | 9/115 (7.83%) | 5/113 (4.42%) | 9/114 (7.89%) |
| Vulvovaginal mycotic infection * 1 [3] | | | | | | |
| # participants affected / at risk | 0/115 (0.00%) | 3/113 (2.65%) | 6/114 (5.26%) | 1/115 (0.87%) | 3/113 (2.65%) | 6/114 (5.26%) |
| Metabolism and nutrition disorders | | | | | | |
| Hypoglycaemia * 1 [5] | | | | | | |
| # participants affected / at risk | 2/115 (1.74%) | 1/113 (0.88%) | 6/114 (5.26%) | 3/115 (2.61%) | 3/113 (2.65%) | 5/114 (4.39%) |
| Musculoskeletal and connective tissue disorders | | | | | | |
| Arthralgia * 1 [3] | | | | | | |
| # participants affected / at risk | 2/115 (1.74%) | 1/113 (0.88%) | 6/114 (5.26%) | 3/115 (2.61%) | 3/113 (2.65%) | 9/114 (7.89%) |
| Back pain * 1 [3] | | | | | | |
| # participants affected / at risk | 3/115 (2.61%) | 8/113 (7.08%) | 5/114 (4.39%) | 4/115 (3.48%) | 10/113 (8.85%) | 7/114 (6.14%) |
| Muscle spasms * 1 [4] | | | | | | |
| # participants affected / at risk | 3/115 (2.61%) | 1/113 (0.88%) | 3/114 (2.63%) | 6/115 (5.22%) | 2/113 (1.77%) | 4/114 (3.51%) |
| Nervous system disorders | | | | | | |
| Headache * 1 [4] | | | | | | |
| # participants affected / at risk | 4/115 (3.48%) | 3/113 (2.65%) | 5/114 (4.39%) | 5/115 (4.35%) | 3/113 (2.65%) | 6/114 (5.26%) |

| | | | | | | |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Renal and urinary disorders | | | | | | |
| Pollakiuria * 1 [3] | | | | | | |
| # participants affected / at risk | 1/115 (0.87%) | 5/113 (4.42%) | 7/114 (6.14%) | 1/115 (0.87%) | 6/113 (5.31%) | 8/114 (7.02%) |
| Respiratory, thoracic and mediastinal disorders | | | | | | |
| Cough * 1 [3] | | | | | | |
| # participants affected / at risk | 6/115 (5.22%) | 3/113 (2.65%) | 1/114 (0.88%) | 7/115 (6.09%) | 5/113 (4.42%) | 2/114 (1.75%) |

* Events were collected by non-systematic assessment

1 Term from vocabulary, MEDDRA 14.1 / 15.0

[3] MEDDRA 14.1 used for Week 26/MEDDRA 15.0 for Week 52

[4] MEDDRA 14.1 used for Week 26/MEDDRA 15.0 for Week 52.

[5] MEDDRA 14.1 used for Week 26/MEDDRA 15.0 for Week 52. In the Week 26 study report, 2 patients had hypoglycaemia recorded in error by the investigator, which were corrected in the Week 52 study report.

Limitations and Caveats

 Hide Limitations and Caveats

Limitations of the study, such as early termination leading to small numbers of participants analyzed and technical problems with measurement leading to unreliable or uninterpretable data

No text entered.

More Information

 Hide More Information

Certain Agreements:

Principal Investigators are **NOT** employed by the organization sponsoring the study.

There **IS** an agreement between Principal Investigators and the Sponsor (or its agents) that restricts the PI's rights to discuss or publish trial results after the trial is completed.

The agreement is:

- ☐ The only disclosure restriction on the PI is that the sponsor can review results communications prior to public release and can embargo communications regarding trial results for a period that is **less than or equal to 60 days**. The sponsor cannot require changes to the communication and cannot extend the embargo.
- ☐ The only disclosure restriction on the PI is that the sponsor can review results communications prior to public release and can embargo communications regarding trial results for a period that is **more than 60 days but less than or equal to 180 days**. The sponsor cannot require changes to the communication and cannot extend the embargo.
- ☒ Other disclosure agreement that restricts the right of the PI to discuss or publish trial results after the trial is completed.
- Restriction Description:** A copy of the manuscript must be provided to the sponsor for review at least 60 days before submission for publication or presentation. If requested in writing, such publication will be withheld for up to an additional 60 days.

Results Point of Contact:

Name/Title: Vice President, Franchise Medical Leader, Cardiovascular & Metabolism Franchise

Organization: Janssen Research & Development, LLC

phone: 1-800-526-7736

Publications automatically indexed to this study by ClinicalTrials.gov Identifier (NCT Number):

Watts NB, Bilezikian JP, Usiskin K, Edwards R, Desai M, Law G, Meininger G. Effects of Canagliflozin on Fracture Risk in Patients With Type 2 Diabetes Mellitus. *J Clin Endocrinol Metab*. 2016 Jan;101(1):157-66. doi: 10.1210/jc.2015-3167. Epub 2015 Nov 18.

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Responsible Party: Janssen Research & Development, LLC
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