Hausaufgabe (2)

Konfidenzintervall - Mean Age Canagliflozin

Table 1. Demographic and Clinical Characteristics of the Patients at Baseline.*

Characteristic	Canagliflozin (N=2202)	Placebo (N=2199)	All Patients (N=4401)
Age — yr	62.9±9.2	63.2±9.2	63.0±9.2
Female sex — no. (%)	762 (34.6)	732 (33.3)	1494 (33.9)

Alter: Mittelwert

Gesucht: 99%-Konfidenzintervall

Gegeben: Canagliflozin $\bar{x} = 62{,}9$

$n = 2202$

$s = 9{,}2$

Hausaufgabe (3)

Konfidenzintervall - Age Canagliflozin

Canagliflozin

t-Quantil: $n = 2202 > 100$; → Normalquantil anwenden!

$$z_{1-\alpha/2} = z_{0,995} = 2{,}575$$

$$\bar{x} - z_{1-\alpha/2} \cdot \frac{s}{\sqrt{n}} \leq \mu \leq \bar{x} + z_{1-\alpha/2} \cdot \frac{s}{\sqrt{n}}$$

$$62{,}9 - 2{,}575 \cdot \frac{9{,}2}{\sqrt{2202}} \leq \mu \leq 62{,}9 + 2{,}575 \cdot \frac{9{,}2}{\sqrt{2202}}$$

99%-KI: $[62,4; 63,4]$ Jahre

Hausaufgabe (4)

Konfidenzintervall - Mean Age Placebo

Table 1. Demographic and Clinical Characteristics of the Patients at Baseline.*

Characteristic	Canagliflozin (N=2202)	Placebo (N=2199)	All Patients (N=4401)
Age — yr	62.9±9.2	63.2±9.2	63.0±9.2
Female sex — no. (%)	762 (34.6)	732 (33.3)	1494 (33.9)

Alter: Mittelwert

Gesucht: 99%-Konfidenzintervall

Gegeben: Placebo $\bar{x} = 63{,}2$

$n = 2199$

$s = 9{,}2$

Hausaufgabe (5)

Konfidenzintervall - Age Placebo

Placebo

t-Quantil: $n = 2199 > 100$; → Normalquantil anwenden!

$$z_{1-\alpha/2} = z_{0,995} = 2{,}575$$

$$\bar{x} - z_{1-\alpha/2} \cdot \frac{s}{\sqrt{n}} \leq \mu \leq \bar{x} + z_{1-\alpha/2} \cdot \frac{s}{\sqrt{n}}$$

$$63{,}2 - 2{,}575 \cdot \frac{9{,}2}{\sqrt{2199}} \leq \mu \leq 63{,}2 + 2{,}575 \cdot \frac{9{,}2}{\sqrt{2199}}$$

99%-KI: $[62,7; 63,7]$ Jahre

Hausaufgabe (6)

Konfidenzintervall - Female sex (%) Canaglifloxin

Table 1. Demographic and Clinical Characteristics of the Patients at Baseline.*

Characteristic	Canagliflozin (N=2202)	Placebo (N=2199)	All Patients (N=4401)
Age — yr	62.9±9.2	63.2±9.2	63.0±9.2
Female sex — no. (%)	762 (34.6)	732 (33.3)	1494 (33.9)

Geschlecht: Anteil der Frauen

Gesucht: 99%-Konfidenzintervall

Gegeben: Canaglifloxin $\hat{p} = 34{,}6\% = 0{,}346$

$n = 2202$

Hausaufgabe (7)

Konfidenzintervall - Female sex (%) Canaglifloxin

Canagliflozin

Voraussetzung:

$$n \cdot \hat{p} \cdot (1 - \hat{p}) = 2202 \cdot 0{,}346 \cdot 0{,}654 = 498{,}3 \geq 9$$

Normalquantil: $z_{1-\alpha/2} = z_{0{,}995} = 2{,}575$

$$\hat{p} - z_{1-\alpha/2} \cdot \sqrt{\frac{\hat{p} \cdot (1 - \hat{p})}{n}} \leq p \leq \hat{p} + z_{1-\alpha/2} \cdot \sqrt{\frac{\hat{p} \cdot (1 - \hat{p})}{n}}$$

$$0{,}346 - 2{,}575 \cdot \sqrt{\frac{0{,}346 \cdot 0{,}654}{2202}} \leq p \leq 0{,}346 + 2{,}575 \cdot \sqrt{\frac{0{,}346 \cdot 0{,}654}{2202}}$$

99%-KI: $[32,0; 37,2]\%$

Hausaufgabe (8)

Konfidenzintervall - Female sex (%) Placebo

Table 1. Demographic and Clinical Characteristics of the Patients at Baseline.*

Characteristic	Canagliflozin (N=2202)	Placebo (N=2199)	All Patients (N=4401)
Age — yr	62.9±9.2	63.2±9.2	63.0±9.2
Female sex — no. (%)	762 (34.6)	732 (33.3)	1494 (33.9)

Geschlecht: Anteil der Frauen

Gesucht: 99%-Konfidenzintervall

Gegeben: <u>Placebo</u> $\hat{p} = 33{,}3\% = 0{,}333$

$n = 2199$

Hausaufgabe (9)

Konfidenzintervall - Female sex (%) Placebo

Placebo

Voraussetzung:

$$n \cdot \hat{p} \cdot (1 - \hat{p}) = 2199 \cdot 0{,}333 \cdot 0{,}667 = 488{,}4 \geq 9$$

Normalquantil: $z_{1-\alpha/2} = z_{0{,}995} = 2{,}575$

$$\hat{p} - z_{1-\alpha/2} \cdot \sqrt{\frac{\hat{p} \cdot (1 - \hat{p})}{n}} \leq p \leq \hat{p} + z_{1-\alpha/2} \cdot \sqrt{\frac{\hat{p} \cdot (1 - \hat{p})}{n}}$$

$$0{,}333 - 2{,}575 \cdot \sqrt{\frac{0{,}333 \cdot 0{,}667}{2199}} \leq p \leq 0{,}333 + 2{,}575 \cdot \sqrt{\frac{0{,}333 \cdot 0{,}667}{2199}}$$

99%-KI: $[30,7; 35,9]\%$