```
# Import necessary libraries
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
from sklearn.datasets import load_diabetes
from sklearn.model_selection import train_test_split
from sklearn.preprocessing import StandardScaler
from sklearn.linear_model import LogisticRegression
from sklearn.metrics import accuracy_score, classification_report, confusion_matrix, roc_curve, auc
```

```
# Load the diabetes dataset
diabetes = load_diabetes()
X, y = diabetes.data, diabetes.target

# Convert the target variable to binary (1 for diabetes, 0 for no diabetes)
y_binary = (y > np.median(y)).astype(int)
```

```
X_train, X_test, y_train, y_test = train_test_split(X, y_binary, test_size=0.2, random_state=42)
```

```
# # Standardize features
# scaler = StandardScaler()
# X_train = scaler.fit_transform(X_train)
# X_test = scaler.transform(X_test)
```

```
# Train the Logistic Regression model
model = LogisticRegression()
model.fit(X_train, y_train)
```

▾ LogisticRegression
LogisticRegression()

```
# Evaluate the model
y_predict = model.predict(X_test)
print(classification_report(y_test, y_predict))
```

```
                   precision    recall  f1-score   support

               0       0.77      0.76      0.76        49
               1       0.71      0.72      0.72        40

        accuracy                           0.74        89
       macro avg       0.74      0.74      0.74        89
    weighted avg       0.74      0.74      0.74        89
```

```
cm = confusion_matrix(y_test, y_predict)
sns.heatmap(cm, annot = True)
```

<Axes: >