CANCER DIAGNOSIS DASHBOARD

357 TOTAL RECORDS

212 MALIGNANT CASES

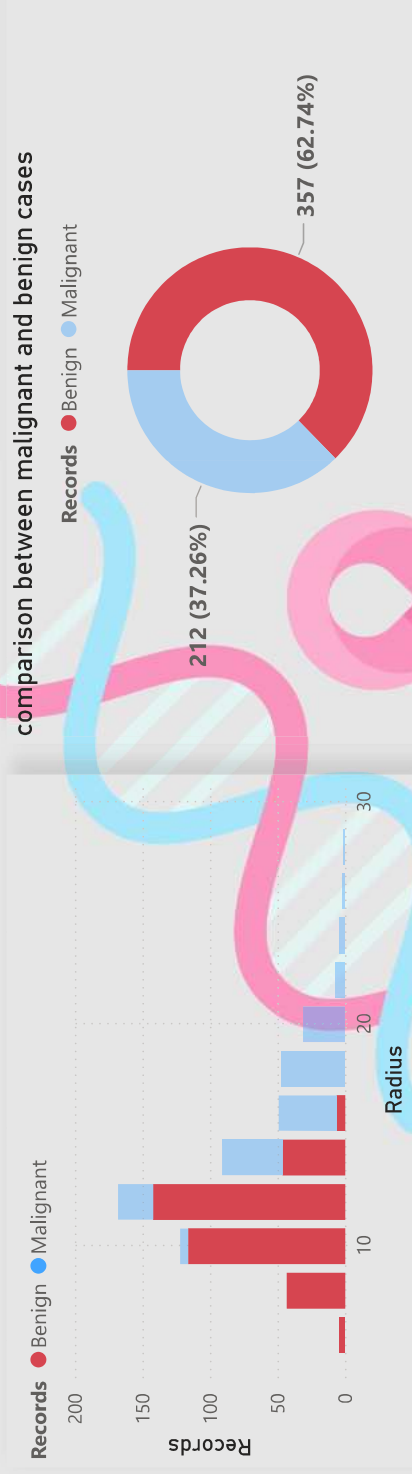**357** BENIGN CASES

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Features plot

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comparison between malignant and benign cases

Records ● Benign ● Malignant

357 (62.74%)

212 (37.26%)

Records ● Benign ● Malignant

Records

200

150

100

50

0

10   20   30

Radius

## INSIGHT SUMMARY

· Malignant tumors generally have higher values for **radius, Smoothness, and concavity**-related features.

· **Outliers** in the dataset are **mostly valid** and stem from **extreme cancer cases**.

· **Log transformation** reduces skewness and brings features closer to a normal distribution.

· Features like **radius_mean, concavity_mean,** and **symmetry_mean** are strong indicators of malignancy.

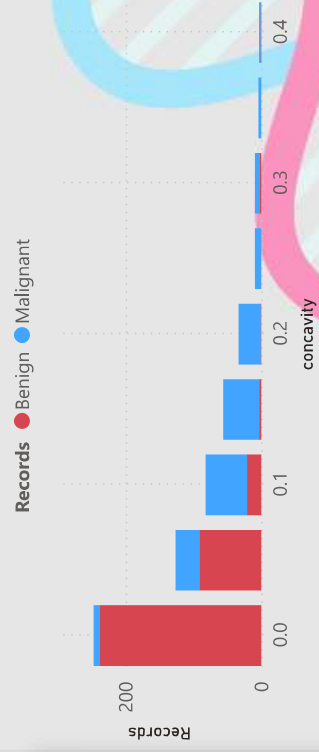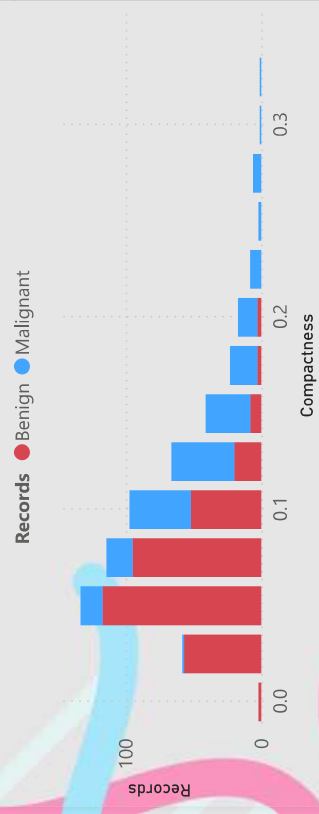· **Column chart** show clear separation between benign and malignant classes
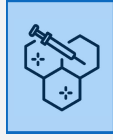
Features Plot

Comparing compactness between benign and malignant tumor

Records ● Benign ● Malignant

Records

0 — 100

Compactness: 0.0 — 0.1 — 0.2 — 0.3

comparing symmetry between benign and malignant tumor

Records ● Benign ● Malignant

Records

0 — 100 — 200

Symmetry: 0.10 — 0.15 — 0.20 — 0.25 — 0.30

Comparing Concavity between Benign and Malignant tumor

Records ● Benign ● Malignant

Records

0 — 200

concavity: 0.0 — 0.1 — 0.2 — 0.3 — 0.4

Comparing smoothness between beingn and malignant tumor

Records ● Benign ● Malignant

Records

0 — 100

Smoothness: 0.05 — 0.10 — 0.15

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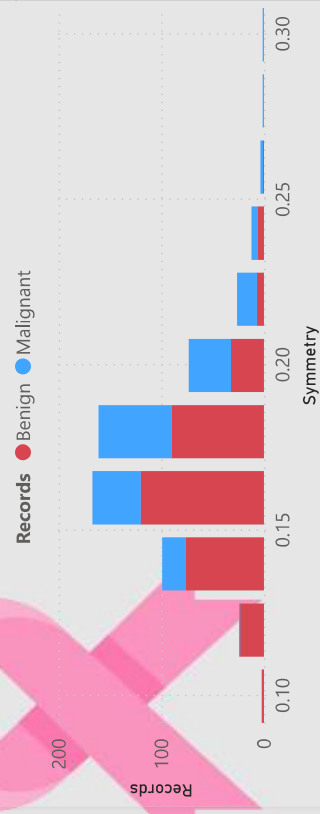
ALL THE VALUES ALONG X-AXIS ARE IN "CM"

Features Information

Radius: It represents the **average distance** from the nucleus center to its boundary. It is calculated as the **mean of** radial lengths. **Malignant** cells typically show a larger radius due to abnormal cell growth.

Smoothness: It Indicates the **uniformity of the nucleus edges. Lower smoothness suggests jagged, irregular borders,** which are common in cancerous cells.

Compactness: It Measures the **density and shape compactness** of the nucleus. **Higher compactness** is often linked to **irregular and denser tumor shapes.**

Concavity: Concavity Captures the **severity of concave portions** (inward curves) of the cell boundary. High values indicate **more pronounced indentations,** which are typical in **malignant cells.**

Symmetry: Reflects the **degree of symmetry** in the shape of the cell nucleus. **Benign tumors are more symmetrical,** while **malignant ones often display asymmetry.**