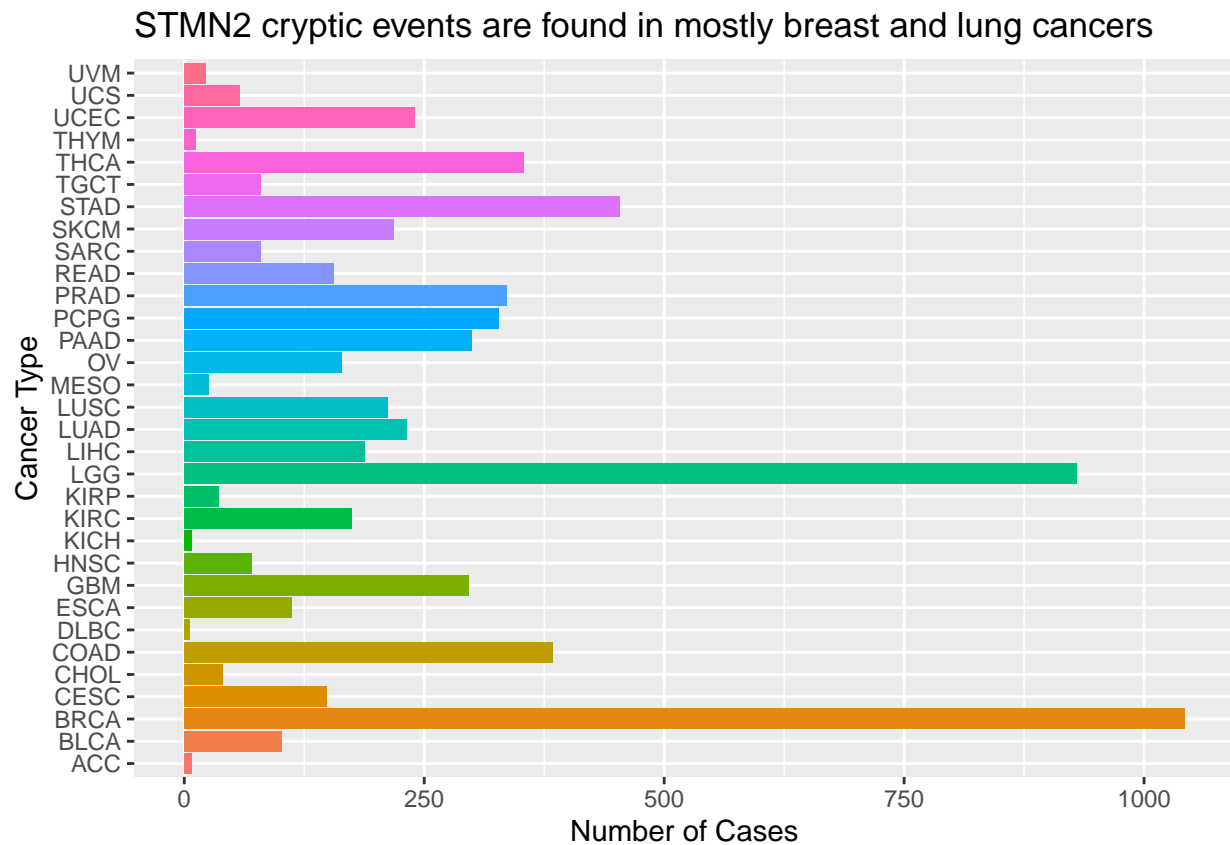# Clinical, gene and mutation data of cancers with cryptic STMN2 events
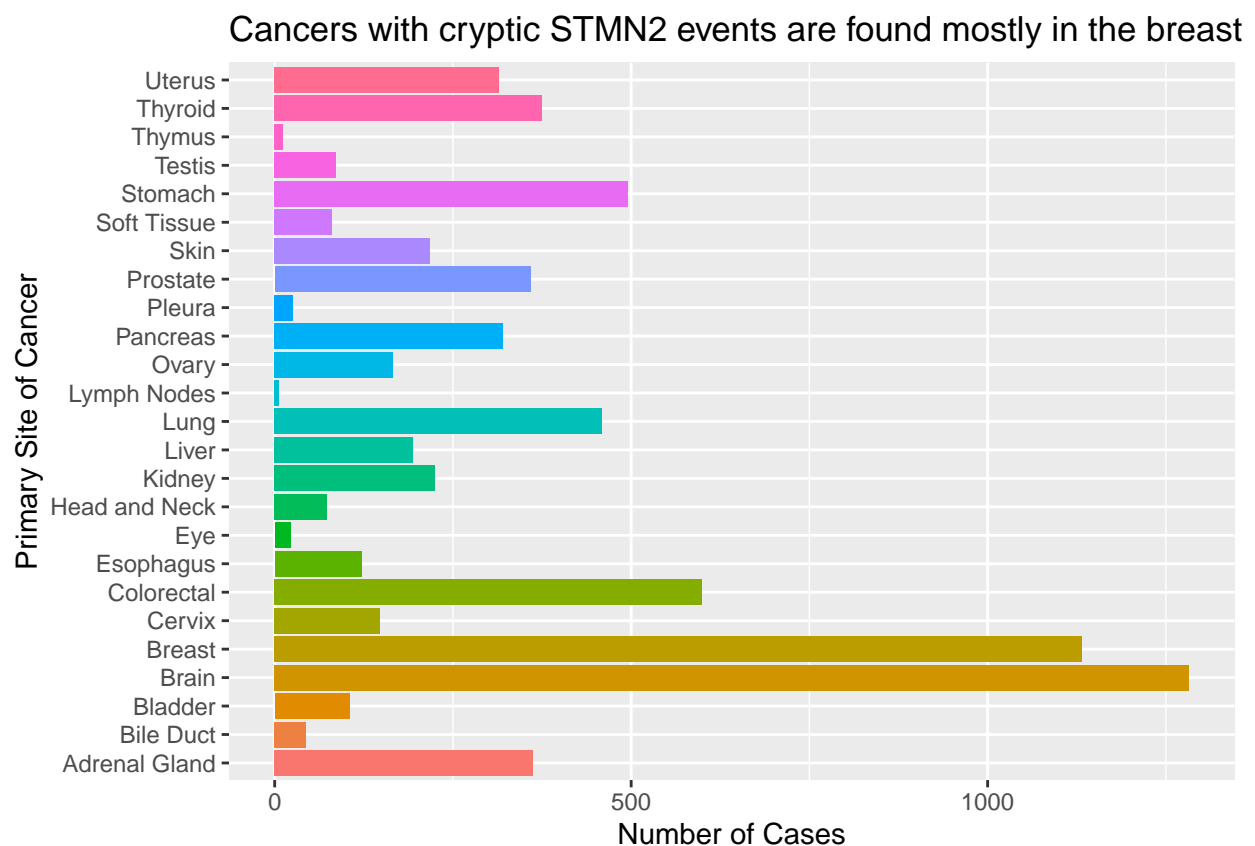
Cancer types with cryptic STMN2 events

```
STMN2_clinical |>
  ggplot(aes(x = cancer_type)) +
  geom_bar(aes(fill = cancer_type)) +
  coord_flip() +
  labs(
    x = "Cancer Type",
    y = "Number of Cases",
    title = "STMN2 cryptic events are found in mostly breast and lung cancers"
  ) +
  theme(legend.position = "none")
```

Primary sites of the cancers with cryptic STMN2 events

```
STMN2_clinical_jir |>
  drop_na() |>
  ggplot(aes(x = gdc_primary_site)) +
  geom_bar(aes(fill = gdc_primary_site)) +
  coord_flip() +
  labs(
    x = "Primary Site of Cancer",
    y = "Number of Cases",
    title = "Cancers with cryptic STMN2 events are found mostly in the breast and brain"
  ) +
  theme(legend.position = "none")
```

Cancers with cryptic STMN2 events are found mostly in the breast
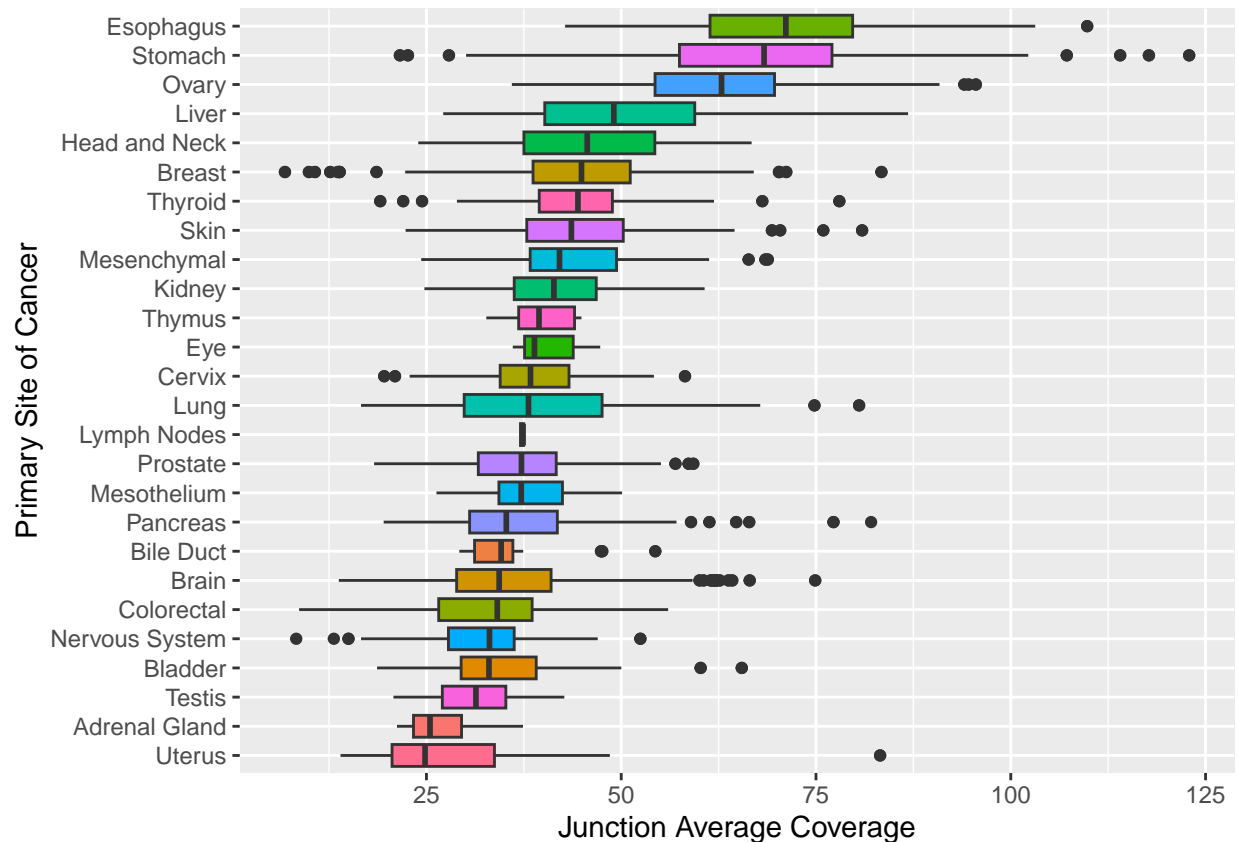

Cryptic STMN2 coverage in the different primary sites of cancers with cryptic STMN2 events

```
STMN2_clinical_jir |>
  drop_na() |>
  filter(cgc_primary_site != "") |>
  ggplot(aes(x = junction_avg_coverage, y = fct_reorder(cgc_primary_site,
```

```
                                              junction_avg_coverage, median))) +
  geom_boxplot(aes(fill = cgc_primary_site)) +
  labs(
    x = "Junction Average Coverage",
    y = "Primary Site of Cancer",
  ) +
  theme(legend.position = "none")
```


Which cancers have the most STMN2 events?

```
STMN2_events_different_cancers <- STMN2_clinical_jir |>
  drop_na() |>
  janitor::tabyl(cancer_type)

kable(STMN2_events_different_cancers,
      caption = "STMN2 events are found primarily in breast and brain cancer.")
```

Table 1: STMN2 events are found primarily in breast and brain cancer.

cancer_type	n	percent
Adrenocortical Carcinoma	8	0.0011071
Bladder Urothelial Carcinoma	105	0.0145309
Brain Lower Grade Glioma	963	0.1332688
Breast Invasive Carcinoma	1132	0.1566565
Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma	148	0.0204816
Cholangiocarcinoma	44	0.0060891
Colon Adenocarcinoma	436	0.0603377
Esophageal Carcinoma	122	0.0168835
Glioblastoma Multiforme	319	0.0441461
Head and Neck Squamous Cell Carcinoma	73	0.0101024
Kidney Chromophobe	8	0.0011071
Kidney Renal Clear Cell Carcinoma	179	0.0247717
Kidney Renal Papillary Cell Carcinoma	38	0.0052588
Liver Hepatocellular Carcinoma	194	0.0268475
Lung Adenocarcinoma	240	0.0332134
Lung Squamous Cell Carcinoma	219	0.0303072
Lymphoid Neoplasm Diffuse Large B-cell Lymphoma	6	0.0008303
Mesothelioma	26	0.0035981
Ovarian Serous Cystadenocarcinoma	166	0.0229726
Pancreatic Adenocarcinoma	320	0.0442845
Pheochromocytoma and Paraganglioma	354	0.0489898
Prostate Adenocarcinoma	359	0.0496817
Rectum Adenocarcinoma	163	0.0225574
Sarcoma	80	0.0110711
Skin Cutaneous Melanoma	218	0.0301688
Stomach Adenocarcinoma	496	0.0686410
Testicular Germ Cell Tumors	86	0.0119015
Thymoma	12	0.0016607
Thyroid Carcinoma	375	0.0518959
Uterine Carcinosarcoma	58	0.0080266
Uterine Corpus Endometrial Carcinoma	257	0.0355660
Uveal Melanoma	22	0.0030446

Where are the cancers located, which contain cryptic STMN2 events?

```
STMN2_events_primary_sites1 <- STMN2_clinical_jir |>
  drop_na() |>
  janitor::tabyl(gdc_primary_site)

kable(STMN2_events_primary_sites1, caption = ".")
```

Table 2: .

gdc_primary_site	n	percent
Adrenal Gland	362	0.0500969
Bile Duct	44	0.0060891
Bladder	105	0.0145309
Brain	1282	0.1774149
Breast	1132	0.1566565
Cervix	148	0.0204816
Colorectal	599	0.0828951
Esophagus	122	0.0168835
Eye	22	0.0030446
Head and Neck	73	0.0101024
Kidney	225	0.0311376
Liver	194	0.0268475
Lung	459	0.0635206
Lymph Nodes	6	0.0008303
Ovary	166	0.0229726
Pancreas	320	0.0442845
Pleura	26	0.0035981
Prostate	359	0.0496817
Skin	218	0.0301688
Soft Tissue	80	0.0110711
Stomach	496	0.0686410
Testis	86	0.0119015
Thymus	12	0.0016607
Thyroid	375	0.0518959
Uterus	315	0.0435926

```
STMN2_events_primary_sites2 <- STMN2_clinical_jir |>
  drop_na() |>
  filter(cgc_primary_site != "") |>
  janitor::tabyl(cgc_primary_site)

kable(STMN2_events_primary_sites2, caption = ".")
```

Table 3: .

cgc_primary_site	n	percent
Adrenal Gland	8	0.0011074
Bile Duct	44	0.0060908
Bladder	105	0.0145349
Brain	1282	0.1774640
Breast	1132	0.1566999
Cervix	148	0.0204873
Colorectal	599	0.0829181
Esophagus	122	0.0168882
Eye	22	0.0030454
Head and Neck	73	0.0101052
Kidney	225	0.0311462
Liver	194	0.0268549
Lung	459	0.0635382

cgc_primary_site	n	percent
Lymph Nodes	6	0.0008306
Mesenchymal	80	0.0110742
Mesothelium	26	0.0035991
Nervous System	354	0.0490033
Ovary	164	0.0227021
Pancreas	320	0.0442968
Prostate	359	0.0496955
Skin	218	0.0301772
Stomach	496	0.0686600
Testis	86	0.0119048
Thymus	12	0.0016611
Thyroid	375	0.0519103
Uterus	315	0.0436047