nCov2019数据分析

当前城市

当前显示的城市是：

In [1]:

```python
city_name = '深圳'
```

In [2]:

```python
%matplotlib inline

import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import data_util
import plot_util
```

In [3]:

```python
raw_data = data_util.load_data()
```
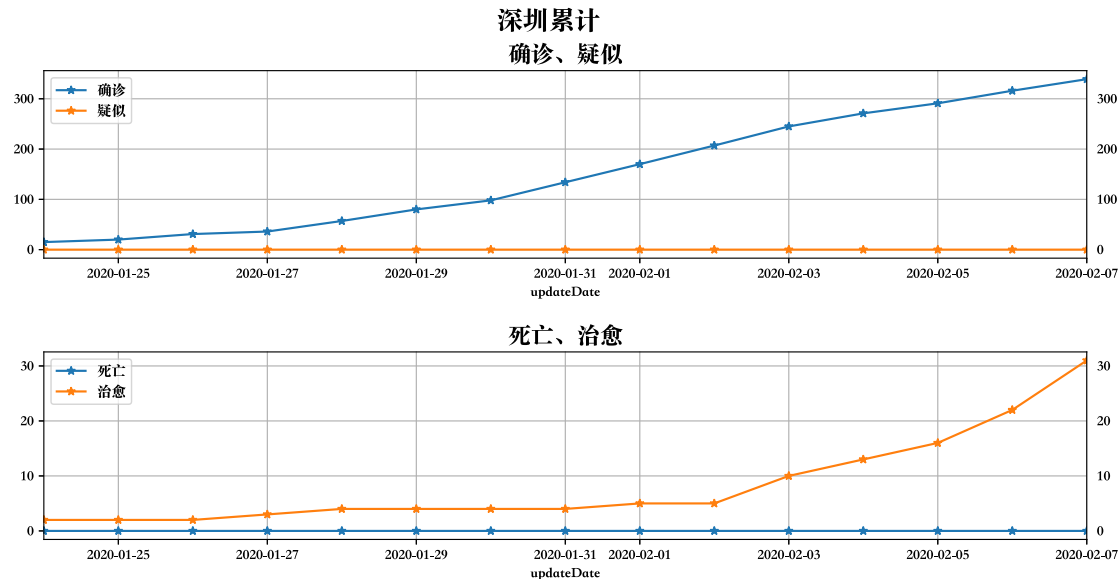
累计数量

```
city_daily_data = data_util.aggregate_daily(raw_data, city_nam
e)
city_daily_data = data_util.calculate_dead_cured_rate(city_dai
ly_data)
city_daily_data.tail(5)
```

	provinceName	cityName	confirmed	suspected	cured	dead
8510	广东省	深圳	245	0	10	0
6813	广东省	深圳	271	0	13	0
4582	广东省	深圳	291	0	16	0
2312	广东省	深圳	316	0	22	0
0	广东省	深圳	339	0	31	0

```
figure = plot_util.plot_conf_main(city_daily_data, city_name +
'累计')
```


增长速度

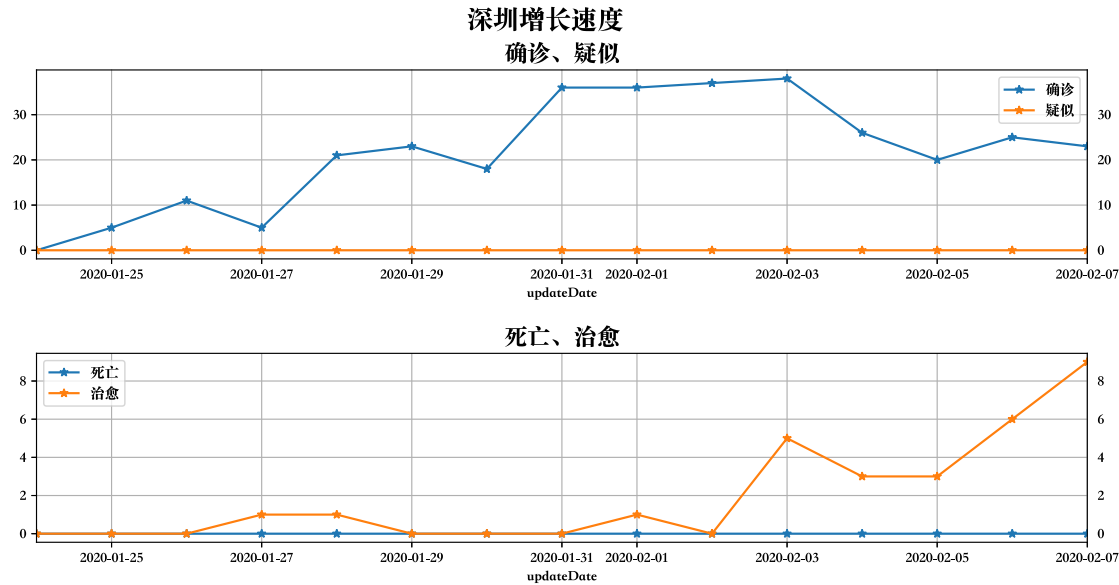```
city_daily_data_1st_derivative = data_util.diff(city_daily_dat
a)
city_daily_data_1st_derivative.tail()
```

Out[6]:

| | provinceName | cityName | confirmed | suspected | cured | dead |
|---|---|---|---|---|---|---|
| 8510 | 广东省 | 深圳 | 38.0 | 0.0 | 5.0 | 0.0 |
| 6813 | 广东省 | 深圳 | 26.0 | 0.0 | 3.0 | 0.0 |
| 4582 | 广东省 | 深圳 | 20.0 | 0.0 | 3.0 | 0.0 |
| 2312 | 广东省 | 深圳 | 25.0 | 0.0 | 6.0 | 0.0 |
| 0 | 广东省 | 深圳 | 23.0 | 0.0 | 9.0 | 0.0 |

In [7]:

```
figure = plot_util.plot_conf_main(city_daily_data_1st_derivati
ve, city_name + '增长速度')
```


增长加速度

```
city_daily_data_2nd_derivative = data_util.diff(city_daily_dat
a_1st_derivative)
city_daily_data_2nd_derivative.tail()
```
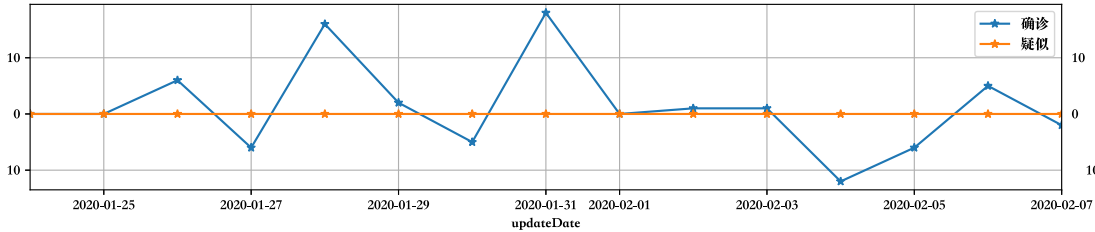
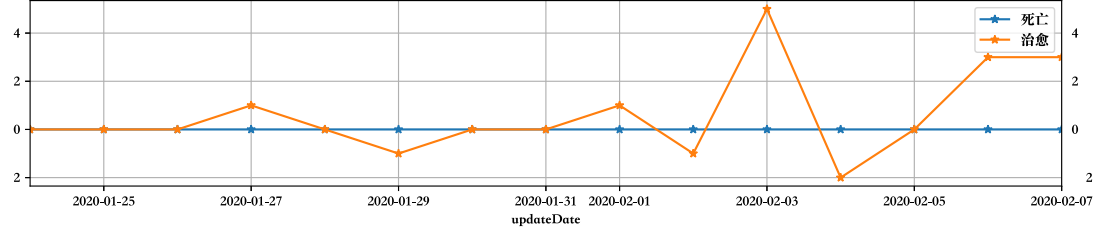|	provinceName	cityName	confirmed	suspected	cured	dead
8510	广东省	深圳	1.0	0.0	5.0	0.0
6813	广东省	深圳	-12.0	0.0	-2.0	0.0
4582	广东省	深圳	-6.0	0.0	0.0	0.0
2312	广东省	深圳	5.0	0.0	3.0	0.0
0	广东省	深圳	-2.0	0.0	3.0	0.0

```
figure = plot_util.plot_conf_main(city_daily_data_2nd_derivati
ve, city_name + '增长加速度')
```

```
/Library/Frameworks/Python.framework/Versions/3.7/
lib/python3.7/site-packages/matplotlib/backends/ba
ckend_agg.py:211: RuntimeWarning: Glyph 8722 missi
ng from current font.
  font.set_text(s, 0.0, flags=flags)
/Library/Frameworks/Python.framework/Versions/3.7/
lib/python3.7/site-packages/matplotlib/backends/ba
ckend_agg.py:180: RuntimeWarning: Glyph 8722 missi
ng from current font.
  font.set_text(s, 0, flags=flags)
/Library/Frameworks/Python.framework/Versions/3.7/
lib/python3.7/site-packages/matplotlib/textpath.py
:90: RuntimeWarning: Glyph 8722 missing from curre
nt font.
  font.set_text(s, 0.0, flags=LOAD_NO_HINTING)
/Library/Frameworks/Python.framework/Versions/3.7/
lib/python3.7/site-packages/matplotlib/textpath.py
:203: RuntimeWarning: Glyph 8722 missing from curr
ent font.
  glyph = font.load_char(ccode, flags=LOAD_NO_HINT
ING)
```


治愈率、死亡率

```
city_daily_data.tail(5)
```
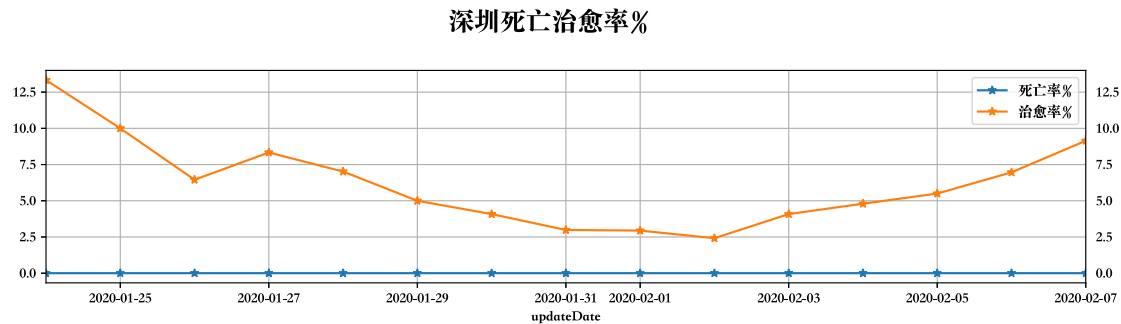
	provinceName	cityName	confirmed	suspected	cured	dead
8510	广东省	深圳	245	0	10	0
6813	广东省	深圳	271	0	13	0
4582	广东省	深圳	291	0	16	0
2312	广东省	深圳	316	0	22	0
0	广东省	深圳	339	0	31	0

```
figure = plot_util.plot_conf_dead_cured_ratio(city_daily_data,
city_name + '死亡治愈率%')
```


深圳死亡治愈率%