```
1 import json
2 import pandas as pd
4
5 def read_data_from_json(file_name):
      with open(file name, encoding='utf-8') as file:
           return json.load(file).get('data').get('list')
7
8
9
10 def process_data(input_data):
11
       infos = []
       for province in input_data:
12
13
           p_name = province.get('name')
           cities = province.get('city')
14
15
           for city in cities:
              city['p_name'] = p_name
16
              infos.append(city)
17
18
      df = pd.DataFrame(infos)
       df = df.rename(columns={'name': '城市/地区', 'conNum': '
19
   累计确诊', 'cureNum': '治愈',
                               'deathNum': '死亡','econNum': '
20
  现存确诊',
21
                               'zerodays': '最长清零天数', '
  p_name': '省份/直辖市'})
22
       df = df.astype({'累计确诊': int, '治愈': int, '死亡': int
     '现存确诊': int})
       df.to_excel('l5_data.xlsx', sheet_name='疫情', index=
23
  False)
24
25
26 data = read_data_from_json('l3.json')
27 process_data(data)
28
```