Supplementary Table 1. The main biologic agents on market

| Drugs            | FDA approval time | CFDA approval time | Standard regimen                                                                 | Half-life |
|------------------|-------------------|-------------------|-----------------------------------------------------------------------------------|-----------|
| Etanercept       | Apr.30, 2004      | Jul.23, 2012      | 50mg twice a week for the first 12 weeks, followed by 50mg weekly                  | 3.5 days  |
| Infliximab       | Sept.27, 2006     | Aug.22, 2013      | 5 mg / kg at weeks 0, 2, and 6 and thereafter every 8 weeks                      | 10 days   |
| Adalimumab       | Jan.22, 2008      | May.17, 2018      | 80 mg at week 0, 40 mg at week 1, and 40 mg every two weeks thereafter.           | 14 days   |
| Ustekinumab      | Sept.25, 2009     | Feb.21, 2019      | 45 mg at week 0 and 4, followed by every 12 weeks. The dosage is 90 mg for patients $\geq$100 kg. | 21 days   |
| Secukinumab      | Jan.21, 2015      | Apr.1, 2019       | 300 mg at weeks 0, 1, 2, 3 and 4, and then 300 mg every 4 weeks.                 | 27 days   |
| Ixekizumab       | Mar.22, 2016      | Sept.4, 2019      | 160 mg at week 0, 80 mg at 2, 4, 6, 8, 10 and then 80 mg every 4 weeks.          | 13 days   |
| Brodalumab       | Feb.15, 2017      | Not approved yet  | 210 mg at weeks 0, 1 and 2, followed by every 2 weeks.                           | 11 days   |
| Guselkumab       | Jul.13, 2017      | Dec.27, 2019      | 100 mg at week 0, week 4, and every 8 weeks thereafter.                           | 18 days   |
| Tildrakizumab    | Mar.21, 2018      | Not approved yet  | 100 mg at weeks 0 and 4 and then every 12 weeks.                                 | 23 days   |
| Risankizumab     | Apr.23, 2019      | Not approved yet  | 150 mg at week 0, week 4, and every 12 weeks thereafter.                          | 11 days   |