**Multimedia Appendix 1. Structured target templates and items.**

When we developed clinical template models, user needs were the first priority. Then, in view of the lack of time, we chose the target template for them. The specific reasons for choosing the template are explained in the table below.

| Pathology reports | Colon cancer | Stomach cancer | Liver cancer | Thyroid cancer | Lung cancer | Manually entered report | 2014–2015 |
|-------------------|--------------|----------------|-------------|----------------|-------------|------------------------|-----------|
| Bone marrow aspiration and biopsy report | Clinician request | 2015 |
| Pulmonary function test report | Manually entered report | 2015 |
| Bronchoscopy report | Automatically entered report from medical device | 2015 |
| Primary diagnosis list | Key information for clinical statistics | 2015 |
| Body measurements | Height | Weight | BMI | Abdominal circumference | Head circumference | Essential information of clinical observation | 2016 |
| Vital signs | Body temperature | Pulse | Respiration | Blood pressure | Essential information of clinical observation | 2016 |
| Allergies | Adverse drug reactions | Essential information of clinical observation | 2016 |
| Primary operation list | Key information on the operation record | 2016 |
| Blood tests | The most useful among laboratory results | 2016 |
| Gastrointestinal disease examination reports | Upper gastrointestinal disease examination report | Lower gastrointestinal disease examination report | High percentage of total number tests | 2016 |
| Radiology report | Brain magnetic resonance imaging | Extension of structured template | 2016 |
| Neurology progress report | Stroke record | Reduce missing entries | 2016 |
|--------------------------|--------------|------------------------|------|
| Care records summary     |              | Use for health exchanges | 2016 |