Detailed clinical and radiographic manifestations and protein chip profiling monitoring in the SARS patients under longitudinal follow-up were shown in Supplemental Data Figures 1-4.

With SAA being identified as one of the predominantly elevated biomarkers in SARS patients, its levels were correlated with the clinical findings and serial chest radiographic scores in 4 SARS patients as in the followings.

SARS PATIENT 1 (Supplemental Data Figure 1)

A 55 years-old lady with good past health contracted SARS from a household family member. She presented with fever and chills since April 18th and was hospitalized four days later. Her radiological features upon presentation demonstrated bilateral lower lobe consolidations and the RT-PCR test in throat swab for SARS-CoV RNA upon admission showed the presence of the virus. The patient was started on treatment with intravenous ribavirin and methylprednisolone together with potent broad-spectrum antibiotics on April 22nd. In view of her extensive pneumonic changes and rapid clinical deterioration, she was given two courses of pulse methylprednisolone and was transferred to intensive care unit (ICU) on the 4th day of admission. Subsequently a course of intravenous immunoglobulins (i.v. Ig) was also given. Despite a fulminant early clinical course, she progressively recovered without the need of mechanical ventilation and was discharged
on May 14\textsuperscript{th}.

Her radiographic score increased from 6 on April 23\textsuperscript{rd} to a peak value of 19 on April 30\textsuperscript{th}, indicating an initial steady deterioration in her pneumonia. The score then gradually dropped with recovery. The SAA showed an early substantial elevation on April 23\textsuperscript{rd} that peaked earlier than the radiographic score (both in the gel view and the histogram in Figure 5). However, it then gradually subsided along with the radiographic score to a nadir on May 17\textsuperscript{th}, which corresponded to a convalescent state when she had already been discharged on the 14\textsuperscript{th} May with the parameters monitored during a subsequent outpatient follow-up.

**SARS PATIENT 2 (Supplemental Data Figure 2)**

A 39 years-old nurse with otherwise good past health contracted SARS during work in another hospital. She presented with fever, chills, rigor, myalgia on April 28\textsuperscript{th}. Her chest radiograph revealed left middle zone consolidation upon admission on May 1\textsuperscript{st}.

Subsequent stool and nasopharyngeal aspirate samples revealed positive SARS-CoV RT-PCR results. She was managed as SARS on the second day of admission. Two pulses of methylprednisolone were given early in the course of the disease in view of her clinical and radiological deteriorations, the latter as reflected by a rise of radiographic score from May 3\textsuperscript{rd} to May 9\textsuperscript{th}. Protein chip profiling also revealed the levels of SAA rising from May 3\textsuperscript{rd} to 8\textsuperscript{th}. Radiographic score reached a peak level on the May 9\textsuperscript{th} and then a significant drop of score was observed from May 9\textsuperscript{th} to 17\textsuperscript{th}, which correlated with her progressive clinical recovery during the period. There was no need for intensive care, and
she was discharged on May 21st. A significantly high SAA level was still present on May 9\textsuperscript{th} but it soon dropped in a similar fashion as the radiographic score. The rise and fall of the levels of this protein also appeared to precede those of radiographic score with the protein peaking on May 8\textsuperscript{th} and radiographic score peaking on May 9\textsuperscript{th}.

**SARS PATIENT 3 (Supplemental Data Figure 3)**

A 52 years-old man contracted the virus from another inpatient when he was admitted for the investigation and management for a newly diagnosed carcinoma of pancreas in another hospital. He presented with fever, chills, productive cough, myalgia since May 2\textsuperscript{nd} and was transferred to us for further management on May 6\textsuperscript{th}. His initial chest radiographs revealed left upper lobe consolidation. He was managed as SARS on the next day. The clinical course has been uneventful and uncomplicated and no intensive care monitoring was necessary. His pneumonia had never been extensive and hence his radiographic score showed just a low level of lung involvement from May 8\textsuperscript{th} to 15\textsuperscript{th}, and then totally subsided from May 16\textsuperscript{th} onwards. SAA level was essentially low throughout the monitoring period. Despite negative SARS-CoV RT-PCR on the upper respiratory specimens on May 7\textsuperscript{th} and other specimens afterwards, repeated paired serum anti-SARS CoV antibody tests in two different laboratories both showing significantly elevated antibody titers confirmed the SARS-CoV infection. The patient was finally discharged on May 27\textsuperscript{th}. His carcinoma of pancreas was subsequently managed conservatively with palliative measures by surgeons and clinical oncologists.

**SARS PATIENT 4 (Supplemental Data Figure 4)**
A 64 years-old lady, with history of nasopharyngeal carcinoma diagnosed and treated by radiotherapy ten years ago, contracted SARS during her hospital stay for the treatment of cellulites. Her initial chest radiograph on April 16th did not show any abnormalities, but in a subsequent high resolution CT scan, hazy ground glass-like opacity in the right lower lobe of the lung compatible with inflammatory or infective change was observed. Subsequently, she was confirmed to have SARS by positive RT-PCR from the throat and nasopharyngeal swabs. She was treated as SARS on April 18th. Her chest radiographs began to deteriorate with development of bilateral lower zone consolidations since April 19th and progressed rapidly despite treatment. She was transferred to intensive care on April 23rd and was soon mechanically ventilated. The radiographic score was maintained high after ICU admission, and her SAA levels started to rise at this time with subsequent further increase of the levels (on May 12th) just 1 day before she was found to have superimposed bacterial infections with Methicillin-resistant Staphylococcus aureus (MRSA) and Stenotrophomonas maltophilia from tracheal aspirates, on top of the candida septicemia that was identified on May 6th. Coinciding with multiple infections during that period, there was a substantial elevation of SAA levels. She was given potent antibiotics targeting towards the organisms and thereafter a subsequent fall of the SAA levels was observed, although radiological picture did not alter much at that stage. However, subsequent workup also revealed the presence of cytomegalovirus antigenemia. At that stage, despite the previous use of ribavirin, the patient was still harboring SARS-CoV as indicated by positive RT-PCR from various sources. Despite active treatment and support, she still went into a progressive downhill course and succumbed on May 30th.