Rhinitis and Rhinosinusitis Committee

Chair: Luo Zhang MD, PhD

Coupled with the rapid economic development of Asian Pacific countries, the lifestyles of their citizens have become more westernized in terms of urbanization and dietary habits, and the prevalence of upper airway diseases especially involving chronic rhinosinusitis (CRS) and allergic rhinitis (AR) have increased rapidly. Asia, the most populous and largest continent in the world, accounts for 59.9% of the world's total population. It is also the most active region in the world economy. In 2018, the gross domestic product (GDP) of Asia as a whole accounted for 35.7% of the world's total. Furthermore, according to the World Bank Group's latest data, China, Japan, and Korea account for 34.6% of the total population in the Asia region, whereas the total GDP accounts for 65.9%, which potentially indicates the huge burden due to diseases as well as the accompanying great economic capacity in this region. Precision medicine has just started to be appreciated for the upper airways in Europe and the United States, whereas biotherapeutics has also reached the market more recently and has further increased research. Accordingly, Asian Pacific scholars are studying the underling special mechanisms and the corresponding optimal approaches in pharmacotherapy, biological agents, and surgery in the evolving Asian Pacific disease landscape. For example, studies mapping the eosinophilic shift in CRS patients have been of great importance in promoting better understanding of the disease itself and optimizing the management of CRS and AR in Asia.

Chronic rhinosinusitis (CRS) is a prevalent inflammatory disorder of the sinonasal mucosa. Diverse immune cells and corresponding inflammatory mediators orchestrate this heterogeneous disease spectrum, which comprises CRS with nasal polyps (CRSwNP) and CRS without nasal polyps (CRSsNP). The inflammatory patterns of CRS have been designated to be eosinophilic and neutrophilic. In general, while CRSsNP is characterized by predominantly neutrophilic inflammation with increased levels of T helper 1 (Th1) cytokines, CRSwNP is often characterized by eosinophilic inflammation with elevated levels of Th2 cytokines. The identification of the inflammatory patterns of CRS will not only improve understanding of the pathophysiological mechanism but will aid in

selecting treatment strategies. The presence of tissue eosinophilia in CRSwNP is frequently associated with extensive sinus disease, higher postoperative symptom scores, less improvement in both disease-specific and general quality of life, and a higher polyp recurrence rate. However, no consistent diagnostic criteria for CRSwNP with eosinophilic inflammation have been established.

In the next 2-3 years, the objectives of this committee are to facilitate collaboration amongst rhinologists across the Asia Pacific Region and to write 2-3 consensus papers on the diagnosis of refractory eosinophilic CRSwNP, the prevalence of AR by summarizing the related literatures.