A Multicenter, Randomized, Single-blind Evaluation of the Efficacy of 0.15% Hyaluronic Acid versus 0.05%

Cyclosporine A in Moderate to Severe Dry Eye Syndrome

Ji Eun Lee<sup>1,2†</sup>, Sangyoon Kim<sup>1,2†</sup>, Hyung Keun Lee<sup>3</sup>, Tae-Young Chung<sup>4</sup>, Jae Yong Kim<sup>5</sup>, Chul Young Choi<sup>6</sup>, So Hyang Chung<sup>7</sup>, Dong Hyun Kim8, Kyoung Woo Kim9, Jin Kwon Chung10, Gyu Yeon Hwang11, Ho Sik Hwang12, Jin Hyung Kim13, Joon Young Hyon14\*

<sup>1</sup>Department of Ophthalmology, Pusan National University Yangsan Hospital, Pusan National University School of Medicine, Yangsan, Korea

<sup>2</sup>Research Institute for Convergence of Biomedical Science and Technology, Pusan National University Yangsan Hospital, Pusan National

University School of Medicine, Yangsan, Korea

<sup>3</sup>Institute of Vision Research, Department of Ophthalmology, Yonsei University College of Medicine, Seoul 06273, Korea.

<sup>4</sup>Department of Ophthalmology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea

<sup>5</sup>Department of Ophthalmology, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Republic of Korea

<sup>6</sup>Department of Ophthalmology, Kangbuk Samsung Hospital, School of Medicine, Sungkyunkwan University, Seoul 03181, Korea

<sup>7</sup>Department of Ophthalmology, The Catholic University of Korea Seoul St. Mary's Hospital, Seoul, Korea

<sup>8</sup>Department of Ophthalmology, Gil Medical Center, Gachon University College of Medicine, Incheon, Korea.

<sup>9</sup>Department of Ophthalmology, Chung-Ang University Hospital, Chung-Ang University College of Medicine, Seoul, Korea

<sup>10</sup>Department of Ophthalmology, Soonchunhyang University College of Medicine, Soonchunhyang University Seoul Hospital, Seoul 140-743,

Republic of Korea

<sup>11</sup>Department of Ophthalmology, KIM's Eye Hosptial, Seoul, Korea

<sup>12</sup>Department of Ophthalmology, Yeouido St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Seoul

<sup>13</sup>Department of Ophthalmology, Paik Hospital, Ilsan, Inje Medical College, Korea.

<sup>14</sup>Department of Ophthalmology, Seoul National University Bundang Hospital, Seoul National University College of Medicine, Seongnam,

Republic of Korea

†These authors contributed equally to this work.

\*Corresponding author:

Joon Young Hyon, MD, PhD

Department of Ophthalmology, Seoul National University Bundang Hospital, Seongnam, Korea

82 Gumi-ro 173beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea

TEL: +82-31-787-7379

FAX: +82-31-787-4057

E-mail: jyhyon@gmail.com

## **SUPPLEMENTARY TABLES**

Supplementary table S1. The number of right eyes included in each group

	HA 0.15%	CsA 0.05%+CMC 0.5%	HA 0.15%+CsA 0.05%
Right eye, number (%)	81 (66.39)	86 (71.07)	75 (61.98)

**Supplementary table S2. Baseline severity proportion of OSDI score.** There is no statistical difference between groups (p>0.05)

	HA 0.15%	CsA 0.05%+CMC 0.5%	HA 0.15%+CsA 0.05%
Under 13, number (%)	25 (20.49)	27 (22.31)	26 (22.31)
Mild(13~22), number (%)	27 (22.13)	24 (19.83)	29 (23.77)
Moderate(23~32), number (%)	26 (21.31)	21 (17.35)	26 (21.31)
Severe(33~100), number (%)	44 (36.06)	49 (40.49)	41 (33.60)

**Supplementary table S3. Baseline severity proportion of eyes with corneal staining.** There is no statistical difference between groups (p>0.05)

	HA 0.15%	CsA 0.05%+CMC 0.5%	HA 0.15%+CsA 0.05%
Grade 1, number (%)	-	-	-
Grade 2, number (%)	97(79.50)	102(84.29)	101(83.47)
Grade 3, number (%)	20(16.39)	19(15.70)	18(14.75)
Grade 4, number (%)	5 (4.09)	-	3 (2.45)