## Nationwide incidence and treatment pattern of retinopathy of prematurity in South Korea using the 2007-2018 national health insurance claims data

Eun Hee Hong¹,+, Yong Un Shin¹,+, Gi Hwan Bae², Young Jin Choi³, Seong Joon Ahn¹, Lucia Sobrin⁴, Rimkyung Hong¹, Inah Kim²,+, Heeyoon Cho¹,+

<sup>&</sup>lt;sup>1</sup>Department of Ophthalmology, Hanyang University College of Medicine, Seoul, Korea

<sup>&</sup>lt;sup>2</sup>Department of Occupational and Environment Medicine, Hanyang University College of Medicine, Seoul, Korea

<sup>&</sup>lt;sup>3</sup>Department of Pediatrics, Hanyang University College of Medicine, Seoul, Korea

<sup>&</sup>lt;sup>4</sup>Department of Ophthalmology, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston, MA, USA

<sup>\*</sup>Corresponding Authors: Heeyoon Cho, MD, PhD, hycho@hanyang.ac.kr

<sup>\*</sup>Co-corresponding Author: Inah Kim, MD, MPH, PhD, inahkim@hanyang.ac.kr

<sup>&</sup>lt;sup>+</sup>These authors (Eun Hee Hong and Yong Un Shin) contributed equally to this work.

Supplementary Table S1. Annual number of total newborns and premature infants identified in this study during the study period (2007 through 2018).

		Total		Male	Female	
	Total newborns	Premature infants (GA < 37 wks)	Total newborns	Premature infants (GA < 37 wks)	Total newborns	Premature infants (GA < 37 wks)
Year	40.6.022	0.266	255.052	4.500	240.050	2.046
2007	496,822	8,366	255,872	4,520	240,950	3,846
2008	465,892	9,890	240,119	5,456	225,773	4,434
2009	444,849	9,667	229,351	5,167	215,498	4,500
2010	470,171	10,926	242,901	5,901	227,270	5,025
2011	471,265	11,330	242,121	6,240	229,144	5,090
2012	484,550	12,451	248,958	6,770	235,592	5,681
2013	436,455	12,414	223,883	6,830	212,572	5,584
2014	435,435	12,790	223,356	6,949	212,079	5,841
2015	438,420	14,449	224,906	7,917	213,514	6,532
2016	406,243	14,139	208,064	7,715	198,179	6,424
2017	357,771	13,003	184,308	7,141	173,463	5,862
2018	326,822	12,539	167,686	6,927	159,136	5,612
Overall	5,234,695	141,964	2,691,525	77,533	2,543,170	64,431

GA, Gestational age

**Supplementary Table S2.** The annual percentage of ROP infants who underwent treatment according to the treatment type and the GA groups.

		Overall (GA < 37wks)				GA < 28wks				$28$ wks $\leq$ GA $\leq$ 37wks			
	ROP (n)	Surgery (n, %)	Retinal ablation (n, %)	<b>Total</b> (n, %)	ROP (n)	Surgery (n, %)	Retinal ablation (n, %)	Total (n, %)	ROP (n)	Surgery (n, %)	Retinal ablation (n, %)	Total (n, %)	
Year	()	(, / - /	(, / -/	(, /)	()	(, / - )	(, / -/	(, 1.0)	()	(, , -)	(, / -/)	(, , -)	
2007	3308	14 (0.4%)	149 (4.5%)	154 (4.7%)	141	5 (3.6%)	40 (28.4%)	43 (30.5%)	3167	9 (0.3%)	109 (3.4%)	111 (3.5%)	
2008	3687	14 (0.4%)	115 (3.1%)	122 (3.3%)	143	2 (1.4%)	32 (22.4%)	32 (22.4%)	3544	12 (0.3%)	83 (2.3%)	90 (2.5%)	
2009	3579	6 (0.2%)	113 (3.2%)	115 (3.2%)	142	1 (0.7%)	29 (20.4%)	30 (21.1%)	3437	5 (0.2%)	84 (2.4%)	85 (2.5%)	
2010	3656	7 (0.2%)	104 (2.8%)	105 (2.9%)	97	0 (0.0%)	27 (27.8%)	27 (27.8%)	3559	7 (0.2%)	77 (2.2%)	78 (2.2%)	
2011	3702	13 (0.4%)	126 (3.4%)	132 (3.6%)	200	9 (4.5%)	59 (29.5%)	64 (32.0%)	3502	4 (0.1%)	67 (1.9%)	68 (1.9%)	
2012	3794	6 (0.2%)	121 (3.2%)	124 (3.3%)	283	4 (1.4%)	57 (20.1%)	58 (20.5%)	3511	2 (0.1%)	64 (1.9%)	66 (1.9%)	
2013	3673	3 (0.1%)	97 (2.6%)	98 (2.7%)	229	0 (0.0%)	53 (23.1%)	53 (23.1%)	3444	3 (0.1%)	44 (1.3%)	45 (1.3%)	
2014	3623	8 (0.2%)	98 (2.7%)	99 (2.7%)	216	5 (2.3%)	65 (30.1%)	65 (30.1%)	3407	3 (0.1%)	33 (1.0%)	34 (1.0%)	
2015	3635	4 (0.1%)	96 (2.6%)	99 (2.7%)	247	1 (0.4%)	64 (25.9%)	64 (25.9%)	3388	3 (0.1%)	32 (0.9%)	35 (1.0%)	
2016	3546	0 (0.0%)	72 (2.0%)	72 (2.0%)	207	0 (0.0%)	43 (20.8%)	43 (20.8%)	3339	0 (0.0%)	29 (0.9%)	29 (0.9%)	
2017	3154	5 (0.2%)	70 (2.2%)	73 (2.3%)	184	2 (1.1%)	47 (25.5%)	48 (26.1%)	2970	3 (0.1%)	23 (0.8%)	25 (0.8%)	
2018	2943	4 (0.1%)	53 (1.8%)	53 (1.8%)	151	2 (1.3%)	34 (22.5%)	34 (22.5%)	2792	2 (0.1%)	19 (0.7%)	19 (0.7%)	
Overall	42300	84 (0.2%)	1214 (2.9%)	1246 (3.0%)	2240	31 (1.4%)	550 (24.6%)	561 (25.0%)	40060	53 (0.1%)	664 (1.7%)	685 (1.7%)	

GA, Gestational age; ROP, retinopathy of prematurity