Severe asthma registry through the international collaboration: ISAR in Korea

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ERS CONGRESS | 2024
7-11 September | Vienna, Austria

#ERSCONGRESS

ISAR

ISAR Steering Committee Meeting

Saturday 7th September, 14:00 – 14:45 CET

ERS Congress 7–11 September 2024 in Vienna, Austria

opc Global

ISAR Research Published in 2023 and 2024

FIRE[1]

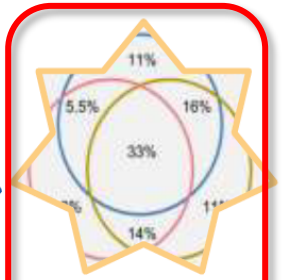
Anti-IL5/5R was superior in reducing asthma exacerbations and LTOCS use

Slide deck:

GLITTER II[2]

Biologics reduce exacerbations, improve asthma control and reduce LTOCS use in patients with high steroid exposure

Web link



PRISM I[3] + PRISM II[4]

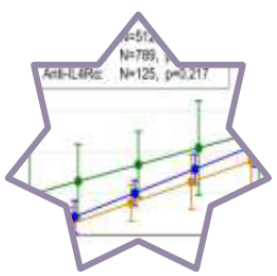
- **High burden of comorbidities**
- **CRS +/- NP key components in predicting successful treatment with biologics**

Web link
Slide deck

BEAM[5]

Response to biologics increases with greater pre-biologic impairment

Slide deck



IGNITE[6]

Higher BEC and FeNO levels associated with larger improvement in lung function following biologic initiation

Slide deck

Exacerbation rates in SA[7]

Considerable heterogeneity in severe exacerbation rates in patients with severe asthma

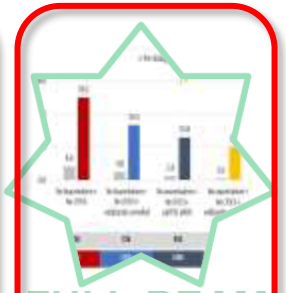
Slide deck

FULL BEAM Response[8]

High response does not mean remission

Need for flexible interpretation of response to biologics

Slide deck



FULL BEAM Remission[9]

Greater chance of remission if less severe impairment and shorter asthma duration at initiation of biologics

Slide deck

LUMINANT[10]

Biologics are initiated in patients who have worse baseline impairments than non-initiators despite similar biomarker levels

Slide deck

BEC: Blood Eosinophil Count; CRS: Chronic Rhinosinusitis; FeNO: Fractional exhaled Nitric Oxide; IL5/5R: Interleukin 5/5-receptor; LTOCS: Long-term oral corticosteroids; NP: Nasal Polyposis, SA: Severe Asthma

1. Pfeffer P, et al. Allergy 2023;78:1934-48. doi:10.1111/all.15711 2. Chen W, et al. J Allergy Clin Immunol Pract 2023;11:2732-47. doi:10.1016/j.jaip.2023.05.044
3. Scelo G, et al. Ann Allergy Asthma Immunol 2024;132:42-53. doi:10.1016/j.anai.2023.08.021 4. Wechsler M, et al. Am J Respir Crit Care Med 2024;209:262-72. doi:10.1164/rccm.202305-0808OC
5. Perez-de-Llano L, et al. Ann Allergy Asthma Immunol, In press. doi:10.1016/j.anai.2023.12.023 6. Porsbjerg C, et al.. Frontiers in Immunology. 2024 Apr 19;15. Epub 2024 Apr 19. doi: 10.3389/fimmu.2024.1361891, 10.3389/fimmu.2024.1361891/full#supplementary-material, 7. Lee, Tae Yoon et al., International Variation in Severe Exacerbation Rates in Patients With Severe Asthma, CHEST 2024, DOI:https://doi.org/10.1016/j.chest.2024.02.029, 8.Scelo, G. et al., J Allergy Clin Immunol Pract. 2024 May 19:S2213-2198(24)00530-0. doi: 10.1016/j.jaip.2024.05.016. 9. Perez-de-Llano, L. et al., Am J Respir Crit Care Med 2024, https://doi.org/10.1164/rccm.202311-2192OC, 10. Denton E, et al. *Allergy*. 2024. doi: 10.1111/all.16178

SOLAR II Update: Biologic users at lower risk (17%) of adverse events than non-initiators

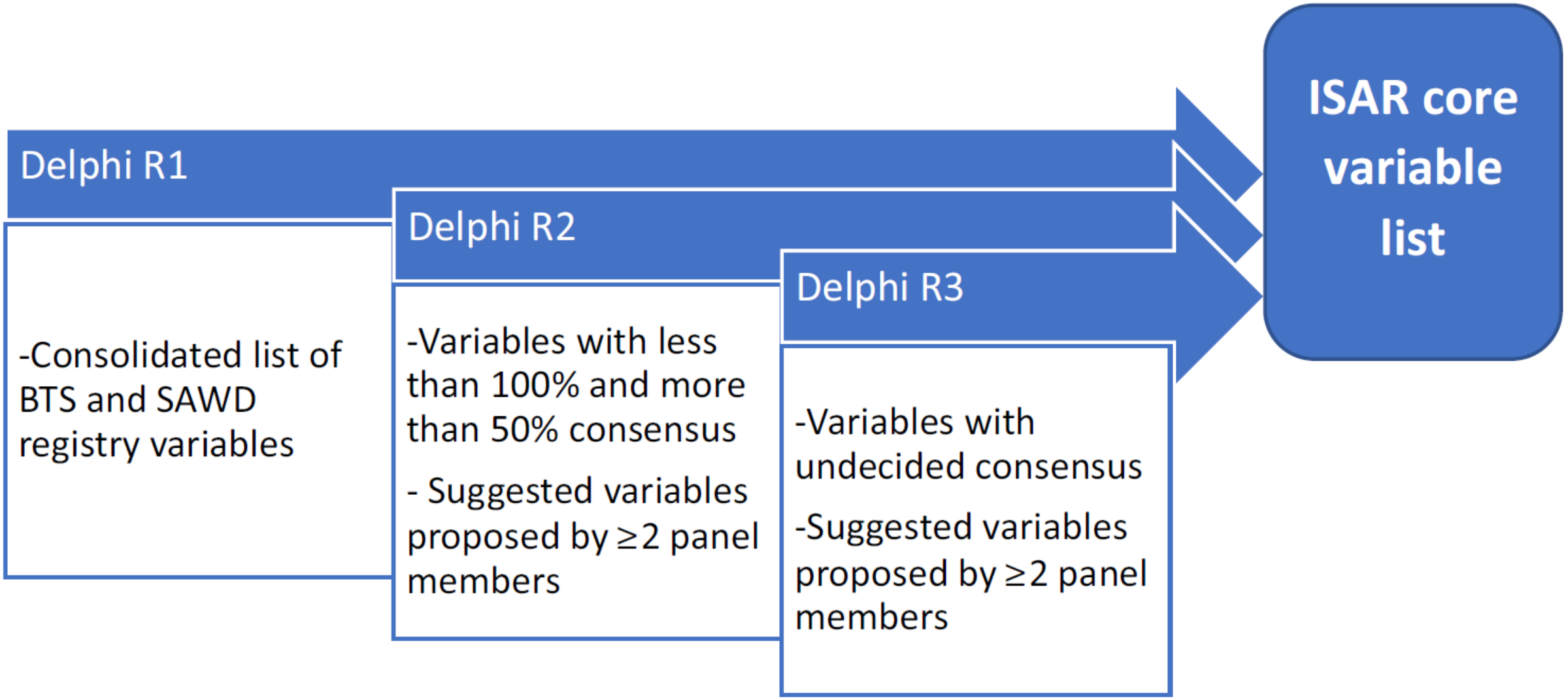
OCS: Oral corticosteroids, CVD: Cardiovascular disease, OPCRD: Optimum Patient Care Research Database, CI: Confidence interval

Original Article

Development of the International Severe Asthma Registry (ISAR): A Modified Delphi Study

Lakmini Bulathsinhala, MPH[a], Nevaashni Eleangovan, BSC[a], Liam G. Heaney, MD[b], Andrew Menzies-Gow, PhD, FRCP[c], Peter G. Gibson, MBBS, FRACP[d,e], Matthew Peters, PhD, MD[f], Mark Hew, MBBS, PhD, FRACP[g], Job F. M. van Boven, PharmD, PhD[h], Lauri Lehtimäki, MD[i], Eric van Ganse, MD, PhD, FRCP[j], Manon Belhassen, PhD[j], Erin S. Harvey, PhD[d,e], Luis Perez de Llano, MD, PhD[k], Anke H. Maitland-van der Zee, PharmD, PhD[l], Nikolaos G. Papadopoulos, MD, PhD[m,n], J. Mark FitzGerald, MB, MD, FRCPI, FERS, FRCPC[o], Celeste Porsbjerg, MD, PhD[p], G. Walter Canonica, MD[q,r], Vibeke Backer, MD, DMSci[p], Chin Kook Rhee, MD, PhD[s], Katia M. C. Verhamme, MD, PhD[t], Roland Buhl, MD[u], Borja G. Cosio, MD, PhD[v], Victoria Carter, BSc[a], Chris Price, LLB[a], Thao Le, BComm[a], Martina Stagno d'Alcontres, PhD[w], Gokul Gopalan, MD[x], Trung N. Tran, MD, PhD[x], and David Price, FRCGP[a,w,y]

Bulathsinhala L. J Allergy Clin Immunol Pract 2019; 7: 578-588.



Bulathsinhala L. J Allergy Clin Immunol Pract 2019; 7: 578-588.

Delphi Follow-Up | ISAR Variable List

7-Price-2017-ISAR ×

ISAR Email <isar@optimumpatientcare.org>
ISAR, David, Victoria, Chris, Lakmini, Veronica, Harika에게

10월 31일 (목) 오후 9:57

Dear ISC Members,

I hope this email finds you well.

We are reaching out as the ISAR team is conducting a **2024 Delphi Follow-Up** round to refine the variables collected in ISAR. We have carefully considered your feedback on the challenges in collecting ISAR variables and whether the current list aligns with our objectives.

As agreed at the ISC meeting during ERS 2024, we kindly ask you to vote on the following variables highlighted in the 'Delphi 2024' workbook attached:

- Do you want to keep **IgE** as a **core** variable at **FU**. YES/NO
- Do you want to keep **FeNO** at **baseline** as a **key** variable or change to **key "subject to reimbursement available"**.
- Do you want to keep **Adherence** as a **core** variable at **FU**. YES/NO
- Do you want to keep **Other Asthma Factors** as a **core** variable at both, **baseline** and **FU**. YES/NO

Please note, while we welcome additional comments on any variable, at this stage we are specifically requesting a YES/NO vote on column E 'Delphi 2024 question' for the highlighted variables in tabs 'Baseline' and 'Follow-up.'

When making your decisions, please keep in mind that ISAR DQ standards require 100% completion for Key Research variables and 90% for Core variables.

We kindly ask that you return your responses within 10 business days, by **end of day on November 14th**.

Thank you for your valuable participation.

Kind regards,
The ISAR team

ISAR Team
01223 967855

Observational & Pragmatic Research Institute
16 Bank Street, Norwich, Norfolk, NR3 1HA

OPRI
Observational & Pragmatic Research Institute

LinkedIn | Twitter

[Asthma Original Research]

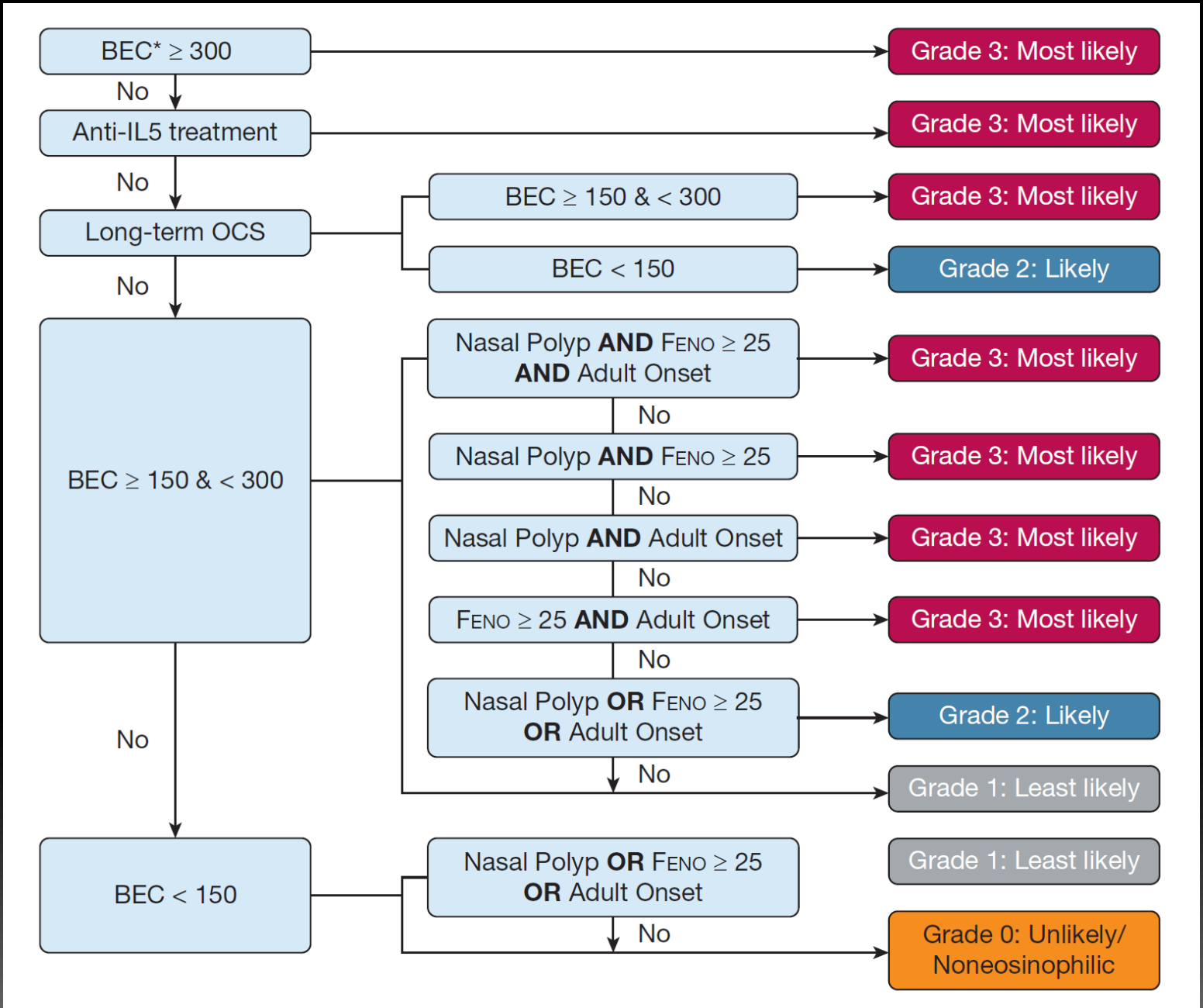
CHEST

Eosinophilic and Noneosinophilic Asthma

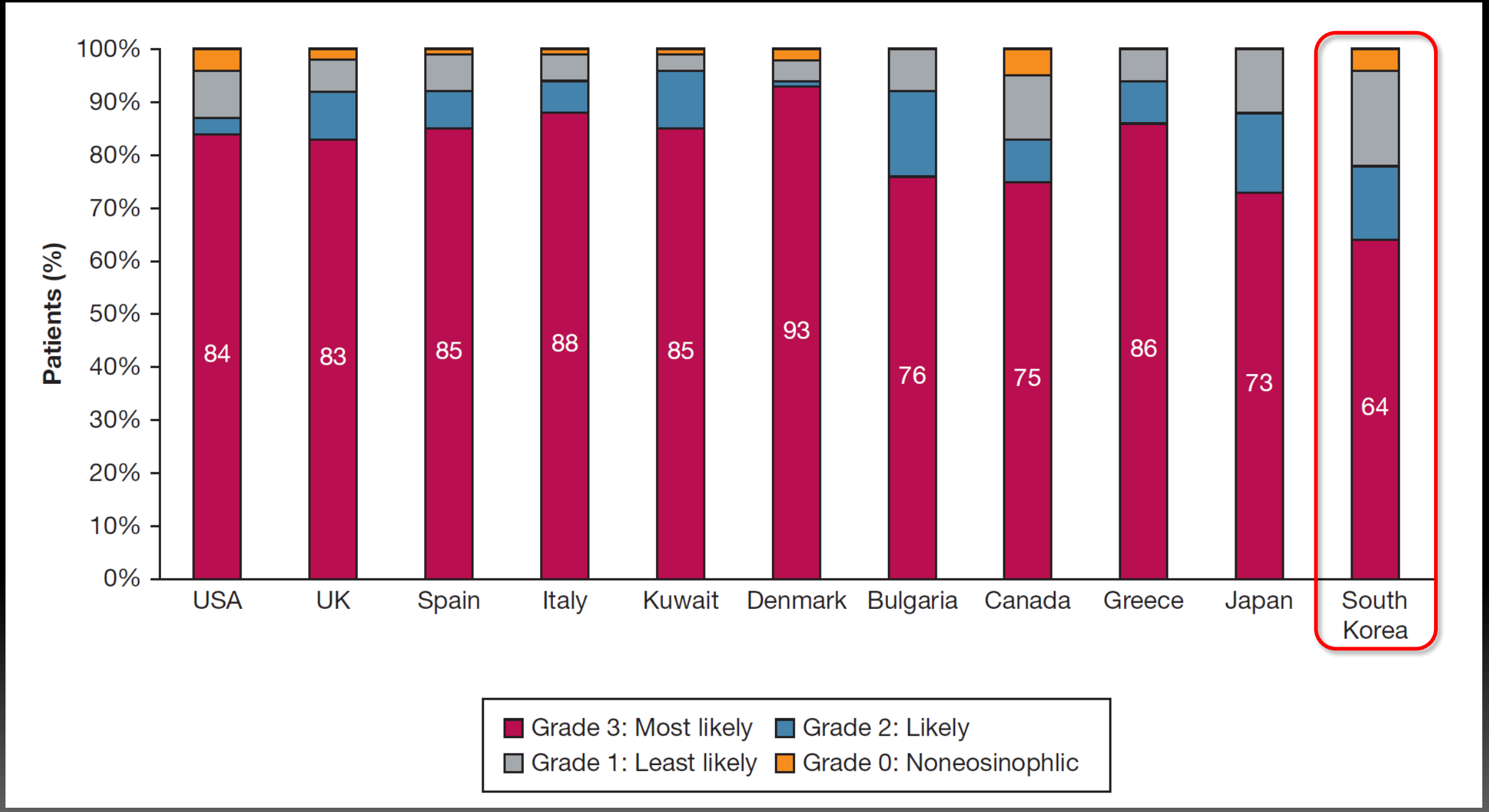
An Expert Consensus Framework to Characterize Phenotypes in a Global Real-Life Severe Asthma Cohort

Liam G. Heaney, MD; Luis Perez de Llano, MD, PhD; Mona Al-Ahmad, MD; Vibeke Backer, MD, DMSci; John Busby, PhD; Giorgio Walter Canonica, MD; George C. Christoff, MD, PhD, MPH; Borja G. Cosio, MD, PhD; J. Mark FitzGerald, MD; Enrico Heffler, MD, PhD; Takashi Iwanaga, MD, PhD; David J. Jackson, MBBS, PhD; Andrew N. Menzies-Gow, PhD; Nikolaos G. Papadopoulos, MD, PhD; Andriana I. Papaioannou, MD, PhD; Paul E. Pfeffer, PhD; Todor A. Popov, MD, PhD; Celeste M. Porsbjerg, MD, PhD; Chin Kook Rhee, MD, PhD; Mohsen Sadatsafavi, MD, PhD; Yuji Tohda, MD, PhD; Eileen Wang, MD, MPH; Michael E. Wechsler, MD; Marianna Alacqua, MD, PhD; Alan Altraja, MD, PhD; Leif Bjermer, MD, PhD; Unnur S. Björnsdóttir, MD; Arnaud Bourdin, MD, PhD; Guy G. Brusselle, MD, PhD; Roland Buhl, MD, PhD; Richard W. Costello, MB, MD; Mark Hew, MBBS, PhD; Mariko Siyue Koh, MBBS, FCCP; Sverre Lehmann, MD, PhD; Lauri Lehtimäki, MD, PhD; Matthew Peters, MD, PhD; Camille Taillé, MD, PhD; Christian Taube, MD; Trung N. Tran, MD, PhD; James Zangrilli, MD; Lakmini Bulathsinhala, MPH; Victoria A. Carter, BSc; Isha Chaudhry, MSc; Neva Eleangovan, BSc; Naeimeh Hosseini, MD; Marjan Kerkhof, MD, PhD; Ruth B. Murray, PhD; Chris A. Price, LLB; and David B. Price, MB BChir

Heaney LG. Chest 2021; 160: 814-830.



Heaney LG. Chest 2021; 160: 814-830.



Heaney LG. Chest 2021; 160: 814-830.

Special Article

Global Variability in Administrative Approval Prescription Criteria for Biologic Therapy in Severe Asthma

Celeste M. Porsbjerg, MD, PhD[a], Andrew N. Menzies-Gow, PhD, FRCP[b], Trung N. Tran, MD, PhD[c], Ruth B. Murray, PhD[d,e], Bindhu Unni, MSc[d,e], Shi Ling Audrey Ang, BSc[d,e], Marianna Alacqua, MD, PhD[f], Mona Al-Ahmad, MD, FRCPC[g], Riyad Al-Lehebi, MD, FRCPC[h], Alan Altraja, MD, PhD[i], Andrey S. Belevskiy, MD, PhD[j], Unnur S. Björnsdóttir, MD[k], Arnaud Bourdin, MD, PhD[l], John Busby, PhD[m], G. Walter Canonica, MD[n,o], George C. Christoff, MD, MPH, PhD[p], Borja G. Cosio, MD, PhD[q], Richard W. Costello, MB, MD, FRCPI[r], J. Mark FitzGerald, MD, FRCPC[s], João A. Fonseca, MD, PhD[t], Susanne Hansen, PhD[a,u], Liam G. Heaney, MD[v], Enrico Heffler, MD, PhD[n,o], Mark Hew, MBBS, PhD, FRACP[w,x], Takashi Iwanaga, MD, PhD[y], David J. Jackson, MBBS, MRCP (UK), PhD[z,aa], Janwillem W.H. Kocks, MD, PhD[e,bb,cc,dd], Maria Kallieri, MD[ee], Hsin-Kuo Bruce Ko, MD, PhD[ff], Mariko Siyue Koh, MBBS, MRCP (UK), FCCP[gg], Désirée Larenas-Linnemann, MD, FAAAAI, Dist.Intl.FACAAI[hh], Lauri A. Lehtimäki, MD, PhD[ii], Stelios Loukides, MD, FCCP[ee], Njira Lugogo, MD[jj], Jorge Maspero, PhD[kk,ll], Andriana I. Papaioannou, MD, PhD[ee], Luis Perez-de-Llano, MD, PhD[mm], Paulo Márcio Pitrez, MD[nn], Todor A. Popov, MD, PhD[oo], Linda M. Rasmussen, MD, PhD[pp], Chin Kook Rhee, MD, PhD[qq], Mohsen Sadatsafavi, MD, PhD[rr], Johannes Schmid, MD, PhD[ss], Salman Siddiqui, PhD, FRCP[tt], Camille Taillé, MD, PhD[uu], Christian Taube, MD[vv], Carlos A. Torres-Duque, MD[ww], Charlotte Ulrik, MD, DMSc, FERS[xx], John W. Upham, MBBS, PhD, FRACP[yy], Eileen Wang, MD, MPH[zz,aaa], Michael E. Wechsler, MD[bbb], Lakmini Bulathsinhala, MPH[d,e], Victoria Carter, BSc[d,e], Isha Chaudhry, MSc[d,e], Neva Eleangovan, BSc[d,e], Naeimeh Hosseini, MD[d,e], Mari-Anne Rowlands, PhD[d,e], David B. Price, FRCGP[d,e,ccc], and Job F.M. van Boven, PharmD, PhD[ddd] *Buenos Aires, Argentina; Brisbane, Queensland, and Melbourne, Victoria, Australia; Porto and*

Porsbjerg CM. J Allergy Clin Immunol Pract 2022; 10: 1202-1216.

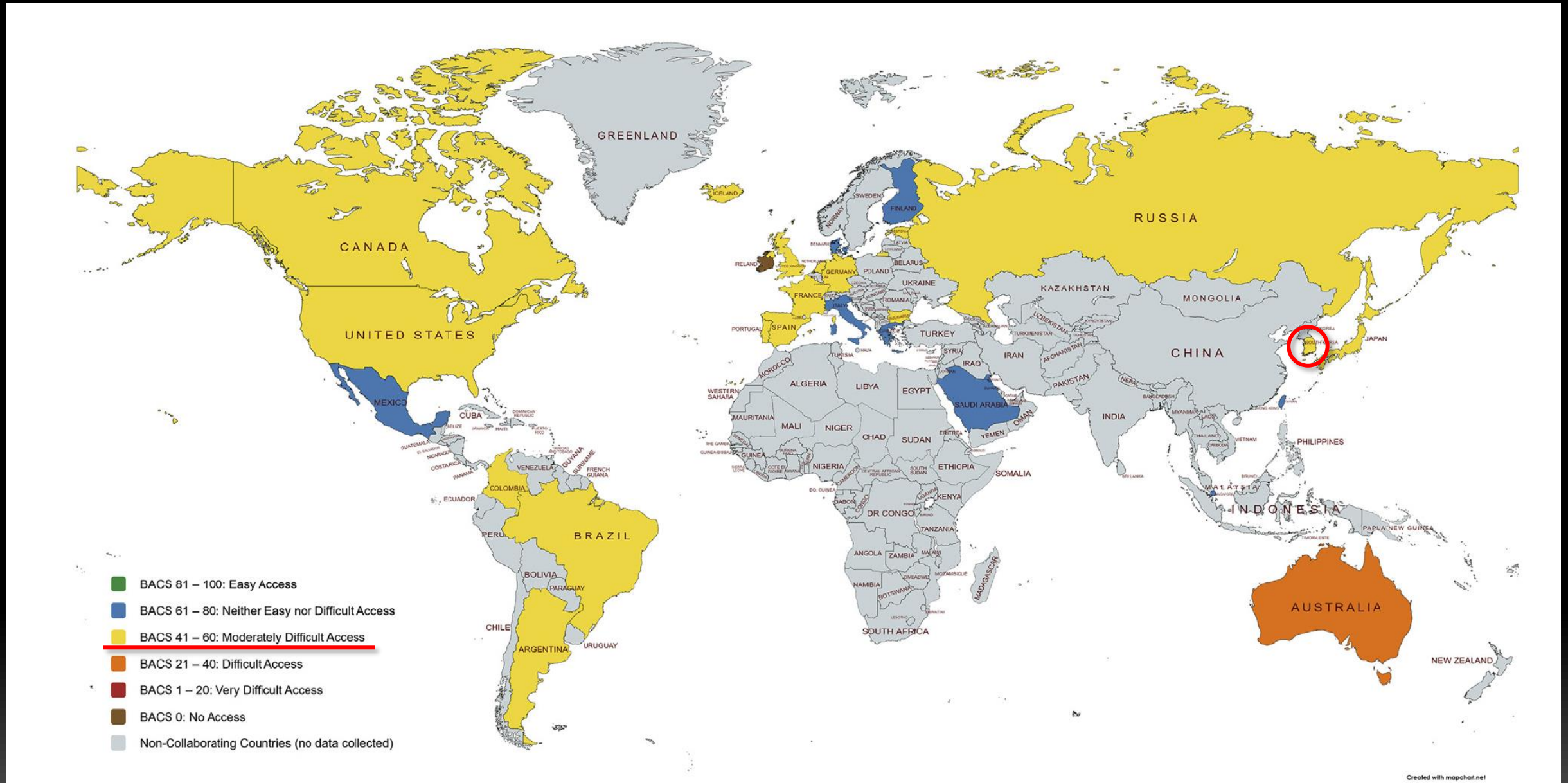
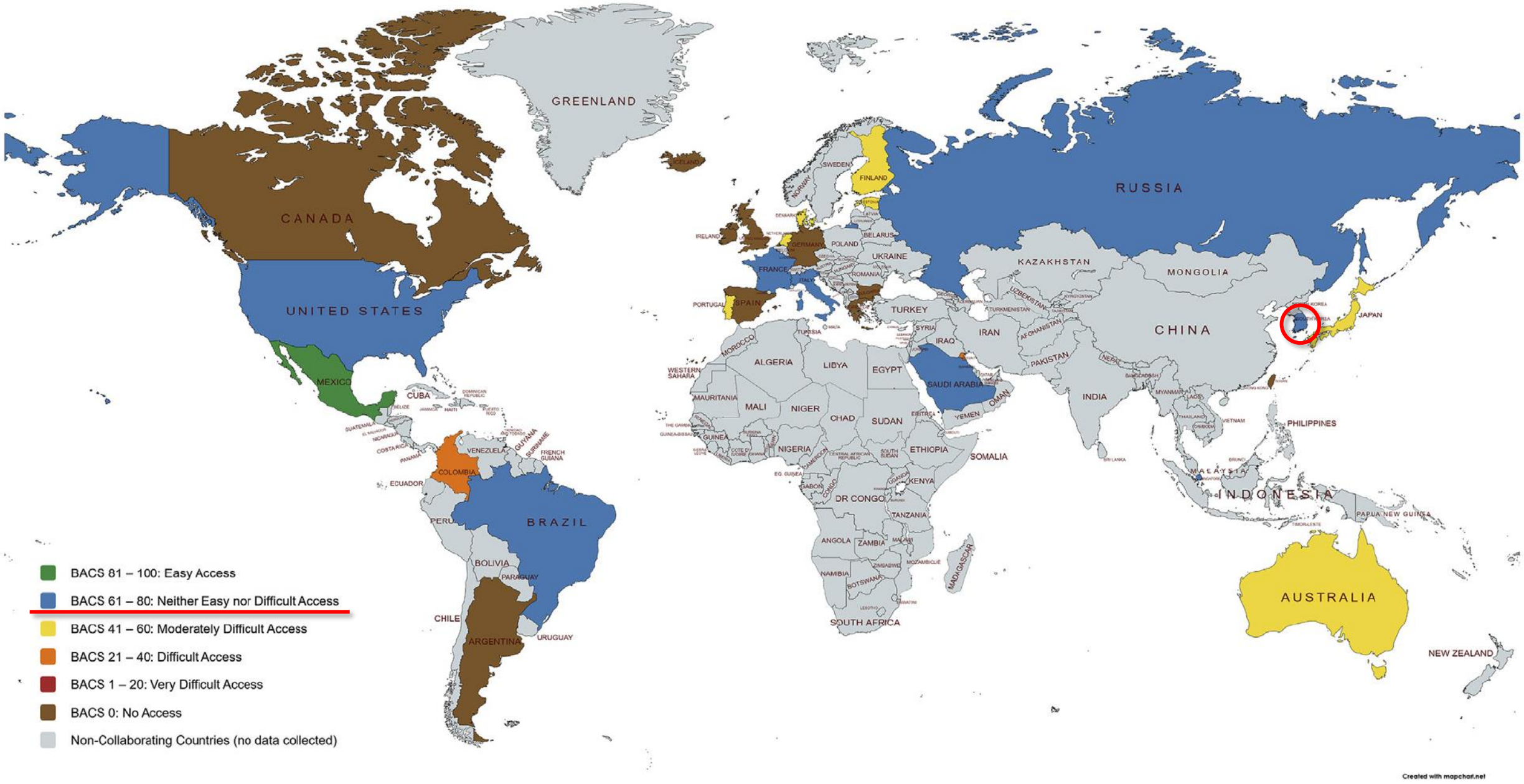


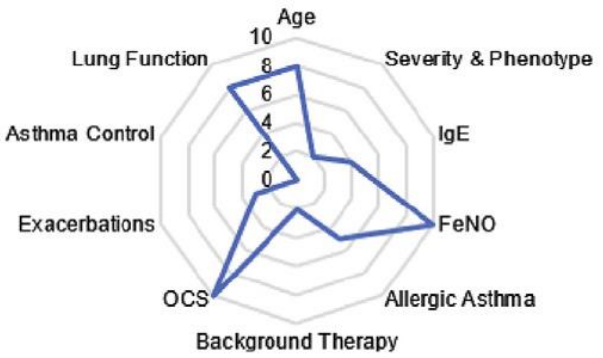
FIGURE 1. Omalizumab Biologic Accessibility Score (BACS) for International Severe Asthma Registry (ISAR) countries.

Porsbjerg CM. J Allergy Clin Immunol Pract 2022; 10: 1202-1216.

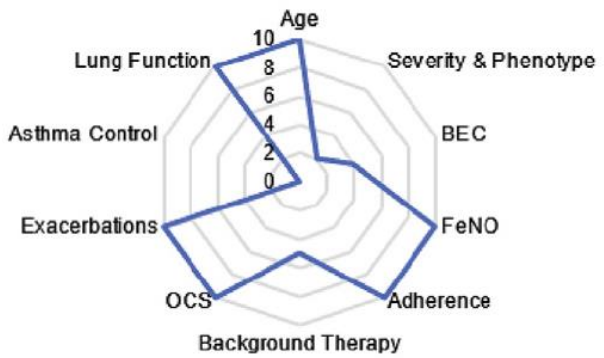


Porsbjerg CM. J Allergy Clin Immunol Pract 2022; 10: 1202-1216.

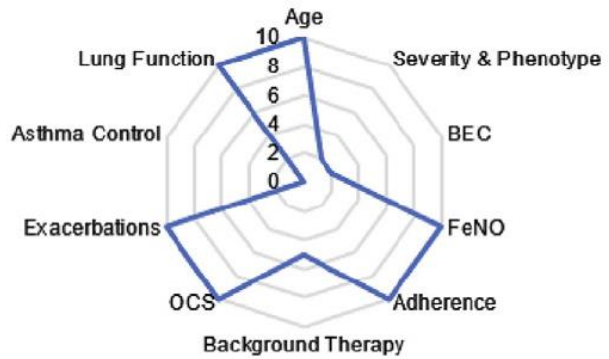
Omalizumab: South Korea - BACS 52



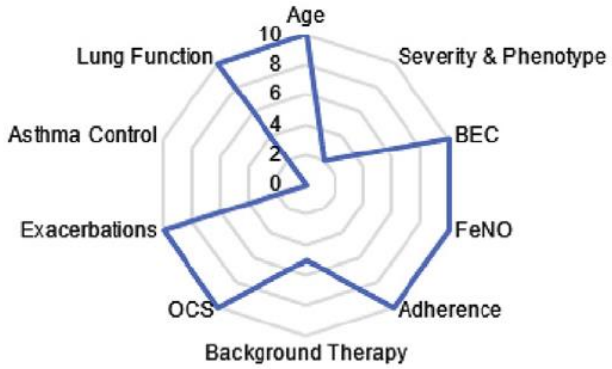
Mepolizumab: South Korea - BACS 71



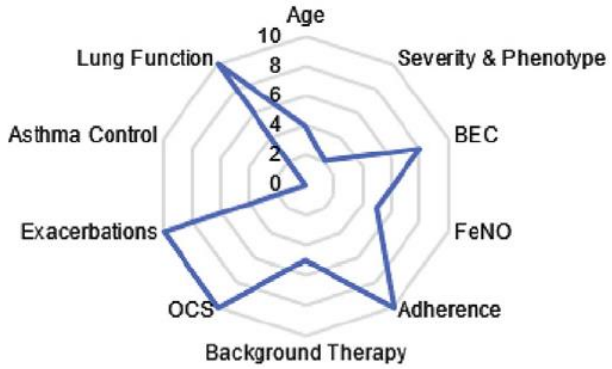
Reslizumab: South Korea - BACS 69



Benralizumab: South Korea - BACS 77



Dupilumab: South Korea - BACS 64



Porsbjerg CM. J Allergy Clin Immunol Pract 2022; 10: 1202-1216.

2.1. 2024년

순위	국가/지역	GDP (US$million)	비고
-	세계		
1	미국	29,167,779	
2	중국	18,273,357	
3	독일	4,710,032	
4	일본	4,070,094	
5	인도	3,899,130	
6	영국	3,587,545	
7	프랑스	3,174,099	
8	이탈리아	2,376,510	
9	캐나다	2,214,796	
10	브라질	2,188,419	
11	러시아	2,184,316	
12	대한민국	1,869,916	

License date and

	Reslizumab	Benralizumab	Dupilumab
	August 16, 2016	January 8, 2018	March 1, 2019*
5	March 23, 2016	November 14, 2017	October 19, 2018†
	4 (26.7)	2 (7.1)	5 (25.0) BR, IE, PT, SK, SG
	mbia, Denmark, Germany, d, France, Italy, Kuwait, audi Arabia, Japan, Mexico, States		4 (20.0) JP, MX,§ RU, US
	PT, UK	DE, ES, EE, FI,§§ FR, GR, IS, IE, IT, KW, NL, PT, SA, TW, UK	11 (55.0) AU, CO,# DK, DE, EE, FI,§§ FR, IT, KW, NL, SA
Total, n	28	15	28	20

Porsbjerg CM. J Allergy Clin Immunol Pract 2022; 10: 1202-1216.

License date and reimbursement status	Omalizumab	Mepolizumab	Reslizumab	Benralizumab	Dupilumab
License dates					
European Medicines Agency license date	October 25, 2005	December 2, 2015	August 16, 2016	January 8, 2018	March 1, 2019*
US Food and Drug Administration license date	June 20, 2003	November 4, 2015	March 23, 2016	November 14, 2017	October 19, 2018†
Reimbursement status, n (%)					
No reimbursement	1 (3.6) SG	2 (7.1)	4 (26.7)	2 (7.1)	5 (25.0) BR, IE, PT, SK, SG
Partial reimbursement	4 (14.3) CN, JP, RU,				4 (20.0) JP, MX,§ RU, US
Full reimbursement	23 (82.1) AR, AU, BR, BG,¶ CO,# DE, ES, EE, FI,§§ FR, GR, IS, IE,** IT, KW, MX,†† NL, PT, SA, SK, TW, UK	ES, EE, FI,§§ FR, GR, IS, IE, IT, KW, NL, PT, SA, TW, UK	PT, UK	DE, ES, EE, FI,§§ FR, GR, IS, IE, IT, KW, NL, PT, SA, TW, UK	11 (55.0) AU, CO,# DK, DE, EE, FI,§§ FR, IT, KW, NL, SA
Total, n	28	28	15	28	20

Australia, Colombia, Denmark, Germany, Estonia, Finland, France, Italy, Kuwait, Netherlands, Saudi Arabia, Japan, Mexico, Russia, United States

Porsbjerg CM. J Allergy Clin Immunol Pract 2022; 10: 1202-1216.

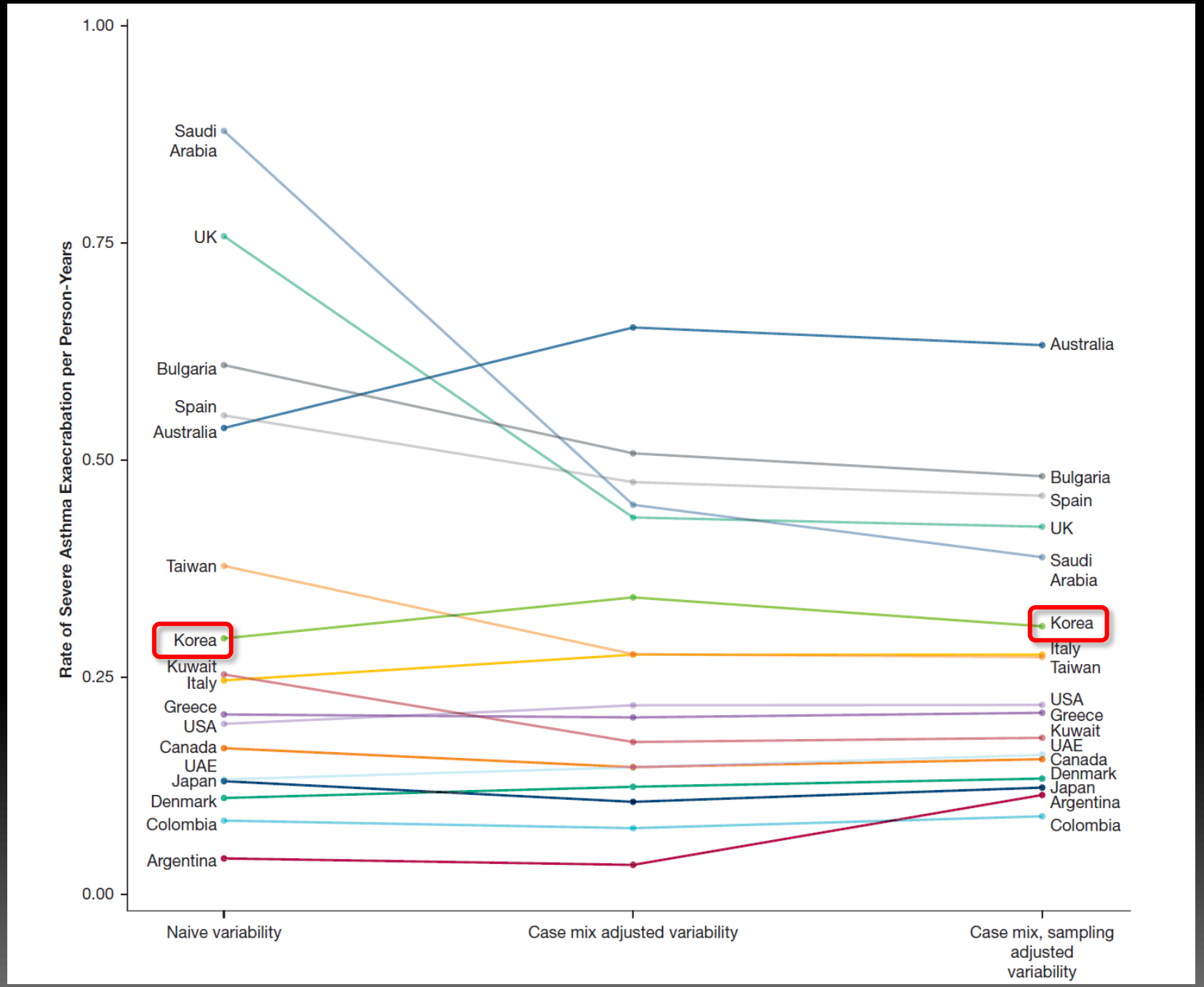
[Asthma Original Research]

CHEST

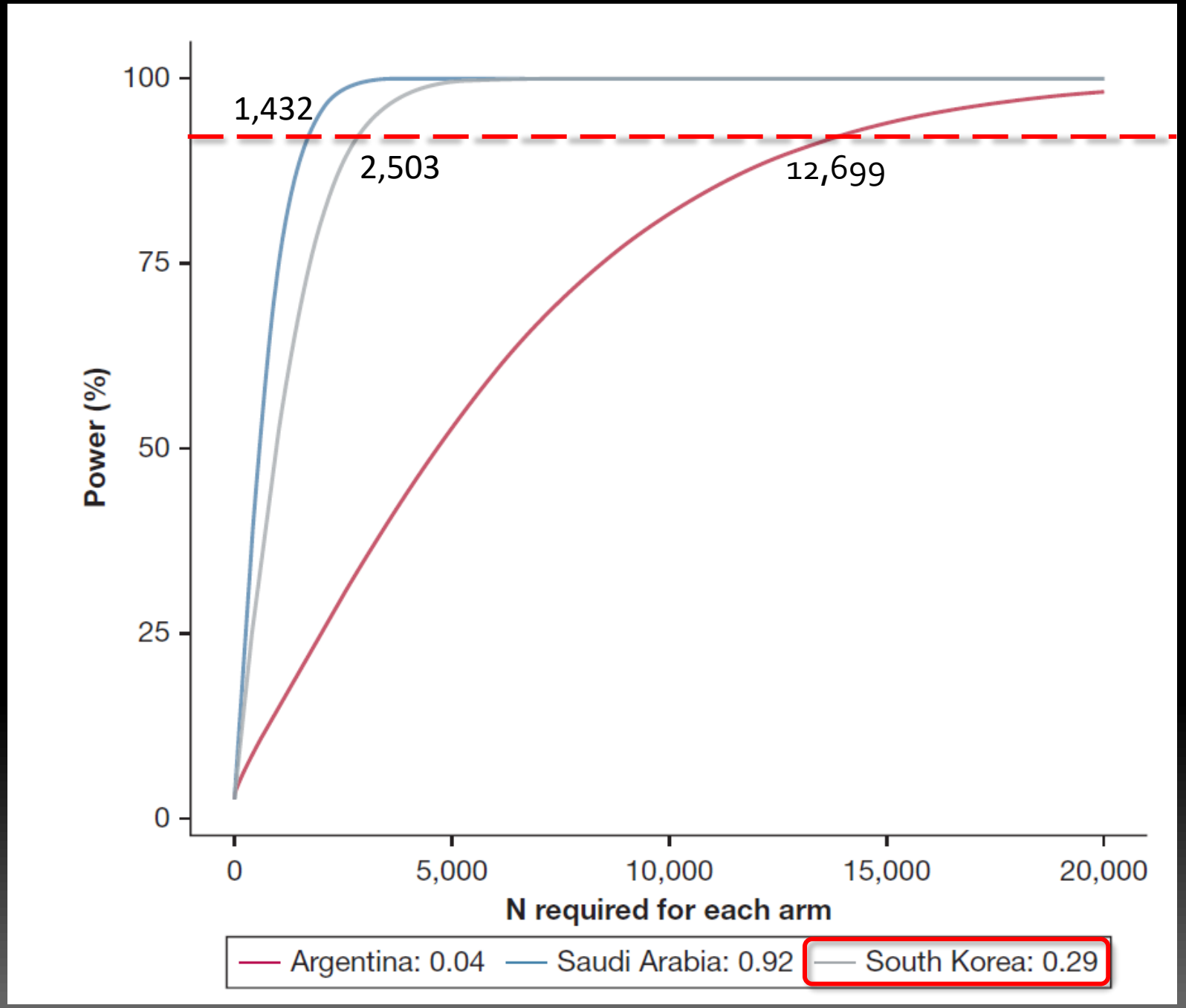
International Variation in Severe Exacerbation Rates in Patients With Severe Asthma

Tae Yoon Lee, MSc; David Price, FRCGP; Chandra Prakash Yadav, PhD; Rupsa Roy, MSc; Laura Huey Mien Lim, MSc; Eileen Wang, MD, PhD; Michael E. Wechsler, MD; David J. Jackson, MBBS, MRCP(UK), PhD; John Busby, PhD; Liam G. Heaney, MD; Paul E. Pfeffer, MRCP(UK), PhD; Bassam Mahboub, MD; Diahn-Warng Perng (Steve), MD, PhD; Borja G. Cosio, MD, PhD; Luis Perez-de-Llano, MD, PhD; Riyad Al-Lehebi, MD; Désirée Larenas-Linnemann, MD; Mona Al-Ahmad, MD; Chin Kook Rhee, MD, PhD; Takashi Iwanaga, MD, PhD; Enrico Heffler, MD, PhD; Giorgio Walter Canonica, MD; Richard Costello, MD; Nikolaos G. Papadopoulos, MD, PhD; Andriana I. Papaioannou, MD, PhD; Celeste M. Porsbjerg, MD, PhD; Carlos A. Torres-Duque, MD; George C. Christoff, MD, PhD, MPH; Todor A. Popov, MD, PhD; Mark Hew, MBBS, PhD; Matthew Peters, MD, PhD; Peter G. Gibson, MBBS; Jorge Maspero, PhD; Celine Bergeron, MD; Saraid Cerda, MD; Elvia Angelica Contreras-Contreras, MD; Wenjia Chen, PhD; and Mohsen Sadatsafavi, MD, PhD

Lee TY. Chest 2024; 166: 28-38.



Lee TY. Chest 2024; 166: 28-38.



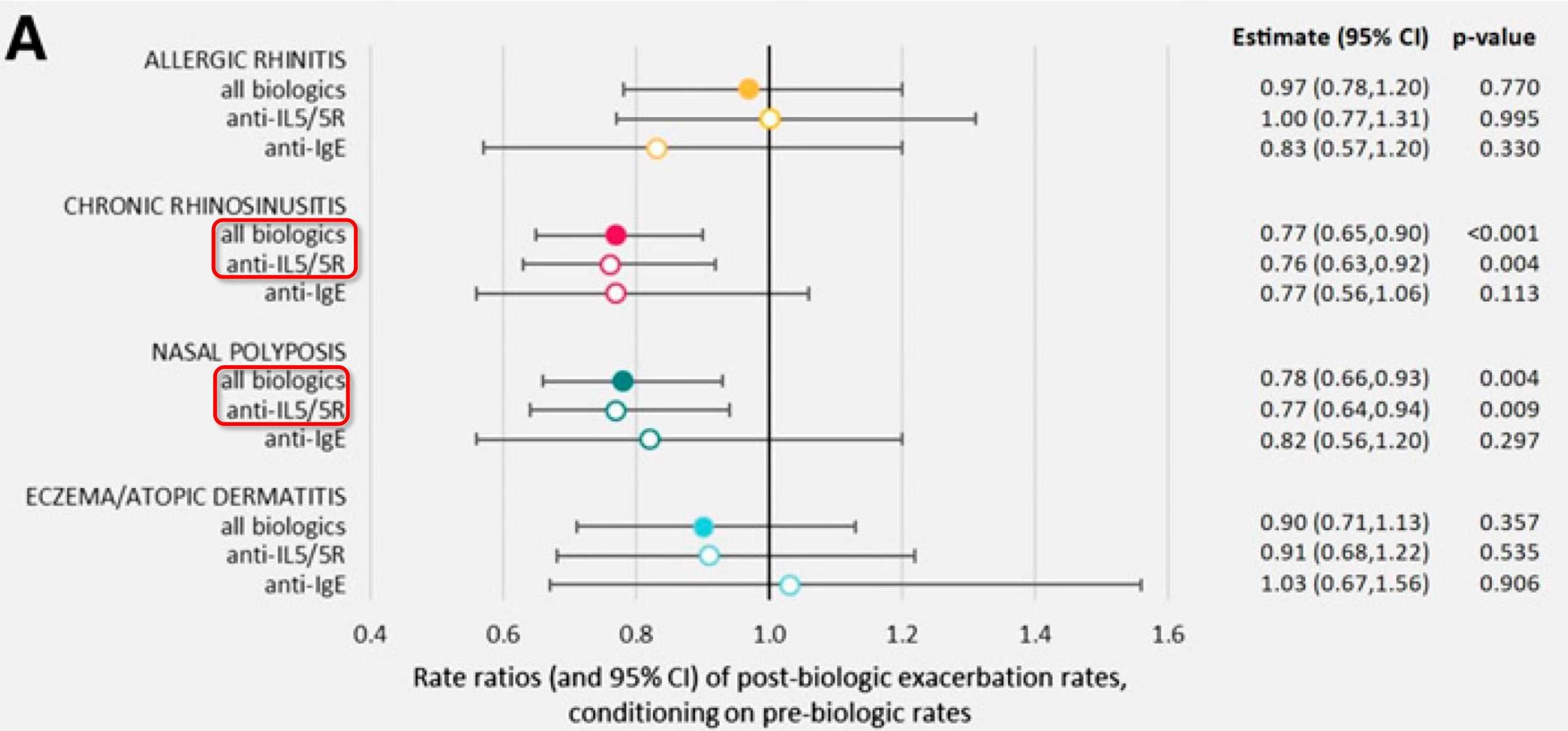
Lee TY. Chest 2024; 166: 28-38.

ORIGINAL ARTICLE

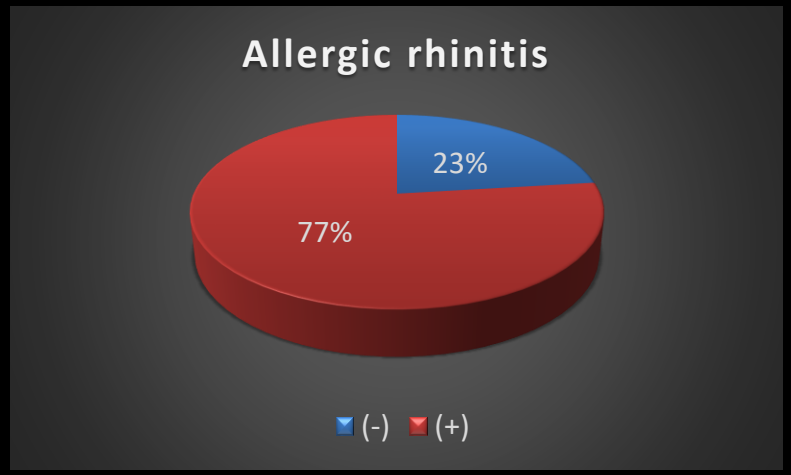
Association Between T2-related Comorbidities and Effectiveness of Biologics in Severe Asthma

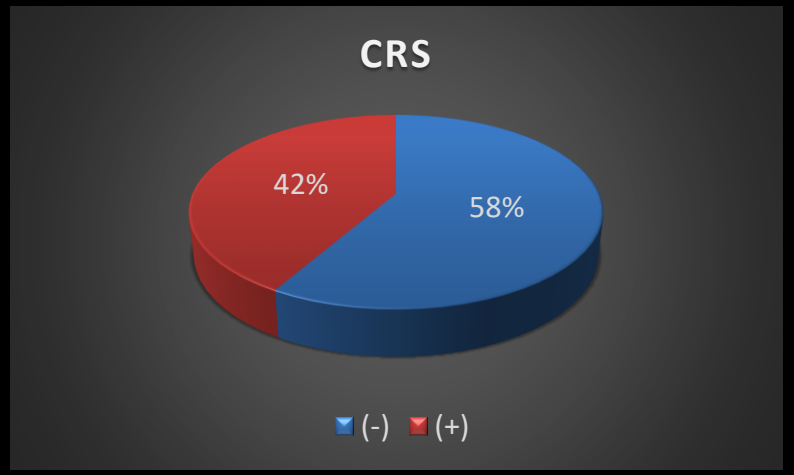
Michael E. Wechsler[1], Ghislaine Scelo[4,5], Désirée E. S. Larenas-Linnemann[6], Carlos A. Torres-Duque[7,8], Jorge Maspero[9], Trung N. Tran[10], Ruth B. Murray[5], Neil Martin[10,11], Andrew N. Menzies-Gow[12,13], Mark Hew[14,15], Matthew J. Peters[16], Peter G. Gibson[17,18], George C. Christoff[19], Todor A. Popov[20], Andréanne Côté[21], Celine Bergeron[22], Delbert Dorscheid[23], J. Mark FitzGerald[24†], Kenneth R. Chapman[26], Louis Philippe Boulet[27], Mohit Bhutani[28], Mohsen Sadatsafavi[25], Libardo Jiménez-Maldonado[29], Mauricio Duran-Silva[29], Bellanid Rodriguez[30], Carlos Andres Celis-Preciado[31,32], Diana Jimena Cano-Rosales[30], Ivan Solarte[31,32], Maria Jose Fernandez-Sanchez[31,32], Patricia Parada-Tovar[7], Anna von Bülow[33], Anne Sofie Bjerrum[34], Charlotte S. Ulrik[35], Karin Dahl Assing[36], Linda Makowska Rasmussen[37], Susanne Hansen[38,39], Alan Altraja[40], Arnaud Bourdin[41], Camille Taille[42], Jeremy Charriot[41], Nicolas Roche[43], Andriana I. Papaioannou[44], Konstantinos Kostikas[45], Nikolaos G. Papadopoulos[46,47], Sundeep Salvi[48], Deirdre Long[49], Patrick D. Mitchell[52], Richard Costello[50,51], Concetta Sirena[53], Cristina Cardini[53], Enrico Heffler[54,55], Francesca Puggioni[54], Giorgio Walter Canonica[54,55], Giuseppe Guida[56], Takashi Iwanaga[57], Mona Al-Ahmad[58], Ulises García[59], Piotr Kuna[60], João A. Fonseca[61,62,63], Riyad Al-Lehebi[64,65], Mariko S. Koh[66], Chin Kook Rhee[67], Borja G. Cosio[68], Luis Perez de Llano[69], Diahn-Warng (Steve) Perng[70,71], Erick Wan-Chun Huang[72], Hao-Chien Wang[73], Ming-Ju Tsai[74,75], Bassam Mahboub[76], Laila Ibraheem Jaber Salameh[76,77], David J. Jackson[78], John Busby[79], Liam G. Heaney[80], Paul E. Pfeffer[81,82], Amanda Grippen Goddard[83], Eileen Wang[2], Flavia C. L. Hoyte[2], Nicholas M. Chapman[3], Rohit Katial[2], Victoria Carter[4,5], Lakmini Bulathsinhala[4,5], Neva Eleangovan[4,5], Con Ariti[4,5], Juntao Lyu[84], Celeste Porsbjerg[85], and David B. Price[4,5,86]

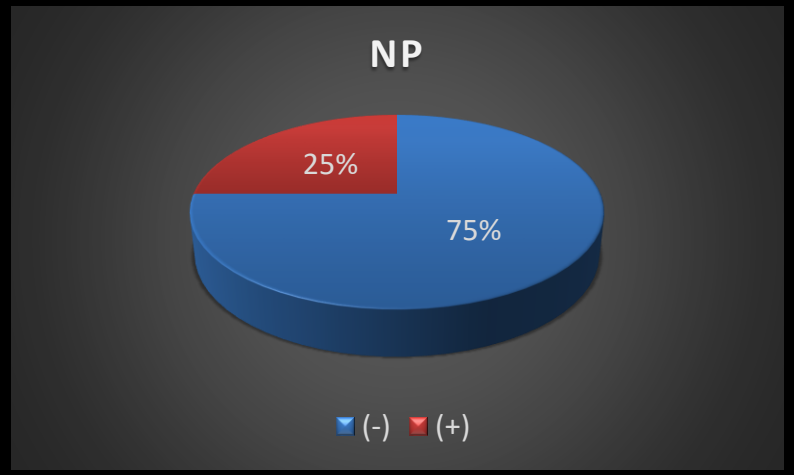
Wechsler ME. Am J Respir Crit Care Med 2024; 209: 262-272.

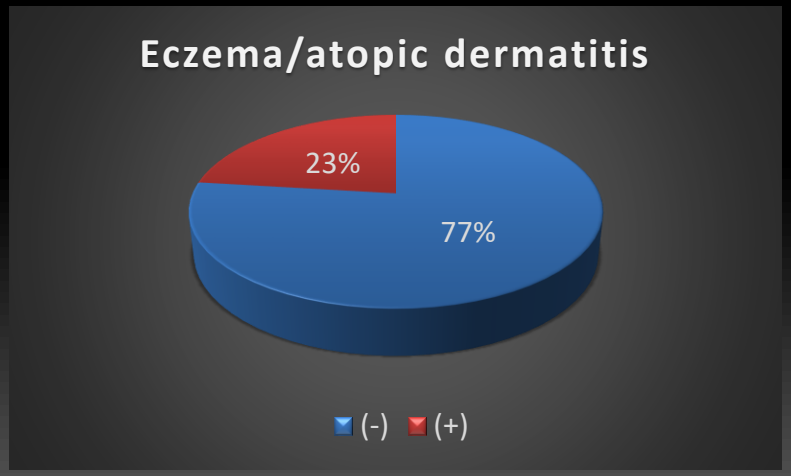


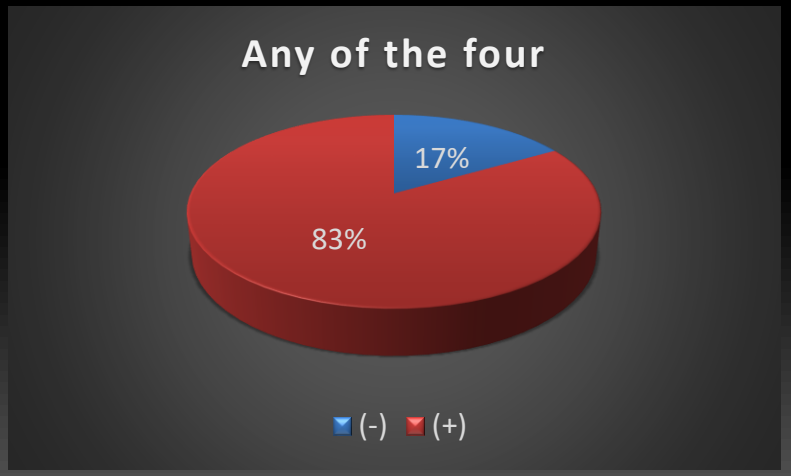
Wechsler ME. Am J Respir Crit Care Med 2024; 209: 262-272.











Wechsler ME. Am J Respir Crit Care Med 2024; 209: 262-272.

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- ISAR
- ISAR Korea
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Contents

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ISAR: Global collaboration for a united goal to improve asthma care

Now Exceeding 30,000 patients!
Thank you to all the countries who signed extension agreements and welcome to our new collaborators

32 countries:

Total patients: **33,933**

Legend:

- **ISAR Collaborating countries**
- **New joining ISAR collaborators 2024**
- **Ongoing discussions for joining ISAR**

Data as of September 2024

Together we have achieved:

25 publications
62 Abstracts and posters presented

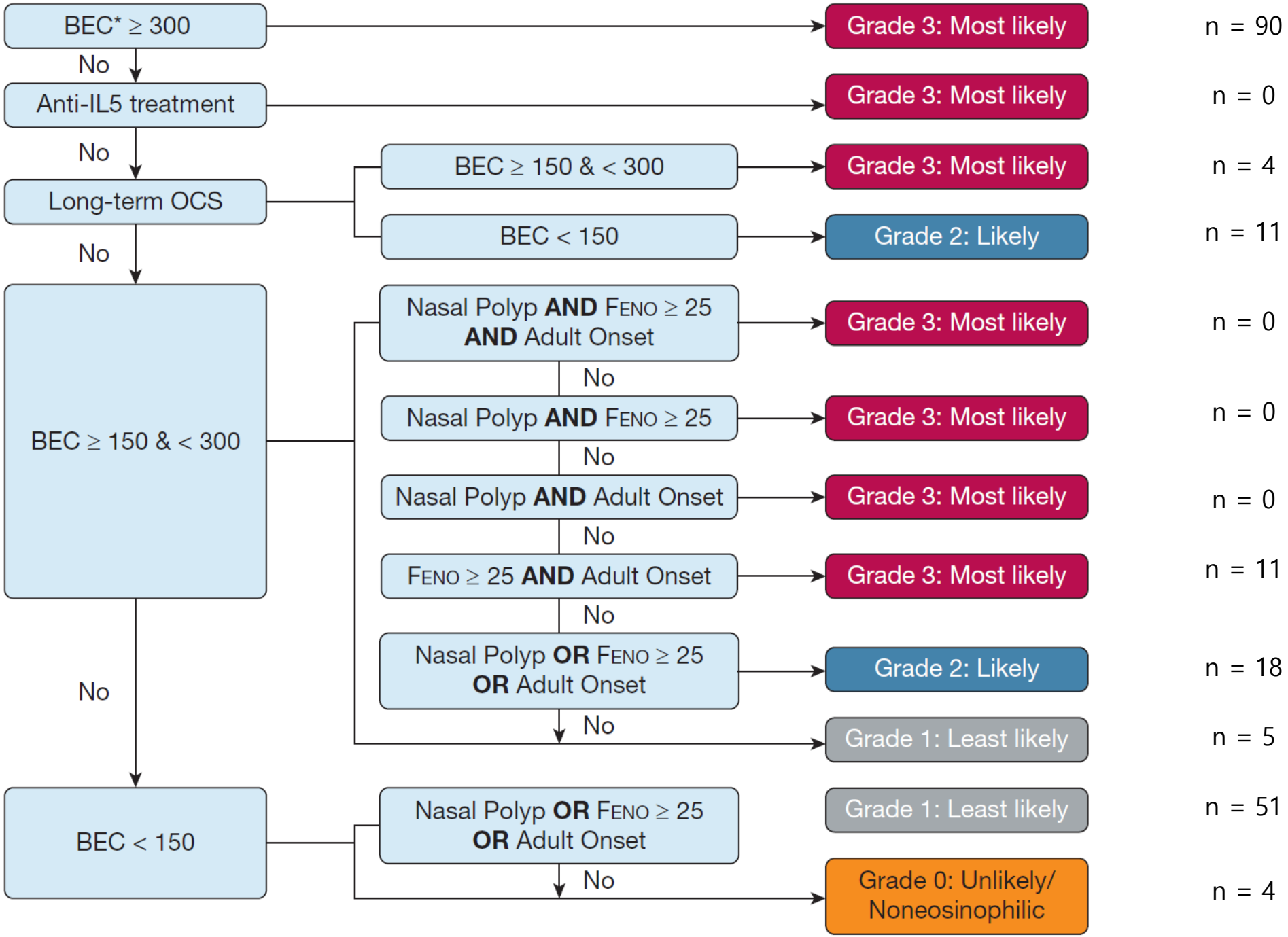
*PASS only data
ISAR: International Severe Asthma Registry, QI = Quality improvement

천식연구회 Workshop 2024

일시 | 2024년 7월 13일(토) 13:30 ~ 17:20 장소 | 양재 aT센터 4층 창조룸 |

13:55 ~ 14:00	인사말	임성용 천식연구회장
	축 사	정만표 대한결핵 및 호흡기학회 이사장
		사회 민경훈 천식연구회 총무

Session I. Severe Asthma Research with the International Severe Asthma Registry (ISAR) Korea 좌장 유광하


BEC* ≥ 300
Grade 3: Most likely
n = 90
No
Anti-IL5 treatment
Grade 3: Most likely
n = 0
No
Long-term OCS
BEC ≥ 150 & < 300
Grade 3: Most likely
n = 4
BEC < 150
Grade 2: Likely
n = 11
No
BEC ≥ 150 & < 300
Nasal Polyp AND FENO ≥ 25 AND Adult Onset
Grade 3: Most likely
n = 0
No
Nasal Polyp AND FENO ≥ 25
Grade 3: Most likely
n = 0
No
Nasal Polyp AND Adult Onset
Grade 3: Most likely
n = 0
No
FENO ≥ 25 AND Adult Onset
Grade 3: Most likely
n = 11
No
Nasal Polyp OR FENO ≥ 25 OR Adult Onset
Grade 2: Likely
n = 18
No
Grade 1: Least likely
n = 5
No
BEC < 150
Nasal Polyp OR FENO ≥ 25 OR Adult Onset
Grade 1: Least likely
n = 51
No
Grade 0: Unlikely/ Noneosinophilic
n = 4

	G0 (n = 4)	G1 (n = 56)	G2 (n = 29)	G3 (n = 105)	P value
Age	48.14 ± 27.99	63.73 ± 15.84	58.19 ± 13.17	56.31 ± 11.87	0.005
Male	3 (75.0%)	17 (30.36%)	9 (31.03%)	47 (44.76%)	0.104
BMI	22.12 ± 4.22	25.24 ± 4.67	25.58 ± 5.33	24.90 ± 3.07	0.402
Smoking					0.630
Never	2 (50.0%)	41 (73.21%)	20 (68.97%)	63 (60.58%)	
Ex	2 (50.0%)	9 (16.07%)	6 (20.69%)	32 (30.77%)	
Current	0 (0.0%)	6 (10.71%)	3 (10.34%)	8 (7.69%)	
Asthma Onset	9.33 ± 1.15	48.05 ± 21.28	46.11 ± 17.47	43.65 ± 15.83	0.003
AR					0.106
Never	2 (50.0%)	31 (56.36%)	13 (44.83%)	36 (34.62%)	
Current	2 (50.0%)	20 (36.36%)	16 (55.17%)	63 (60.58%)	
Past	0 (0.0%)	4 (7.27%)	0 (0.0%)	5 (4.81%)	
CRS					0.622
Never	4 (100.0%)	47 (85.45%)	24 (82.76%)	77 (75.49%)	
Current	0 (0.0%)	7 (12.73%)	5 (17.24%)	24 (23.53%)	
Past	0 (0.0%)	1 (1.82%)	0 (0.0%)	1 (0.98%)	
Eczema					0.938
Never	4 (100.0%)	52 (96.3%)	26 (96.3%)	92 (93.88%)	
Current	0 (0.0%)	1 (1.85%)	1 (3.7%)	5 (5.1%)	
Past	0 (0.0%)	1 (1.85%)	0 (0.0%)	1 (1.02%)	
NP					0.588
Never	4 (100.0%)	51 (92.73%)	27 (93.1%)	88 (85.44%)	
Current	0 (0.0%)	2 (3.64%)	0 (0.0%)	3 (2.91%)	
Past	0 (0.0%)	2 (3.64%)	2 (6.9%)	12 (11.65%)	
Current Atopic Disease	2 (50.0%)	20 (35.71%)	17 (58.62%)	63 (60.0%)	0.027

	G0	G1	G2	G3	P value
Blood eosinophil count	66.38 ± 36.88	83.62 ± 45.38	162.49 ± 77.67	748.5 ± 740.17	<0.001
FeNO	14.5 ± 6.36	33.05 ± 31.78	23.42 ± 29.68	60.3 ± 40.08	<0.001
PostBD FEV1 (%)	87.26 ± 6.04	80.71 ± 23.11	80.00 ± 21.27	79.05 ± 20.14	0.905
PostBD FVC (%)	91.25 ± 19.20	104.33 ± 18.41	98.14 ± 18.35	99.25 ± 17.14	0.314
PostBD FEV1/FVC (%)	82.04 ± 11.76	62.81 ± 15.64	67.63 ± 13.62	65.50 ± 11.33	0.070
Asthma Control					<0.001
Not controlled	3 (75.0%)	0 (0.0%)	13 (44.83%)	55 (52.38%)	
Partially controlled	1 (25.0%)	55 (98.21%)	13 (44.83%)	40 (38.1%)	
Well controlled	0 (0.0%)	0 (0.0%)	2 (6.9%)	8 (7.62%)	
Number of ER visit	0.0 ± 0.0	0.05 ± 0.3	0.48 ± 0.87	0.29 ± 0.83	0.049
Number of hospitalization	0.0 ± 0.0	0.14 ± 0.48	0.66 ± 1.32	0.38 ± 1.09	0.122

THERAPEUTIC ADVANCES in
Respiratory Disease

Original Research

Heterogeneity of asthma–chronic obstructive pulmonary disease (COPD) overlap from a cohort of patients with severe asthma and COPD

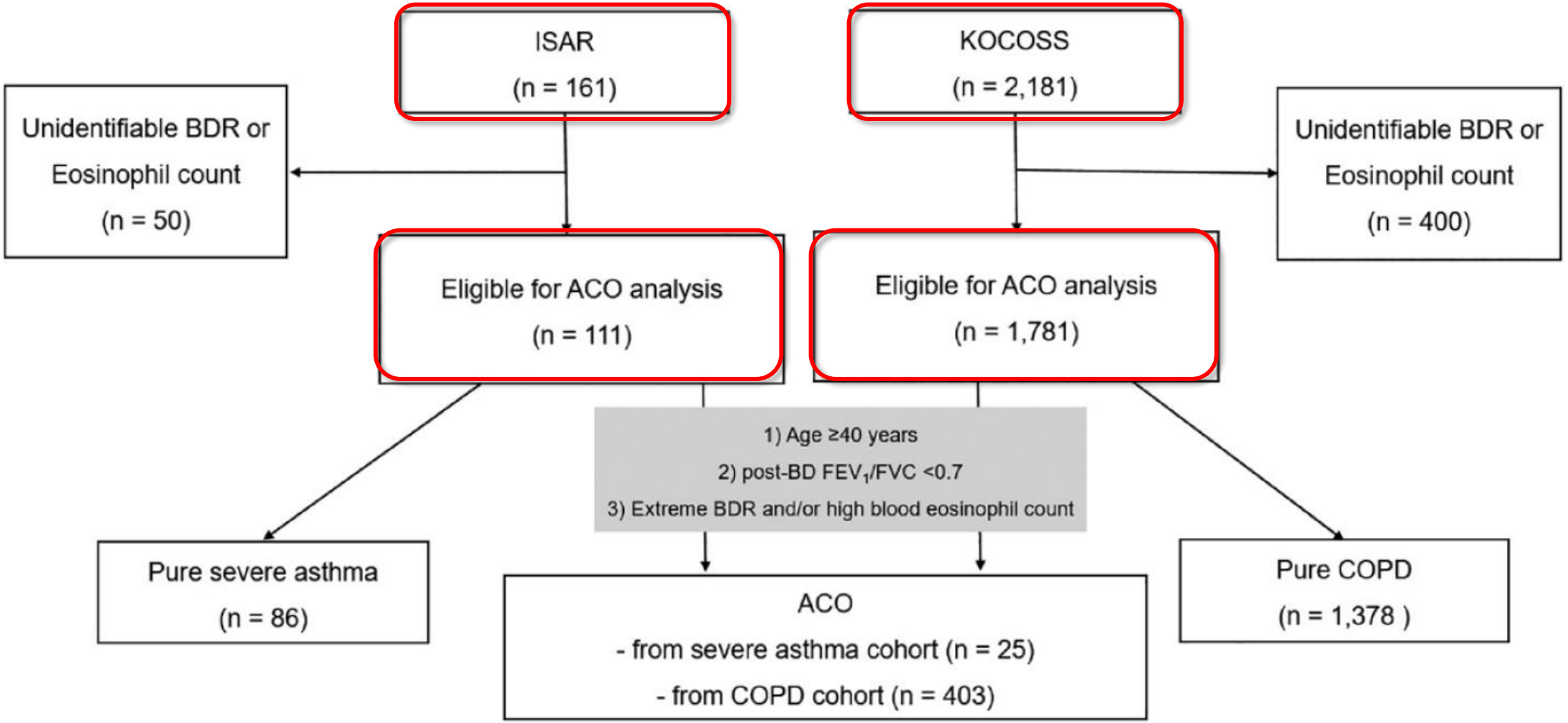
Ther Adv Respir Dis

2023, Vol. 17: 1–11

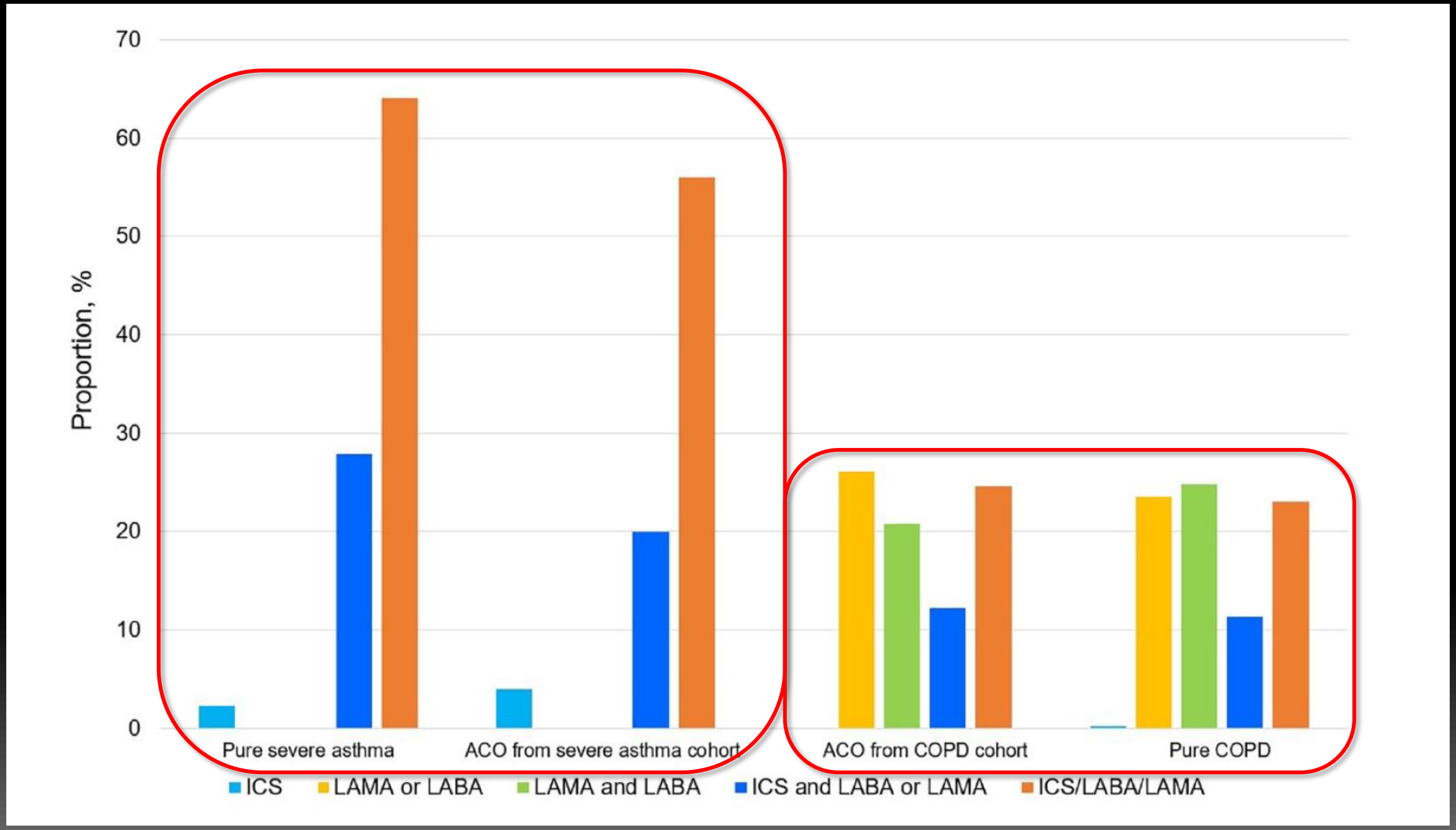
DOI: 10.1177/17534666231169472

Joon Young Choi, Chin Kook Rhee, Kwang Ha Yoo, Ki-Suck Jung, Jae Ha Lee, Hyoung Kyu Yoon, Seung Won Ra, Myung Goo Lee and Yong Suk Jo

Correspondence to:
Yong Suk Jo



Choi JY. Ther Adv Respir Dis 2023; 17: 17534666231169472.



Choi JY. Ther Adv Respir Dis 2023; 17: 17534666231169472.

	Pure severe asthma (*n* = 86)	ACO		Pure COPD (*n* = 1378)
		Severe asthma cohort (*n* = 25)	COPD cohort (*n* = 403)	
Moderate-to-severe AE (yes)	5/22 (22.7%)	3/8 (37.5%)	143/304 (47.0%)	395/1014 (38.9%)
Crude OR (95% CI)	Reference	2.04 (0.36–11.67)	3.02 (1.09–8.39)*	2.17 (0.79–5.93)
Adjusted OR				
Model 1	Reference	2.21 (0.38–13.0)	2.97 (1.01–8.80)*	2.11 (0.73–6.13)
Model 2	Reference	2.85 (0.45–17.95)	4.64 (1.52–14.19)*	3.57 (1.20–10.63)*
Model 3	Reference	1.14 (0.17–7.61)	1.61 (0.46–5.65)	1.20 (0.35–4.13)
Model 4	Reference	1.54 (0.22–10.95)	2.15 (0.59–7.85)	1.72 (0.48–6.11)

Choi JY. Ther Adv Respir Dis 2023; 17: 17534666231169472.

Session II. The Status of Asthma in Studies of Bio-Health Big Data in Korea

좌장 황용일

	OCS dependent asthma	Non-OCS dependent asthma	p-value
Exacerbation			
Moderate	94,339(61.7)	8,919(2.6)	<0.001
Severe	19,985(13.1)	11,131(3.2)	<0.001
Moderate or severe	104,656(68.5)	19,198(5.6)	<0.001
Hospitalization	59,360(38.9)	94,725(27.4)	<0.001
Death	10,542(6.9)	18,691(5.4)	<0.001

Moderate-to-severe exacerbation

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The 26th Congress of the Asian Pacific Society of Respirology

APSR 2022

17-20 November 2022
Coex, Seoul, Korea

"Above and Beyond"

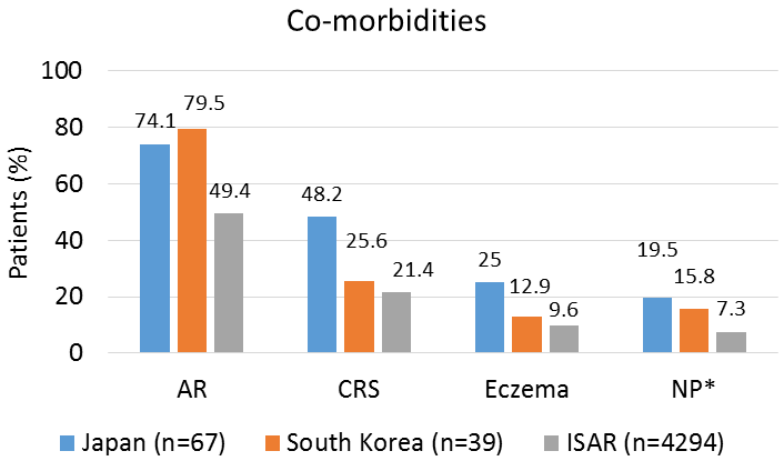
PROGRAM BOOK

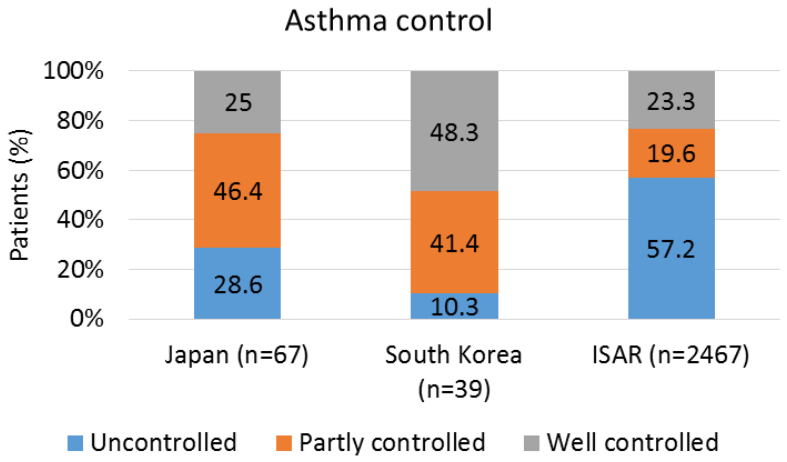
Symposium 5	11:10-12:40	Auditorium (3F)
Asthma - ISAR in Asia Pacific		
Chairs	**Diahn-Warng Perng** (Taipei Veterans General Hospital, Taiwan) **Kwang Ha Yoo** (Konkuk University School of Medicine, Republic of Korea)	
11:10-11:40	**S05-1**	**Current ISAR State in Korea** **Kwang Ha Yoo** (Konkuk University School of Medicine, Republic of Korea)
11:40-12:10	**S05-2**	**Current ISAR State in Taiwan** **Diahn-Warng Perng** (Taipei Veterans General Hospital, Taiwan)
12:10-12:40	**S05-3**	**Current ISAR State in the World** **Ruth Murray** (Director Medscript Ltd NZ & Research Fellow, OPC, New Zealand)

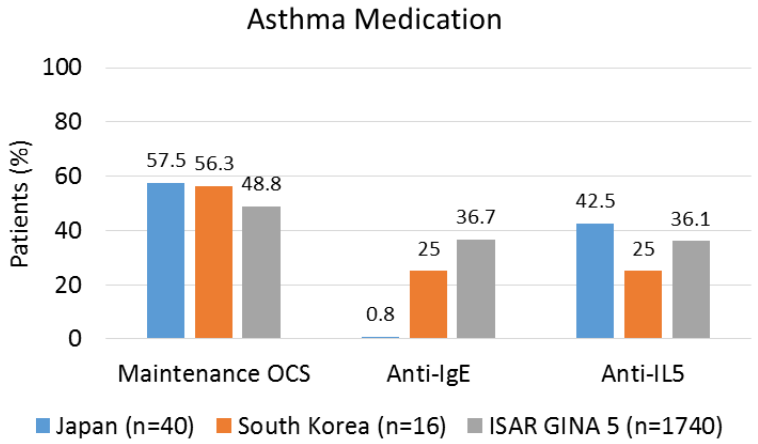
Demographic and clinical characteristics of patients with severe asthma in Japan and South Korea

T. Iwanaga, Y. Tohda, C.K. Rhee, Y. Tanaka, S. Hozawa, D. Price

Results: clinical characteristics







- **JP:** More patients with CRS, AD & NP vs SK
- **JP & SK**: greater co-morbidity burden vs ISAR Global

- **JP**: More patients with uncontrolled asthma vs SK
- **JP & SK**: less patients with uncontrolled asthma vs ISAR Global

- High Maintenance OCS burden in JP, SK and ISAR Global
- Similar Biologic (Anti-IgE or anti-IL5) utilization in JP & SK
  - SK: Bx not reimbursed
  - JP: Bx partially reimbursed

AR: allergic rhinitis; CRS; chronic rhinosinusitis; AD: atopic dermatitis; NP: nasal polyps; OCS: maintenance oral corticosteroids; BEC: blood eosinophil count; JP: Japan; SK: South Korea; ISAR: International Severe Asthma Registry; Bx: biologics; * non-missing data – JP: n=46; SK: n=38

APSR

KATRD

INTERNATIONAL CONFERENCE 2024

The 138th Congress of the Korean Academy of Tuberculosis and Respiratory Diseases

October 23WED–25FRI, 2024

Lotte Hotel World
Seoul, Korea

Better Lungs, Better Tomorrow!

Abstract Submission Deadline

~~August 16 (Fri), 2024~~
August 23 (Fri), 2024

Acceptance Notification

September 6 (Fri), 2024

Early Registration Deadline

September 27 (Fri), 2024

Proceeding Book | Program in Detail | ONLINE REGISTRATION

Sign up for KATRDIC 2024 Newsletters

International Network Meeting 4 Asthma - The State of Severe Asthma by Region as Seen Through the International Severe Asthma Registry (ISAR)	Wednesday, October 23, 15:30-17:00 CRYSTAL 2
Chair	**Seong Yong Lim (KATRD Director of the Scientific Board, Sungkyunkwan University, Korea)**
15:30-15:50	**Severe Asthma in Germany: What Have We Learned?** Roland Buhl (Johannes Gutenberg University Mainz, Germany)
15:50-16:10	**ISAR in Taiwan 2024: What Have We Learned?** Diahn-Warng Perng (Taipei Veterans General Hospital, Taiwan)
16:10-16:30	**Severe Asthma in Korea** Ji-Yong Moon (Hanyang University, Korea)
16:30-17:00	**Q&A, Panel Discussion - Speakers & *Panelists** Roland Buhl (Johannes Gutenberg University Mainz, Germany) Diahn-Warng Perng (Taipei Veterans General Hospital, Taiwan) Ji-Yong Moon (Hanyang University, Korea) *Hyun Lee (Hanyang University, Korea) *Sun Hye Shin (Sungkyunkwan University, Korea)

Invited review for Tuberculosis and Respiratory Diseases journal

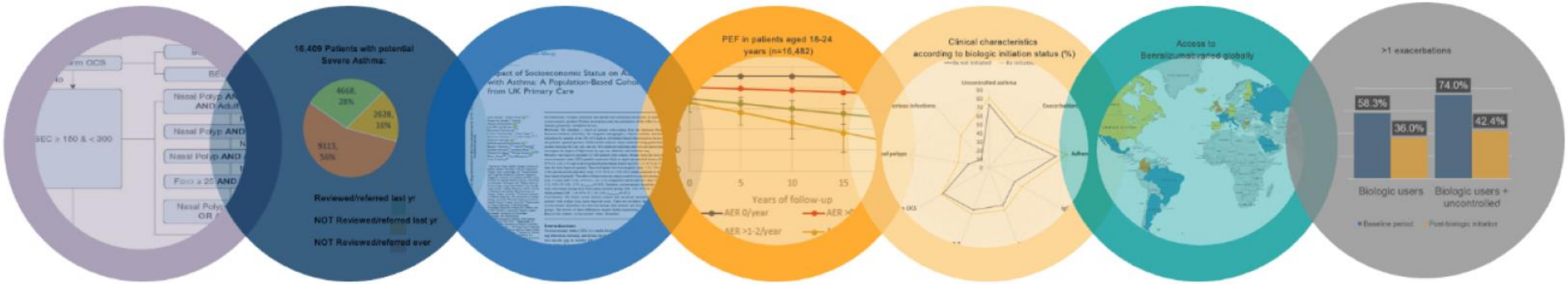
International Severe Asthma Registry (ISAR) – Seven Years of Success, a 2024

Authors (order to be determined):

David L. Neil, PhD[1, 2], Alexandar Sterling, MBBCH, BSc, MRSB[1, 2], Jorge Máspero, MD[3, 4], Peter G. Gibson, MBBS, FRACP[5, 6], Mark Hew, MBBS, PhD, FRACP[7, 8], Matthew J. Peters, MD, PhD[9, 10], Andrew N. Menzies-Gow, PhD, FRCP[11, 12], Neda Stjepanovic, MD[13], Trung N. Tran, MD, PhD[14], Florence Schleich, MD, PhD[15], Paulo Márcio Pitrez, MD, PhD[16], George C. Christoff, MD, MPH, PhD[17], Todor A. Popov, MD, PhD[18], Celine Bergeron, MD, FRCPC, MSc[19, 20], Carlos A. Torres-Duque, MD[21, 22], Celeste M. Porsbjerg, MD, PhD[23], Ivan Cherrez-Ojeda, MD, MSc, PhD[24,25,26,27], Alan Altraja, MD, PhD[28], Arnaud Bourdin, MD, PhD[29], Camille Taillé, MD, PhD[30], Christian Taube, MD[31], Nikolaos G. Papadopoulos, MD, PhD, FRCP[32, 33], Andriana I. Papaioannou, MD, PhD[34], Sundeep Salvi, MD, PhD[35], Richard W. Costello, MB, MD, FRCPI[36], Patrick D. Mitchell, MD, FRCPI[37], Giorgio Walter Canonica, MD[38, 39], Enrico Heffler, MD, PhD[38, 39], Takashi Iwanaga, MD, PhD[40], Mona S. Al-Ahmad, MD, FRCPC[41, 42], Désirée Larenas-Linnemann, MD, FAAAAI, Dist.Intl.FACAAI[43], Sverre Lehmann, MD, PhD[44, 45], Piotr Kuna, MD, PhD[46], João A. Fonseca, MD, PhD[47], Riyad Al-Lehebi, MD, FRCPC[48, 49], Mariko Siyue Koh, MBBS, MRCP (UK), FCCP[50], Chin Kook Rhee, MD, PhD[51], Borja G. Cosio, MD, PhD[52], Luis Perez-de-Llano, MD, PhD[53], Diahn-Warng Perng, MD, PhD[54, 55], Bassam Mahboub, MD[56, 57], John Busby, PhD[58], Liam G. Heaney, MD[59], David J. Jackson, FRCP, PhD[60], Pujan H. Patel, MD[61], Paul E. Pfeffer, MRCP(UK), PhD[62, 63], Rohit Katial, MD[64], Njira Lugogo, MD[65], Roy Alton Pleasants, PharmD[66, 67], Eileen Wang, MD, MPH[64, 68], Michael E. Wechsler, MD, MMSc[69], Lakmini Bulathsinhala, MPH[1, 2], Victoria Carter, BSc[1, 2], Kirsty Fletton, MBChB[1, 2], Ghislaine Scelo, PhD[1, 2] and David B. Price, FRCGP[1, 2, 70].

ISAR Research Overview:

1. Who, what and when of severe and high risk asthma



01 Eosinophilic phenotype is common in severe asthma[1]

02 Patients with severe asthma may be missed in primary care[2]

03 Worse disease control and increased exacerbation rates among patients with asthma from more deprived areas[3]

04 Asthma exacerbations are associated with faster lung function decline, more pronounced in younger patients[4]

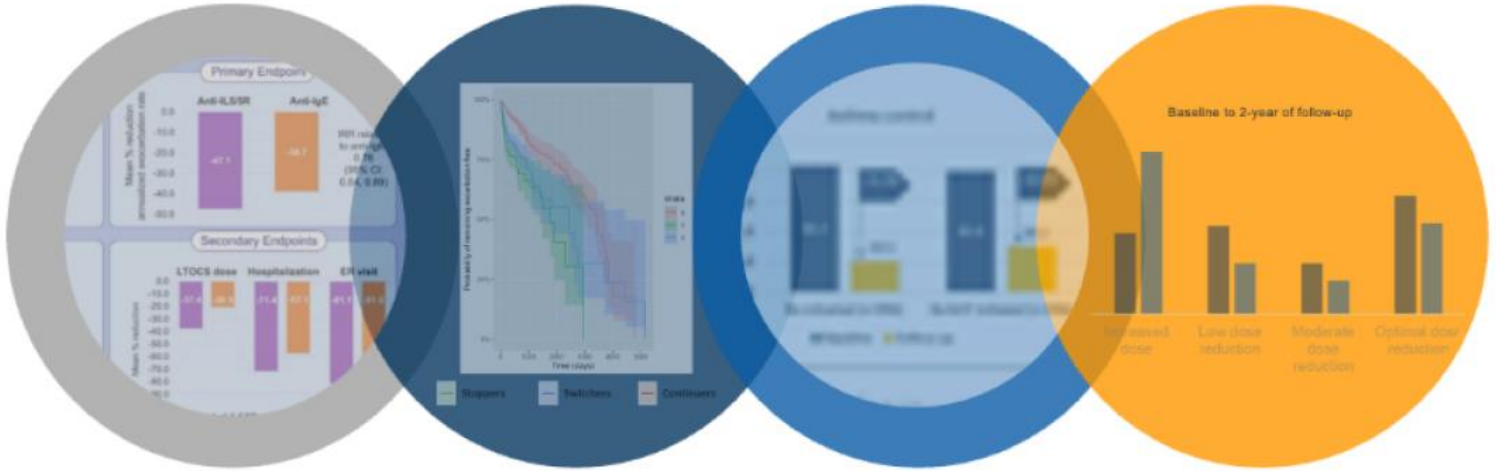
05 Nearly one-third of severe asthma patients with high OCS exposure did not receive biologics[5]

06 Global Variability in Administrative Approval Prescription Criteria for Biologic Therapy: Standardization of biologic prescription and access criteria are needed[6]

07 Substantial baseline disease burden, reduced post-biologic, but remained high[7]

ISAR Research Overview:

2. How biologics can change the trajectory



01

A need to determine the 'right' biologic when eligible for both

Anti-IL5/5R was superior to anit-IgE in reducing asthma exacerbations and LTOCS use[1]

02

Switchers (compared to continuers) had increased exacerbation rates, a higher LTOCS dose and higher chance of uncontrolled asthma

Receiving and continuing the right biologic leads to better outcomes[2]

03

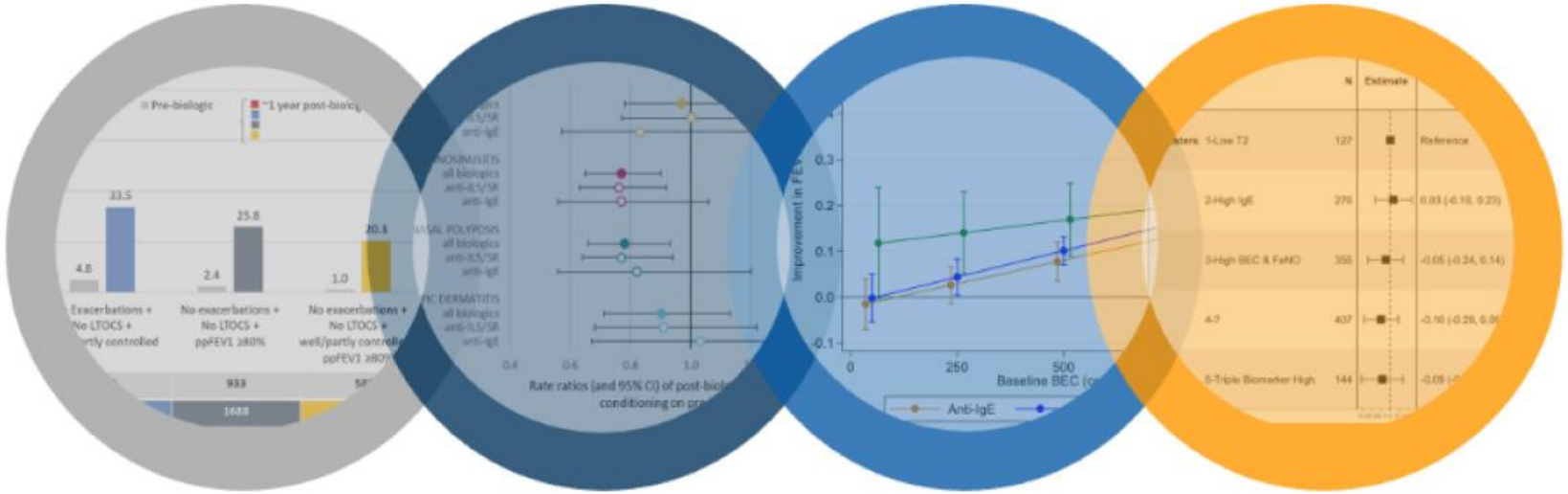
Biologics reduce exacerbations, improve asthma control and reduce OCS use in patients with high steroid exposure[3]

04

SOLAR:
Continues to examine biologic impact on OCS exposure
Asks: will this lower likelihood of OCS reduce related adverse outcomes?

ISAR Research Overview:

3. What is possible in response and remission?



01

Data suggests earlier intervention predicts greater likelihood of remission[1]

02

T2 comorbidities may predict biologic effectiveness

Important to proactively assess for T2 comorbidities[2]

03

Baseline BEC and FeNO associated with greater improvement in FEV1[3]

04

Less improvement in exacerbations with biologic therapy in Low T2 cluster[4]

AI-Powered Personalized Medicine: Predicting Optimal Biological Therapies for Severe Asthma

Proposed By

Rashid Hospital

Prof. Bassam Mahboub

Dr. Laila Salameh

American University of Sharjah (AUS)

Prof. Assim Sagahyroon

Dr. Salam Dhou

Mr. Sameer Alawneh

Journal of Asthma and Allergy

Dovepress

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SHORT REPORT

Predicting Asthma Exacerbation Risk in the Adult South Korean Population Using Integrated Health Data and Machine Learning Models

Joon Young Choi [1], Chin Kook Rhee [2]

Choi JY. J Asthma Allergy 2024; 17: 783-789.

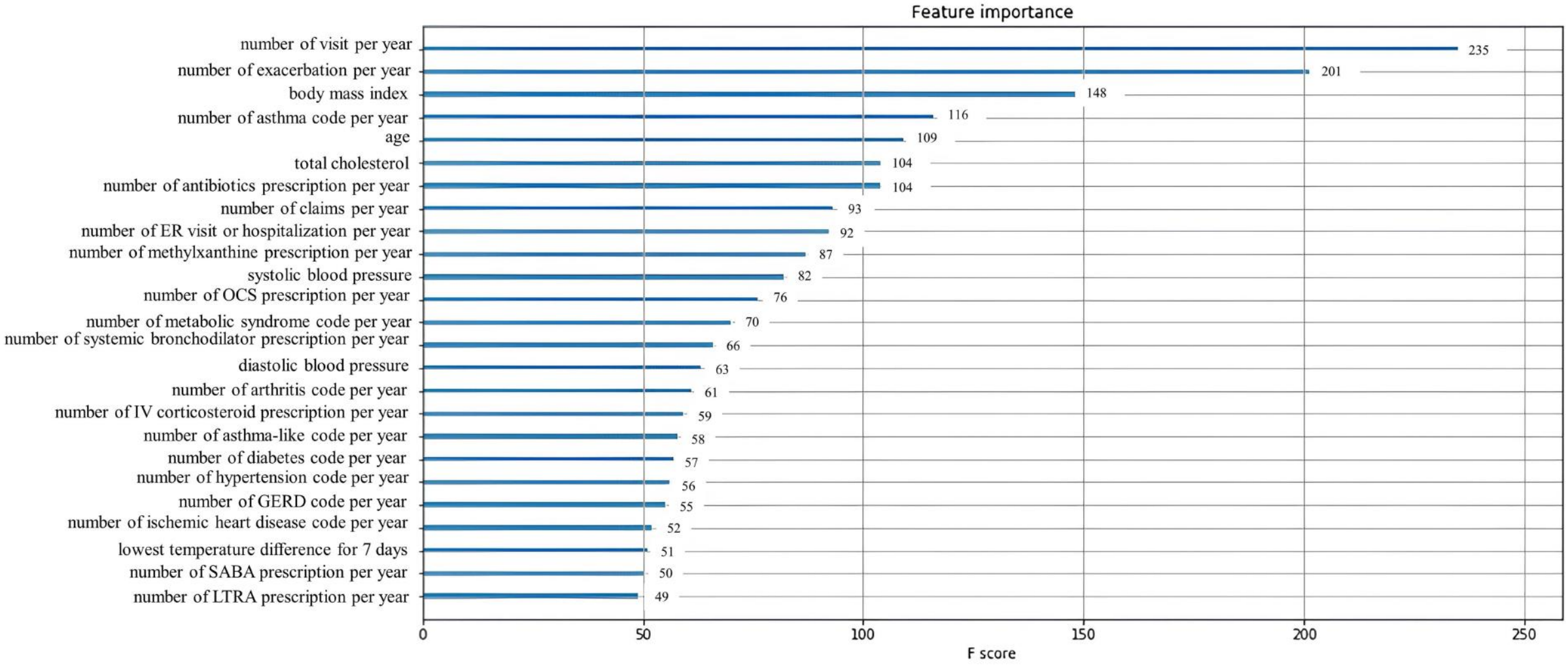

Figure 1 Explanatory variables identified by both XGBoost for predicting acute exacerbations.

Choi JY. J Asthma Allergy 2024; 17: 783-789.

Unveiling the real-world causal interaction of essential risk factors in severe asthma exacerbation: a Bayesian network analysis

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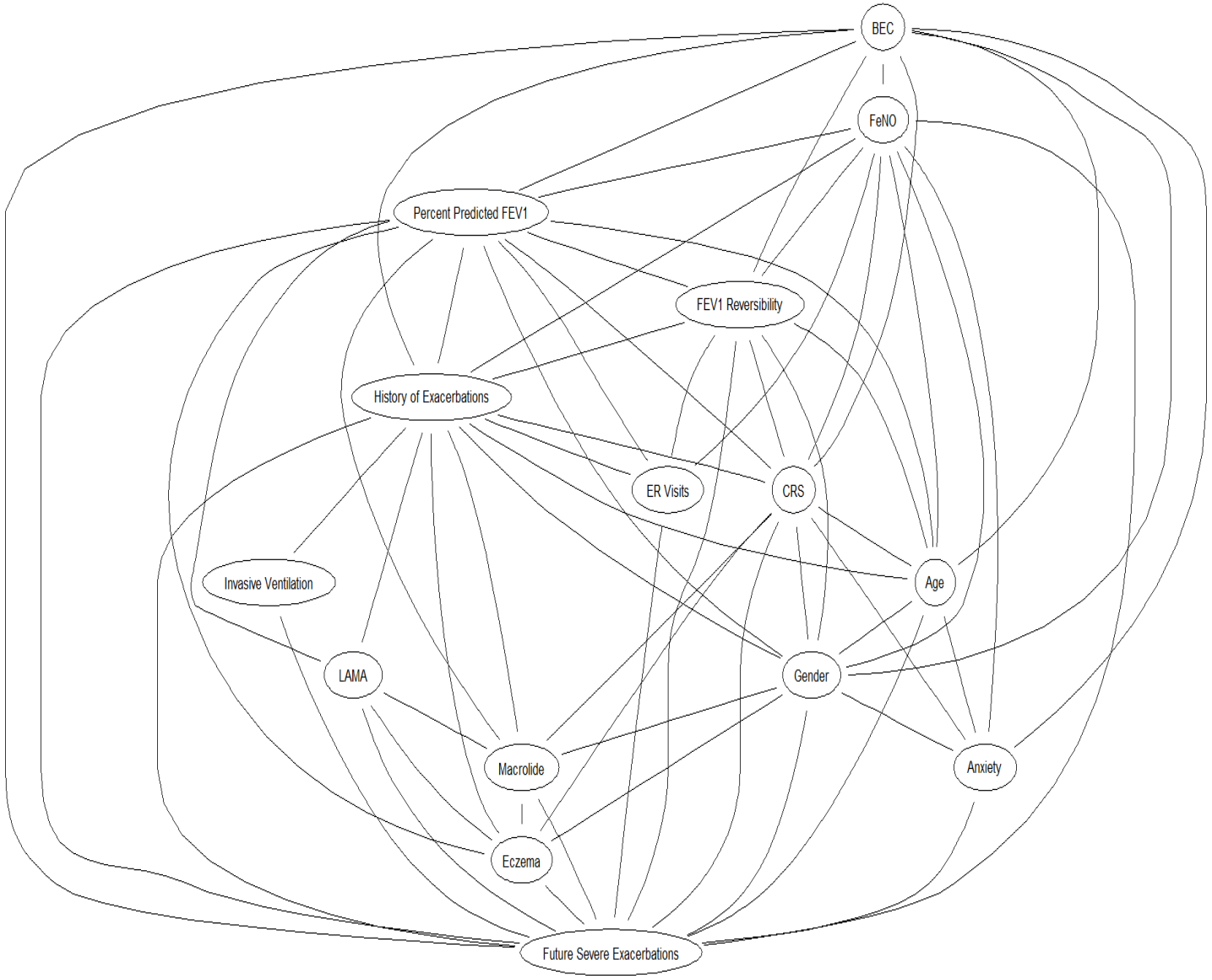


Figure 2: Local parent-children relationship identified

- **Patient Characteristics:**
  - N= 6,814 biologic-naïve adult severe asthma patients.
  - Age: 55.2 years (SD=15.1), Female: 4,172 (61%)
  - History of severe exacerbation: 0.54 (SD=1.23),
  - Past ER visits 0.2(SD=0.6).
  - Future severe exacerbation: 0.2 (±0.8).

Most Connected Arcs:

- FeNO & BEC
- % Predicted FEV1
- FEV1 Reversibility
- CRS
- History of Exacerbations
- Age & Gender
- Eczema
- Anxiety
- Macrolide

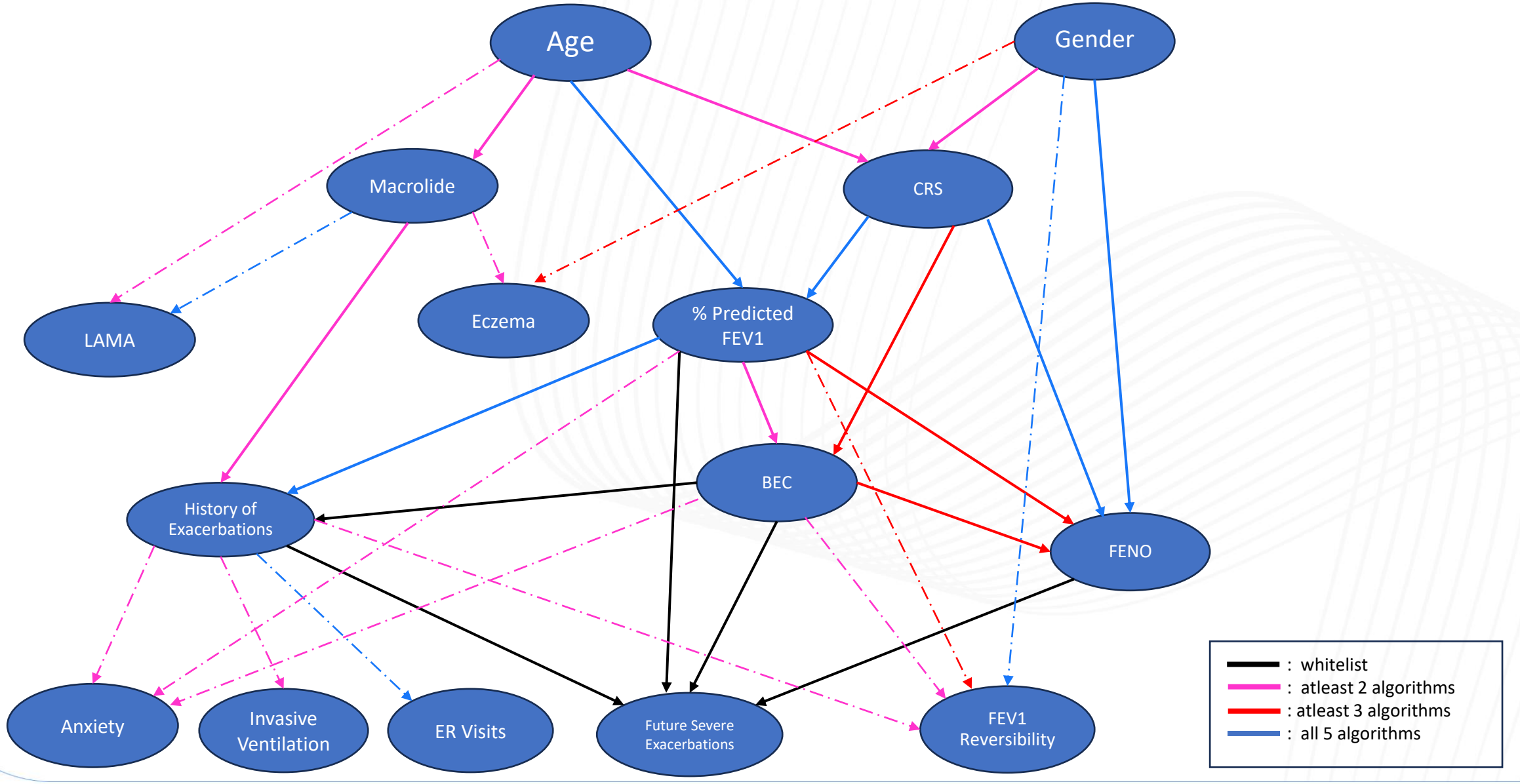
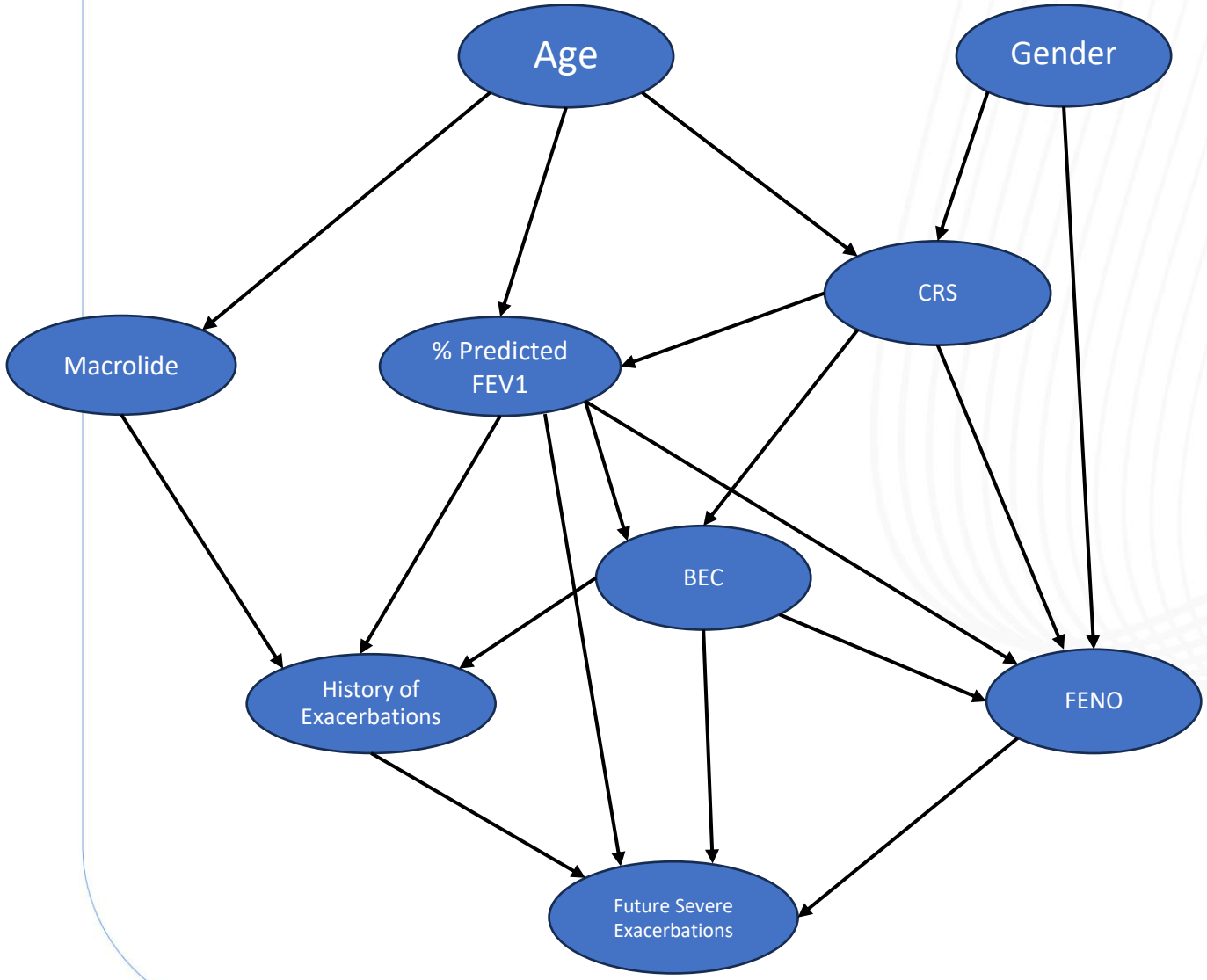


Figure 3: BN learnt from expert knowledge and bootstrap based ML algorithms



- **Final BN**:
  - obtained by discarding nodes not lying in direct prediction pathway and consequences of other predictors.

Figure 4: Final BN with predictors in direct prediction pathway.

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ORIGINAL ARTICLE

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An TJ. Respirology 2024; 29: 985-993.

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Study approach

Respirology

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Similarity analyses of causative viruses for chronic obstructive pulmonary disease and asthma exacerbations

Author

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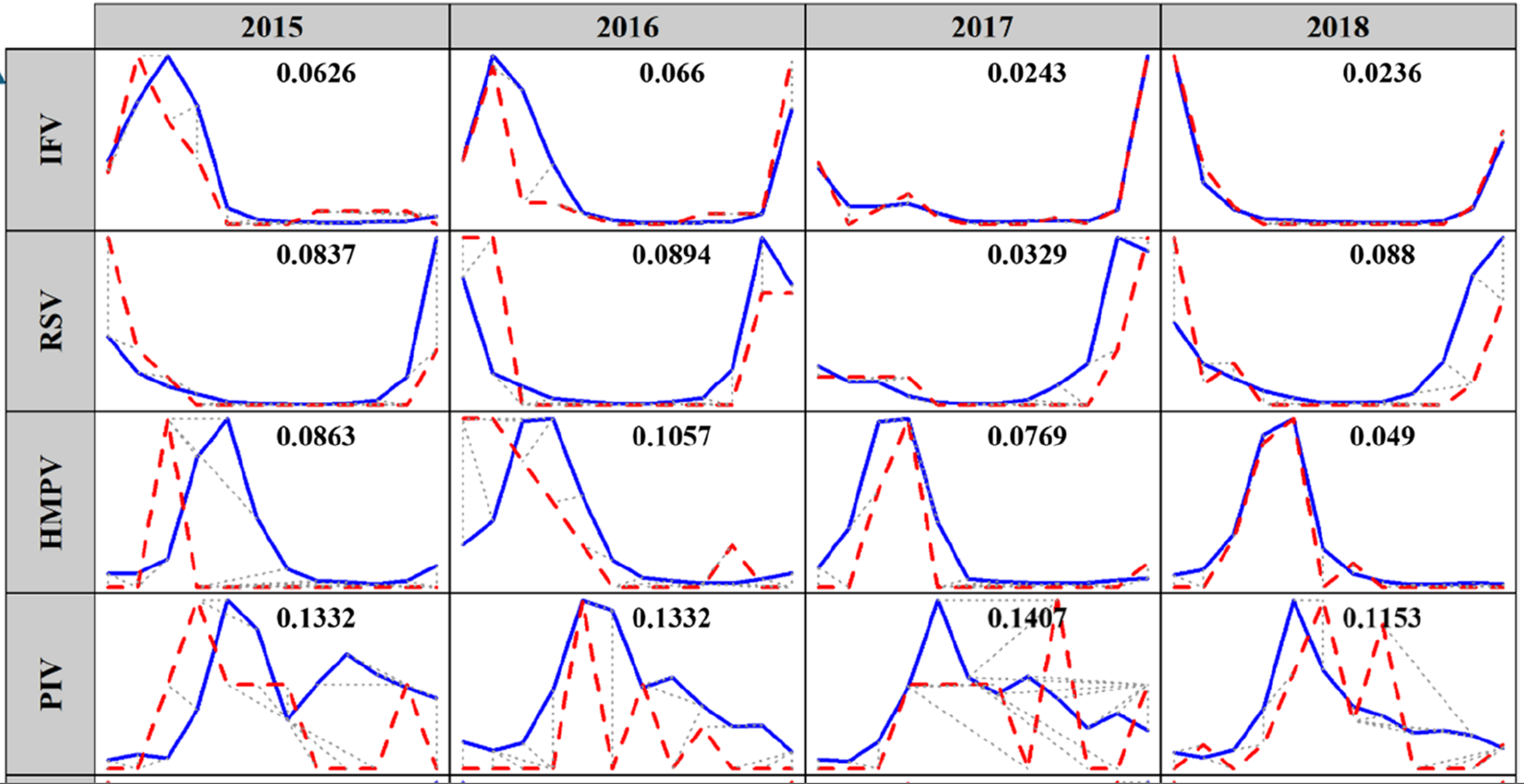

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연구과제명	국 문	중증 천식의 급성 악화 유발 호흡기 바이러스 규명과 국가 표본감시 자료와의 시계열 비교 분석: 다기관 레지스트리 연구		
	영 문	Analysis of Causative Respiratory Viruses in Acute Exacerbation of Severe Asthma and Time-series Comparison with a Nationwide Surveillance System: A Multicenter Registry Study		
주관 연구회명	천식 연구회			
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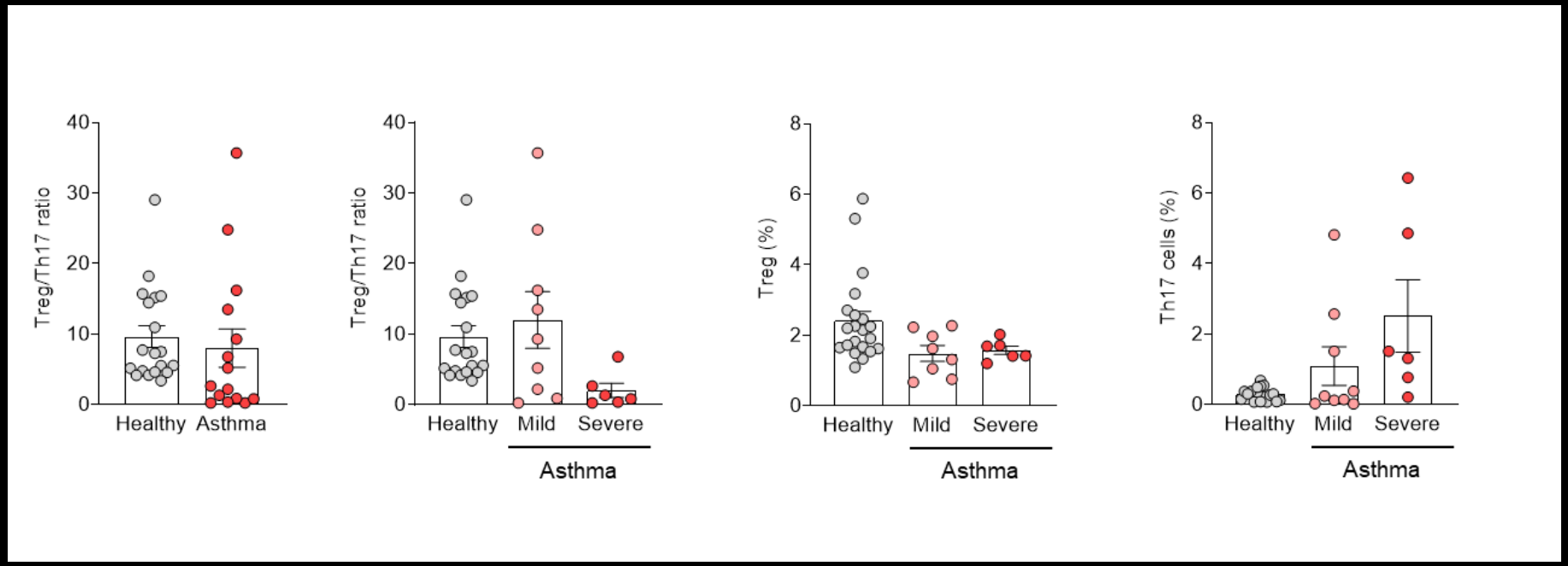

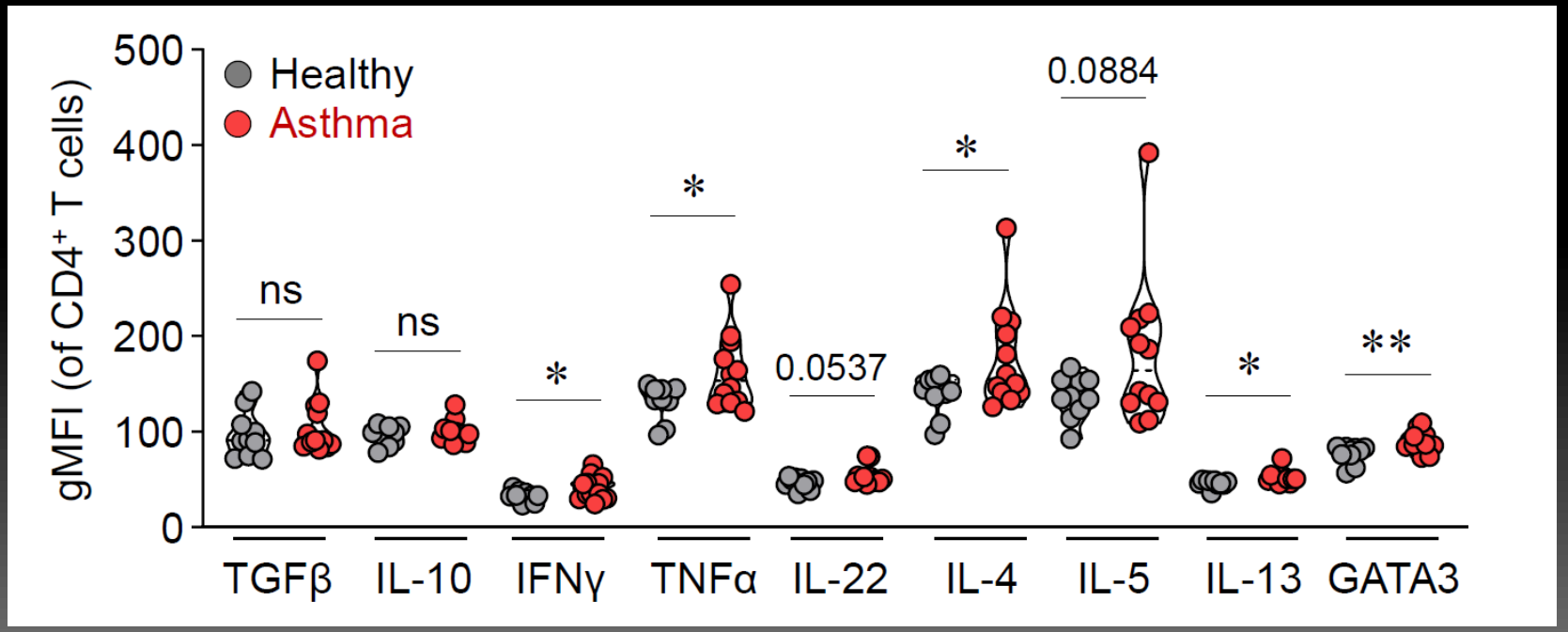

Manuscript under review.

Conclusions

- ISAR: ISAR Korea plays an important role.
- ISAR Korea: Korean data, KOCOSS, big data
- Collaboration: ISAR, AI specialists, Korean Asthma Study Group, PhD