

# Seokyung An, PhD

## Biostatistician | Epidemiologist

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🔗 <https://seokyungan.github.io/>

### 👤 Profile

Experienced biostatistician and epidemiologist with a demonstrated history of working in academic research, the National Cancer Center, and currently serving as a Senior Statistical Analyst at Northwestern University. Skilled in biostatistics, data visualization, and clinical research. Strong research professional with a Doctor in Medical Science (PhD) from Seoul National University, specializing in the prediction and prevention of cardiometabolic disease.

### 🎓 Education

03/2016 – 08/2022  
Seoul, South Korea **Doctor of Philosophy, Medical Science**  
*Seoul National University Graduate School, Department of Biomedical Sciences*

03/2012 – 02/2016  
Seoul, South Korea **Bachelor of Statistics**  
*Sungshin Women's University, Department of Statistics*

### 🧠 Skills

**Statistical analysis** ● ● ● ● ●  
*R, SAS, SPSS, PLINK, Python*

**Artificial intelligence modeling** ● ● ● ● ●  
*Machine learning and Deep learning*

**Data management** ● ● ● ● ●  
*SQL, RedCap*

**Collaboration** ● ● ● ● ●  
*Task management and communication*

### 👜 Professional Experience

07/2023 – present  
Chicago, US **Senior Statistical Analyst**  
*Northwestern University - The Feinberg School of Medicine*  
Senior Statistician, Bluhm Cardiovascular Institute

10/2022 – 06/2023  
Ilsan, South Korea **Postdoctoral fellow**  
*National Cancer Center*  
Investigated the relationships between environmental and genomic factors in cancer and developed cancer prediction models using artificial intelligence.

03/2016 – 08/2022  
Seoul, South Korea **Graduate student, full time**  
*Seoul National University Graduate School*  
Mastered advanced biostatistics and epidemiology and developed metabolic disease prediction models using artificial intelligence methods.

06/2015 – 08/2015  
Ilsan, Seoul Korea

**Intern**

*National Cancer Center*

Investigated the association between colorectal cancer and dietary intake.

06/2014 – 08/2014  
Seoul, South Korea

**Intern**

*Seoul National University Cancer Research Institute*

Investigated hereditary breast cancer and analyzed cohort data from the Korean Hereditary Breast Cancer Study (KOHBRA).

 **Publications (indicates\* first)**

09/2023

**Comparison of intravascular ultrasound, optical coherence tomography, and conventional angiography-guided percutaneous coronary interventions: A systematic review, network meta-analysis, and meta-regression** 

*Catheter Cardiovasc Interv.* PMID: 37483068

Park DY\*, **An S**, Jolly N, Attanasio S, Yadav N, Gutierrez JA, Nanna MG, Rao SV, Vij A.

02/2023

**Factor Xa Inhibitors Versus Vitamin K Antagonist in Morbidly Obese Patients With Venous Thromboembolism: A Systematic Review and Meta-Analysis** 

*BMC Cardiovasc Disord.* PMID: 36814196

Park DY\*, **An S\***, Arif AW, Sana MK, Vij A

02/2023

**Trends and impact of intravascular ultrasound and optical coherence tomography on percutaneous coronary intervention for myocardial infarction** 

*Int J Cardiol Heart Vasc.* 2023. PMID: 36852085

Park DY\*, Vemmou E\*, **An S**, Nikolakopoulos I, Regan CJ, Cambi BC, Frampton J, Vij A, Brilakis E, Nanna MG

01/2023

**Network Meta-Analysis Comparing Angiotensin Receptor-Nephrilysin Inhibitors, Angiotensin Receptor Blockers, and Angiotensin-Converting Enzyme Inhibitors in Heart Failure With Reduced Ejection Fraction** 

*Am J Cardiol.* 2023. PMID: 36459752

Park DY\*, **An S**, Attanasio S, Jolly N, Malhotra S, Doukky R, Samsky MD, Sen S, Ahmad T, Nanna MG, Vij A

11/2022

**Indoor tanning and the risk of overall and early-onset melanoma and non-melanoma skin cancer: Systematic review and meta-analysis.** 

*Cancers (Basel).* PMID: 34885049

**An S\***, Kim K, Moon S, Ko KP, Kim I, Lee JE, Park SK.

11/2022

**Abbreviated versus Standard Duration of DAPT after PCI: A Systematic Review and Network Meta-analysis.** *Am J Cardiovasc Drugs* 

*Am J Cardiovasc Drugs.* PMID: 35781867

Park DY\*, **An S\***, Kumar A, Malhotra S, Jolly N, Kaur A, Kattoor A, Doukky R, Kalra A, Vij A

11/2022

**Projection of Cancer Incidence and Mortality From 2020 to 2035 in the Korean Population Aged 20 Years and Older** 

*J Prev Med Public Health.* PMID: 36475318

Hong Y\*, Lee S, Moon S, Sung S, Lim W, Kim K, **An S**, Choi J, Ko KP, Kim I, Lee JE, Park SK

- 11/2022 **Impact of pulmonary embolism on perioperative outcomes of coronary artery bypass graft** [↗](#)  
*Coron Artery Dis. PMID: 35500089*  
Park DY\*, **An S\***, Attanasio S, Doukky R, Sawaqed R, Vij A
- 11/2022 **In-hospital prognosis of malignancy-related pulmonary embolism: an analysis of the national inpatient sample 2016-2018** [↗](#)  
*J Thromb Thrombolysis. PMID: 35876942*  
Park DY\*, **An S\***, Kashoor I, Ezegwu O, Gupta S
- 11/2022 **Impact of cardiac and noncardiac cirrhosis on coronary revascularization outcomes from the National Inpatient Sample, 2016 to 2018** [↗](#)  
*Proc (Bayl Univ Med Cent)*  
Park DY\*, **An S\***, Warraich MS, Aldeen ZS, Maghari I, Khanal S, Arif AW, Almoghrabi A
- 10/2022 **Modified reverse shock index predicts early outcomes of heart failure with reduced ejection fraction** [↗](#)  
*ESC Heart Fail. PMID: 35775109*  
Oh GC\*, **An S\***, Lee HY, Cho HJ, Jeon ES, Lee SE, Kim JJ, Kang SM, Hwang KK, Cho MC, Chae SC, Choi DJ, Yoo BS, Kim KH, Park SK, Baek SH
- 10/2022 **Association of metabolic comorbidity with myocardial infarction in individuals with a family history of cardiovascular disease: a prospective cohort study** [↗](#)  
*BMC Public Health. 2022. PMID: 36316766*  
**An S\***, Moon S, Park SK
- 10/2022 **Readmission rates and risk factors for readmission after transcatheter aortic valve replacement in patients with end-stage renal disease** [↗](#)  
*PLoS One. 2022. PMID: 36264931*  
Park DY\*, **An S\***, Hanna JM, Wang SY, Cruz-Solbes AS, Kochar A, Lowenstern AM, Forrest JK, Ahmad Y, Cleman M, Damluji AA, Nanna MG
- 10/2022 **Incidence and risk factors of atrial fibrillation and atrial arrhythmias in people living with HIV: a systematic review and meta-analysis** [↗](#)  
*J Interv Card Electrophysiol. PMID: 35610524*  
Park DY\*, **An S\***, Romero ME, Kaur A, Ravi V, Huang HD, Vij A
- 09/2022 **Shortening the duration of dual antiplatelet therapy after percutaneous coronary intervention for acute coronary syndrome: A systematic review and meta-analysis** [↗](#)  
*Am Heart J. PMID: 35654162*  
Park DY\*, Wang P\*, **An S**, Grimshaw AA, Frampton J, Ohman EM, Rao SV, Nanna MG
- 07/2022 **Impact of end-stage renal disease on in-hospital outcomes of hypertensive emergency from the National Inpatient Sample, 2016 to 2018**  
*Proc (Bayl Univ Med Cent)*  
Park DY\*, **An S\***, Rodriguez MA, Odeh R, Hammo H, Haque M, Arif AW
- 07/2022 **Myocarditis after COVID-19 mRNA vaccination: A systematic review of case reports and case series** [↗](#)  
*Clin Cardiol. PMID: 35652390*  
Park DY\*, **An S\***, Kaur A, Malhotra S, Vij A

- 06/2022 **Systematic Review and Network Meta-Analysis Comparing Bifurcation Techniques for Percutaneous Coronary Intervention** [↗](#)  
*Journal of the American Heart Association. PMID: 35723005*  
 Park DY\*, **An S\***, Jolly N, Attanasio S, Yadav N, Rao S, Vij A
- 06/2022 **Binary cutpoint and the combined effect of systolic and diastolic pressure on cardiovascular disease mortality: A community-based cohort study** [↗](#)  
*PLoS One. PMID: 35771898*  
 Lee JY\*, Hong JH, Lee S, **An S**, Shin A, Park SK
- 05/2022 **Comparison of the Prevalence of Cardiometabolic Disorders and Comorbidities in Korea and United States: Analysis of the National Health and Nutrition Examination Survey** [↗](#)  
*J Korean Med Sci. PMID: 35535376*  
**An S\***, Ahn C, Jang J, Lee J, Kang D, Lee JK, Park SK
- 03/2022 **Individualized Biological Age as a Predictor of Disease: Korean Genome and Epidemiology Study (KoGES) Cohort** [↗](#)  
*J Pers Med. PMID: 35330504*  
**An S\***, Ahn C, Moon S, Sim EJ, Park SK
- 03/2022 **Effect of weight loss on recurrence of atrial fibrillation after ablative therapy: a systematic review and meta-analysis** [↗](#)  
*J Interv Card Electrophysiol. PMID: 35258752*  
 Park DY\*, **An S**, Murthi M, Kattoor AJ, Kaur A, Ravi V, Huang HD, Vij A
- 11/2021 **Obesity measures at baseline, their trajectories over time, and the incidence of chronic kidney disease: A 14 year cohort study among Korean adults** [↗](#)  
*Nutr Metab Cardiovasc Dis. PMID: 33546946*  
 Zhang HS\*, **An S**, Ahn C, Park SK, Park B
- 11/2020 **Isoflavone intake on the risk of overall breast cancer and molecular subtypes in women at high risk for hereditary breast cancer** [↗](#)  
*Breast Cancer Res Treat. PMID: 33068197*  
 Sim EJ\*, Ko KP, Ahn C, Park SM, Surh YJ, **An S**, Kim SW, Lee MH, Lee JW, Lee JE, Kim KS, Yom CK, Kim HA, Park SK
- 08/2019 **Long-term Breastfeeding in the Prevention of Allergic Rhinitis: Allergic Rhinitis Cohort Study for Kids (ARCO-Kids Study)** [↗](#)  
*Clin Exp Otorhinolaryngol. PMID: 30992421*  
 Han DH\*, Shin JM, **An S**, Kim JS, Kim DY, Moon S, Kim JS, Cho JS, Kim SW, Kim YH, Roh HJ, Shim WS, Rha KS, Kim SW, Lee SS, Kim DW, Cho KS, Yim HJ, Park SK, Rhee CS

## Patents

- 07/2020 **Apparatus and method for predicting chronic kidney disease**  
 South Korea  
*(Patent Registration No: KR 1020200000929)*
- 06/2019 **Device and method for biometric age prediction model generation**  
 South Korea  
*(Patent Registration No: KR 1020180156873)*
- 06/2019 **Apparatus and method for predicting disease risk of metabolic disease**  
 United States  
*(Patent Publication No: US20190172587A1)*

## Awards

- 07/2019      **Young Investigator Award**  
*The Korean Society of Cancer Prevention*
- 07/2018      **Young Investigator Award**  
*The Korean Society of Cancer Prevention*
- 07/2017      **Young Investigator Award**  
*The Korean Society of Cancer Prevention*

## Certificates

**SAS Certified Base Programmer for SAS 9**  
*SAS Global Certification, Certificate Verification No.Y9V19JB12F4Q1T5X*

## Languages

**English**  
*Fluent*

**Korean**  
*Native*