Year in review, 2019
- Smoking & Smoking cessation-

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Contents

- Impact of cigarette smoking, smoking cessation
- Smoking cessation & lung cancer screening
- E-cigarette risks
- Useful biomarker for smoking cessation

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Cigarette Smoking, Smoking Cessation, and Long-Term Risk of 3 Major Atherosclerotic Diseases

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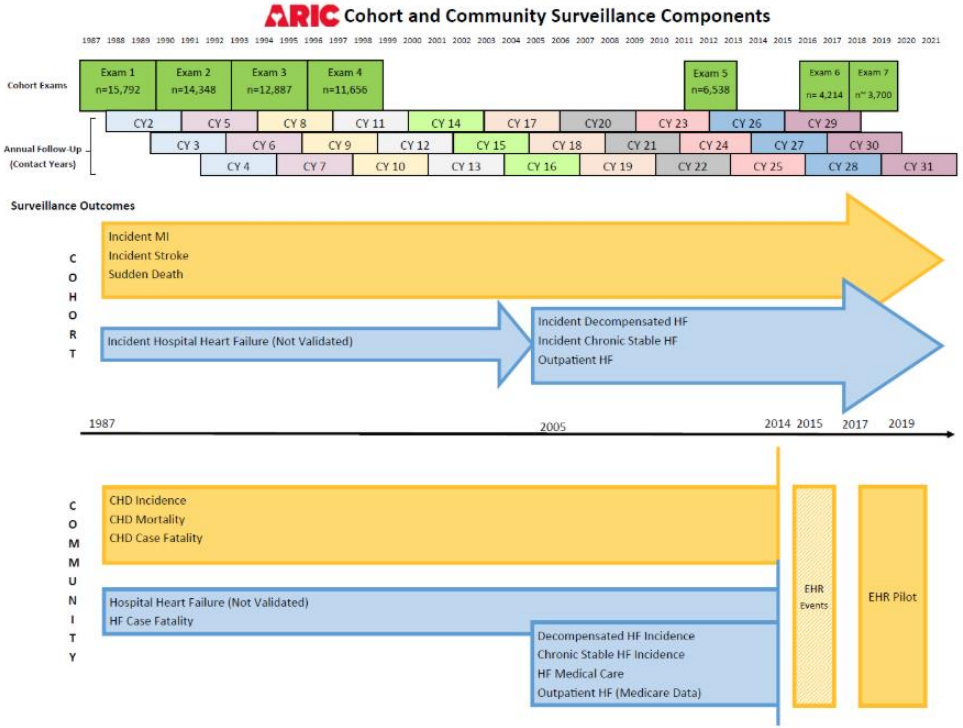
J Am Coll Cardiol. 2019 Jul 30;74(4):498-507

- 15,792 participants aged 45 to 64 years in the ARIC (Atherosclerosis Risk In Communities) study took place from 1987 to 1989



J Am Coll Cardiol. 2019 Jul 30;74(4):498-507

- 15,792 participants aged 45 to 64 years
  in the ARIC (Atherosclerosis Risk In Communities) study
  took place from 1987 to 1989

- 13,355 participants without PAD, CHD, or stroke at baseline

- over a median follow-up of 26 years

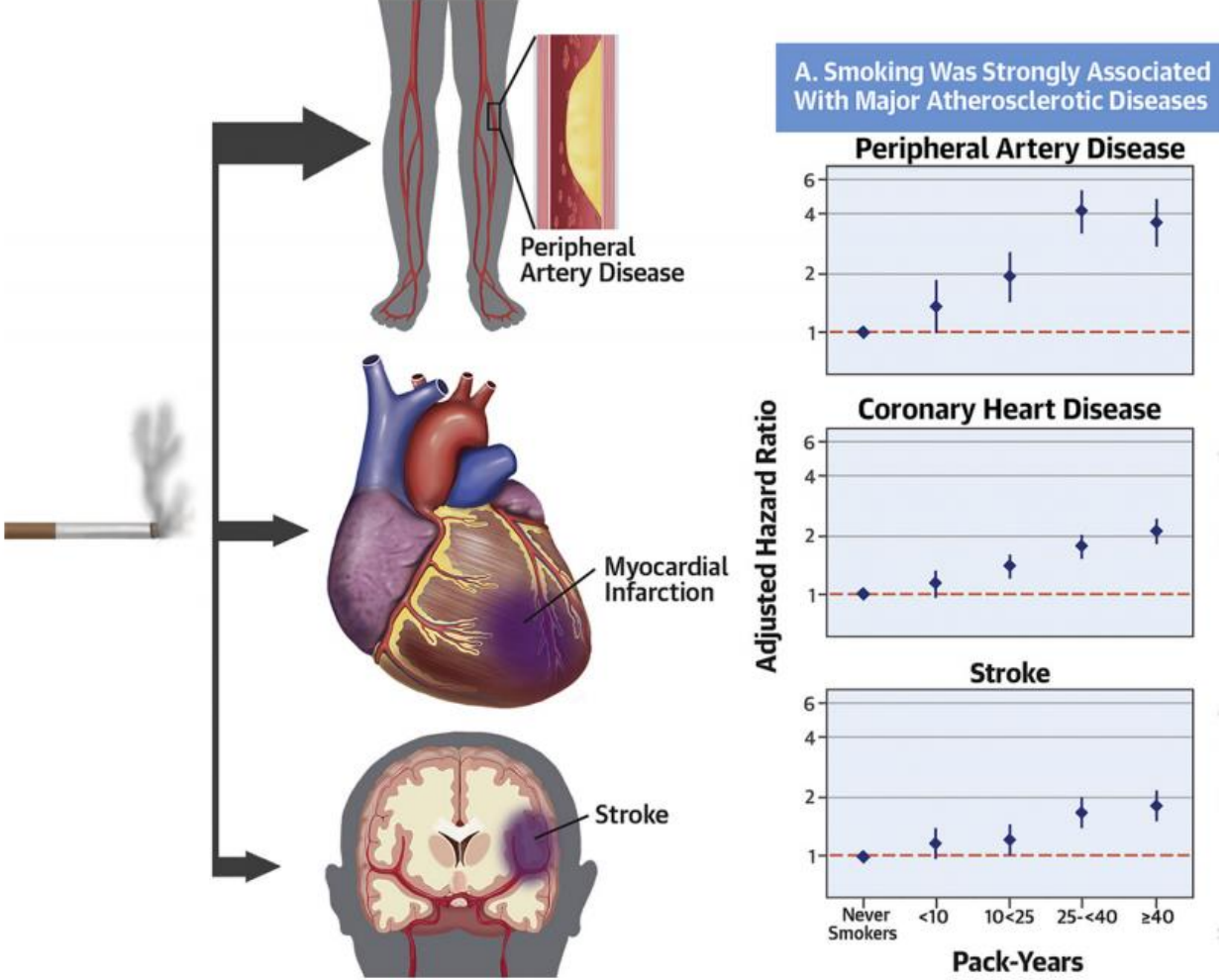
- smoking parameters (packyears, duration, intensity & cessation)
  PAD, CHD and stroke

J Am Coll Cardiol. 2019 Jul 30;74(4):498-507

TABLE 1 Baseline Characteristics by Smoking Status at Baseline

	Overall (N = 13,355)	Current Smokers (n = 3,323)	Former Smokers (n = 4,185)	Never Smokers (n = 5,847)	p Value
Age, yrs	53.9 ± 5.7	53.2 ± 5.6	54.5 ± 5.7	53.9 ± 5.8	<0.001
Female	7,505 (56.2)	1,776 (53.4)	1,657 (39.6)	4,072 (69.6)	<0.001
Black	3,377 (25.3)	953 (28.7)	768 (18.4)	1,656 (28.3)	<0.001
Body mass index, kg/m^2	27.6 ± 5.3	26.4 ± 5.0	27.9 ± 5.0	28.1 ± 5.6	<0.001
Education level					
Basic	2,921 (21.9)	956 (28.8)	835 (20.0)	1,330 (19.3)	<0.001
Intermediate	5,522 (41.4)	1,422 (42.8)	1,648 (39.4)	2,452 (41.9)	0.006
Advanced	4,912 (36.8)	945 (28.4)	1,702 (40.7)	2,265 (38.7)	<0.001
Physical activity	2.4 ± 0.8	2.3 ± 0.8	2.6 ± 0.8	2.4 ± 0.8	<0.001
Current drinker	7,603 (56.9)	2,158 (64.9)	2,734 (65.3)	2,711 (46.4)	<0.001
Systolic blood pressure, mm Hg	120.7 ± 18.3	118.9 ± 19.4	120.9 ± 17.1	121.6 ± 18.4	<0.001
Diastolic blood pressure, mm Hg	73.7 ± 11.1	72.0 ± 11.9	74.1 ± 10.5	74.3 ± 10.9	<0.001
Total cholesterol, mmol/l	5.5 ± 1.1	5.5 ± 1.1	5.5 ± 1.0	5.6 ± 1.1	0.052
HDL cholesterol, mmol/l	1.3 ± 0.4	1.3 ± 0.5	1.3 ± 0.4	1.4 ± 0.4	<0.001
eGFR, ml/min	102.9 ± 15.2	106.1 ± 14.6	100.5 ± 14.6	102.8 ± 15.7	<0.001
Antihypertensive medication	3,669 (27.5)	815 (24.5)	1,122 (26.8)	1,732 (29.6)	<0.001
Cholesterol-lowering medication	340 (2.5)	61 (1.8)	125 (3.0)	154 (2.6)	0.006
Diabetes	1,420 (10.6)	300 (9.0)	433 (10.3)	687 (11.7)	<0.001

J Am Coll Cardiol. 2019 Jul 30;74(4):498-507



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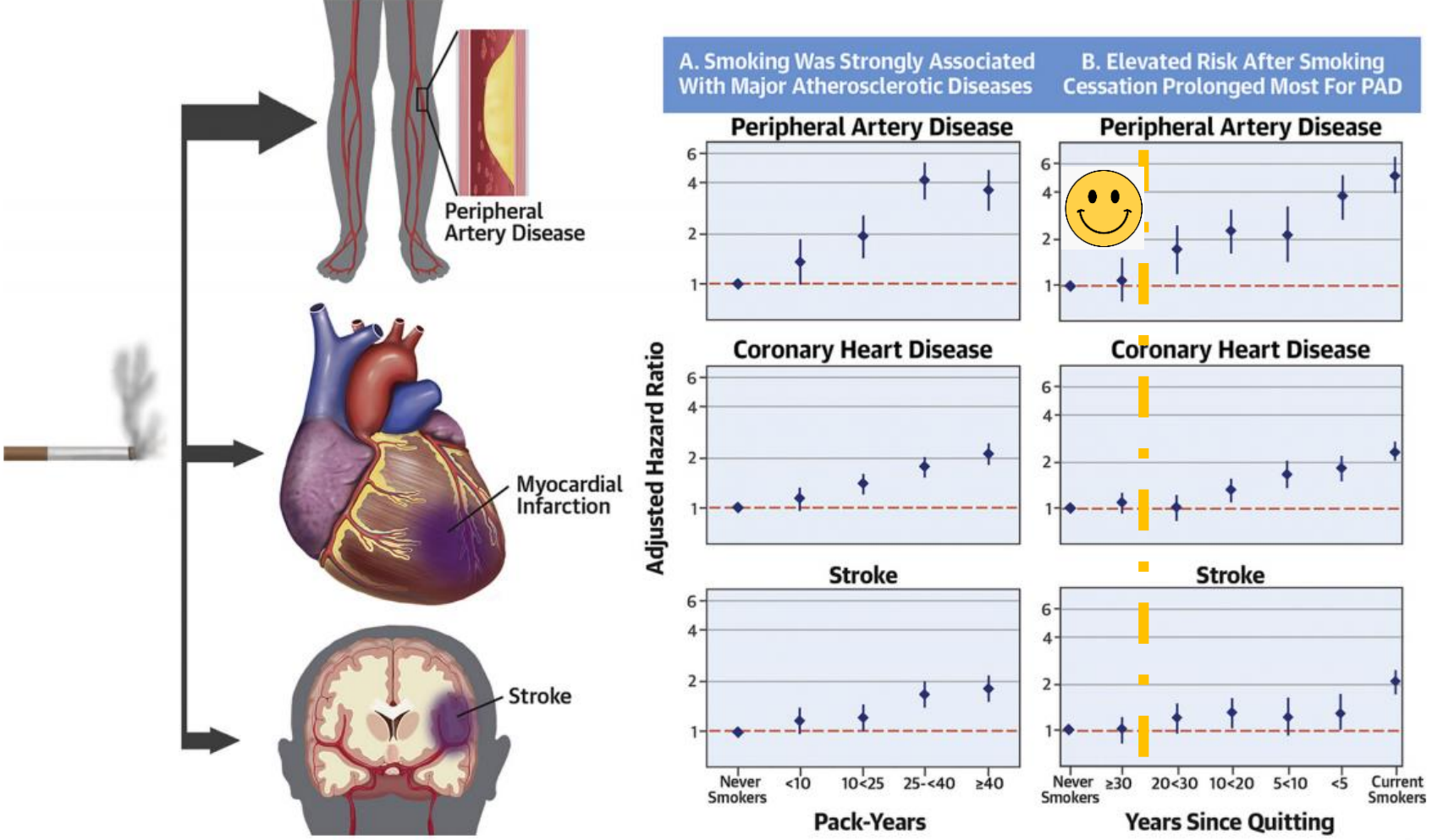

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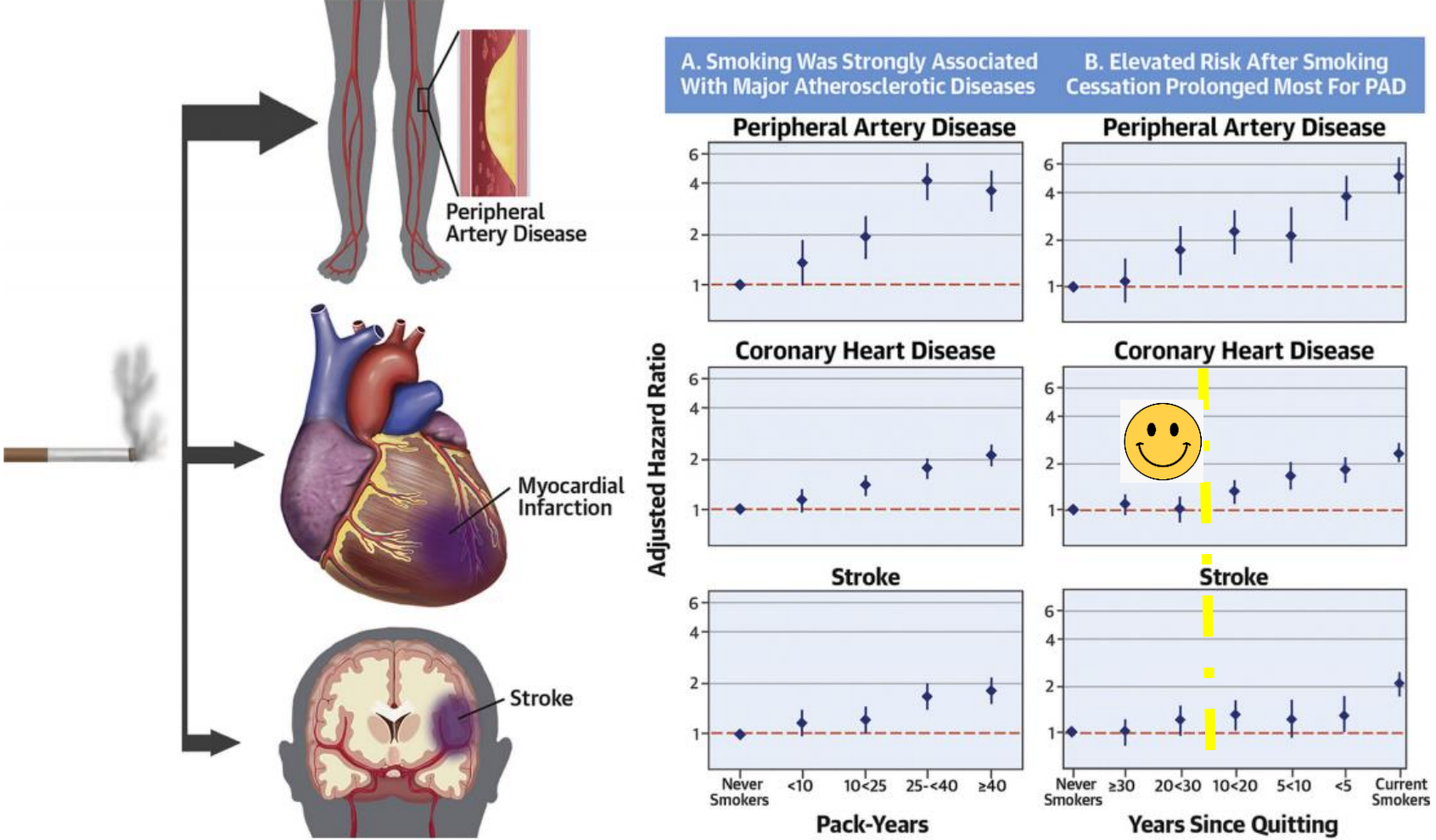

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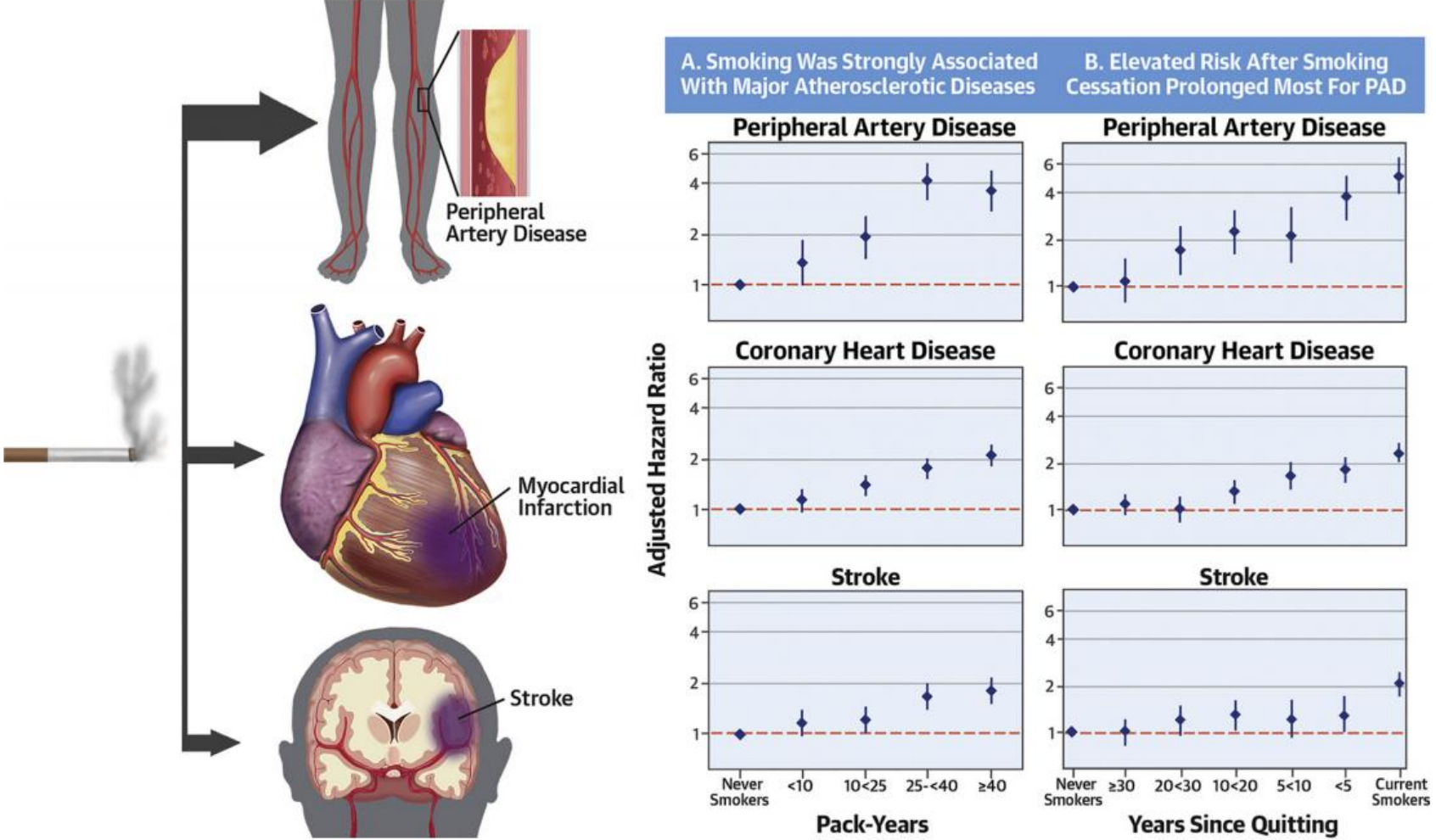

J Am Coll Cardiol. 2019 Jul 30;74(4):498-507

CONCLUSIONS All smoking measures showed significant associations with 3 major atherosclerotic diseases, with the strongest effect size for incident PAD. The risk due to smoking lasted up to 30 years for PAD and 20 years for CHD. Our results further highlight the importance of smoking prevention and early smoking cessation, and indicate the need for public statements to take PAD into account when acknowledging the impact of smoking on overall cardiovascular health.
(J Am Coll Cardiol 2019;74:498-507)

Contents lists available at ScienceDirect

Lung Cancer

journal homepage: www.elsevier.com/locate/lungcan

Longitudinal study to assess impact of smoking at diagnosis and quitting on 1-year survival for people with non-small cell lung cancer

Rachel E. Gemine[a,b,*], Robin Ghosal[b], Gareth Collier[b], Diane Parry[c], Ian Campbell[c], Gareth Davies[d], Kathryn Davies[e], Keir E. Lewis[a,b,e], on behalf of the LungCast Investigators

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[b] Hywel Dda University Health Board, Wales, SA14 8QF, UK
[c] Department of Respiratory Medicine, Cardiff & Vale University Health Board, Cardiff, Wales, CF64 2XX, UK
[d] Public Health Wales, St David's Park, Carmarthen, Wales, SA31 3BB, UK
[e] School of Medicine, Swansea University, Singleton Park, Swansea, Wales, SA2 8PP, UK

Lung Cancer. 2019 Mar;129:1-7.

- UK multi-centre study (28 sites)
- 1124 patients with newly diagnosed NSCLC between 2010-2016
- following patients from diagnosis for up to 1 year or until death
- cancer treatment & smoking cessation treatments
- smoking, cessation & 1-year survival

Lung Cancer. 2019 Mar;129:1-7.

Table 1
Baseline group characteristics for never, ex and current smokers at the time of diagnosis.

	Never smokers (n = 64)	Ex-smokers (n = 696)	Current smokers (n = 364)	p-value
Mean Age (years)	68.7 (11.3)	70.3 (8.6)	66.0 (9.4)	Never vs Ex p = 0.91 Never vs Current p = 0.02 Current vs Ex p < 0.01
% male	34.4	61.9	58.2	p < 0.01
% Stage I or II	25.0	22.0	21.7	p = 0.84
Mean ECOG	0.83	0.95	1.09	p = 0.13
% surgery	14.1	16.4	12.1	p = 0.17
% chemotherapy	61.0	61.4	57.1	p = 0.65
% radiotherapy	29.7	31.0	32.7	p = 0.89
% receiving BSC	18.8	12.4	16.2	p = 0.12

Lung Cancer. 2019 Mar;129:1-7.

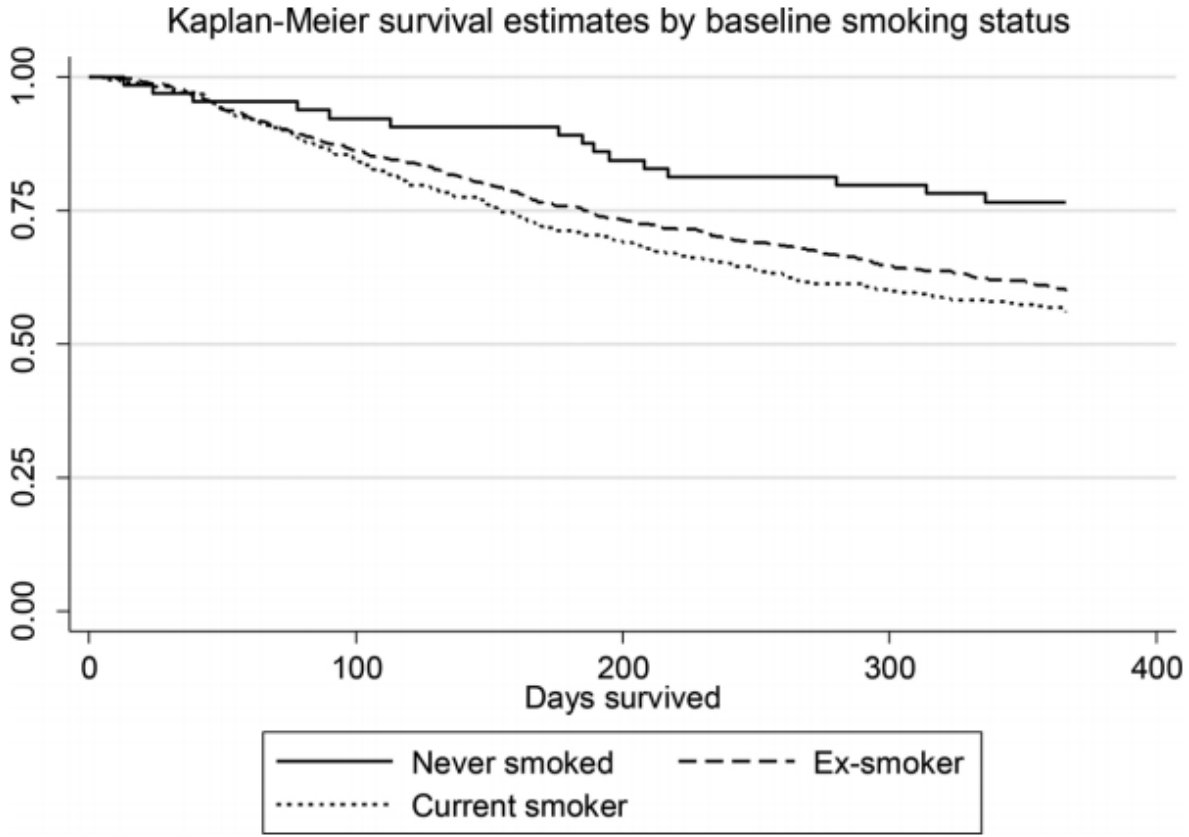

Fig. 1. Kaplan-Meier Survival curves for baseline smoking status at diagnosis of NSCLC (all stages).

Lung Cancer. 2019 Mar;129:1-7.

Multivariate analysis of baseline variables and their effect on survival

Variable	Level	Adjusted Hazard ratio	95% CI	p value
Smoking status	Never smoked (baseline)	–	–	–
	Ex smoker	1.96	1.16 to 3.31	0.01
	Current smoker	2.04	1.19 to 3.48	< 0.01
Received surgery	No (baseline)	–	–	–
	Yes	0.65	0.43 to 0.97	0.03
Stage	I (baseline)	–	–	–
	II	1.05	0.61 to 1.80	0.87
	III	1.63	1.07 to 2.47	0.02
	IV	2.85	1.91 to 4.28	< 0.01
Sex	Male (baseline)	–	–	–
	Female	0.83	0.69 to 1.01	0.05
Age	–	0.99	0.98 to 1.00	0.51

Lung Cancer. 2019 Mar;129:1-7.

Table 3
Characteristics of continued smokers Vs those who quit by 3 months.

	Quitters n = 71	Continuers n = 293	p-value
Age (years)	66.0 (9.7)	66.0 (9.4)	0.99
[illegible]	[illegible]	[illegible]	[illegible]
% Stage I or II	36.6	18.1	< 0.01
% receiving surgery	32.4	7.2	< 0.01
% alive 1 year	69.0	52.9	0.01

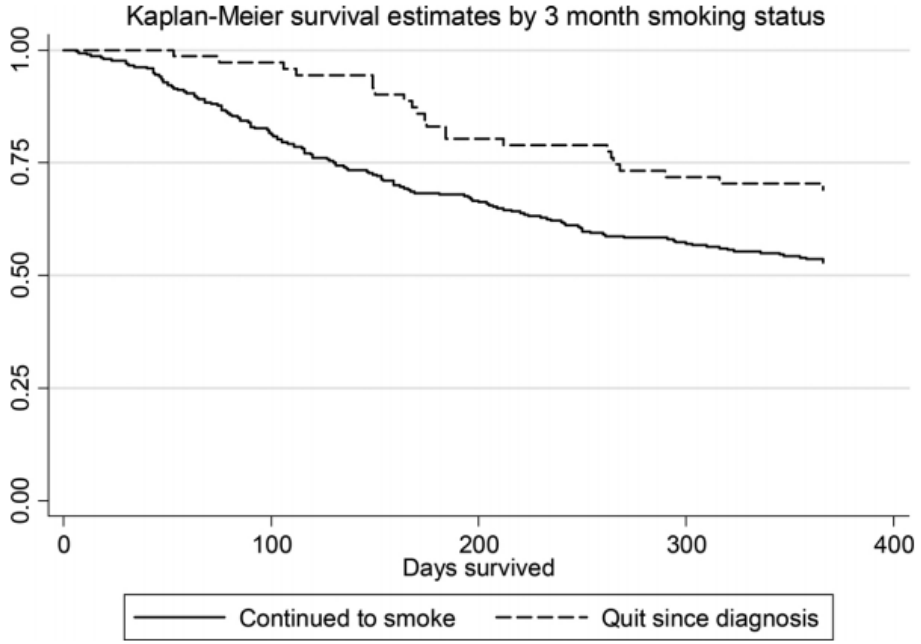

Fig. 2. Kaplan-Meier Survival curves for continued smokers versus quitters.

Lung Cancer. 2019 Mar;129:1-7.

Multivariate analysis of quitting or continued smoking and effect on survival.

Variable	Level	Adjusted Hazard ratio	95% CI	p value
Smoking status	[illegible]			
	Quit at diagnosis	0.75	0.46 to 1.20	0.23
Received surgery	No (baseline)	–	–	–
	Yes	0.55	0.25 to 1.21	0.13
Sex	Male	–	–	–
	Female	0.94	0.68 to 1.30	0.71
Age	–	1.00	0.98 to 1.01	0.80

Lung Cancer. 2019 Mar;129:1-7.

Conclusions: This is the largest prospective study that validates smoking in NSCLC; it shows a third of people are smoking at the time of diagnosis. Smokers have lower 12-month survival than never and ex -smokers. Quitting smoking was associated with 25% reduction in mortality which may be clinically important although not statistically significant, after adjusting for other factors.

Lung Cancer. 2019 Mar;129:1-7.

Importance of Smoking Cessation on Surgical Outcome in Primary Lung Cancer

Mariko Fukui, PhD, Kenji Suzuki, PhD, Takeshi Matsunaga, PhD, Shiaki Oh, PhD, and Kazuya Takamochi, PhD

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Ann Thorac Surg. 2019 Apr;107(4):1005-1009.

- Retrospective study, single center, Japan
- 666 patients with stage I-III primary LCA between 2010-2016
- Preoperative smoking cessation & pulmonary complications

Ann Thorac Surg. 2019 Apr;107(4):1005-1009.

Table 1. Clinical Characteristics of the Patients

Variable	Never Smoker (n = 256)	Smoker (n = 410)	*p* Value
Age, years	65.9 ± 12.5	68.6 ± 8.8	0.002[a]
Sex: male	51 (19.9)	325 (79.2)	<0.001[b]
Smoking history, pack-years	0.1 ± 0.5	49.1 ± 35.2	<0.001[a]
CEA, ng/mL	4.1 ± 15.6	6.6 ± 19.3	0.088[a]
FVC, L	2.89 ± 0.74	3.38 ± 0.79	<0.001[a]
%FVC	103.8 ± 15.3	100.1 ± 15.7	0.004[a]
$FEV_{1.0}$, L	2.20 ± 2.01	2.22 ± 0.62	0.892[a]
FEV/FVC, %	75.4 ± 6.7	69.1± 10.5	<0.001[a]
%DLCO	68.5 ± 15.1	56.3 ± 17.4	<0.001[a]
Radiologic interstitial pneumonia	9 (3.5)	84 (20.5)	<0.001[b]
Comorbidity			
Another cancer	32 (12.5)	72 (17.6)	0.049[b]
Coronary artery disease	15 (5.9)	43 (10.5)	0.039[b]
Diabetes	28 (10.9)	81 (19.8)	0.003[b]
Clinical stage			
Stage I	225 (87.9)	297 (72.4)	<0.001[b]
Stage II or III	31 (12.1)	113 (27.6)	…
Pathologic stage			
Stage I	214 (84.9)	259 (64.1)	<0.001[b]
Stage II or III	38 (15.1)	145 (35.9)	…
Histology of lung cancer			
Squamous cell carcinoma	2 (0.8)	114 (27.8)	<0.001[b]
Surgery			
Sublobar resection	87 (69.9)	121 (58.8)	0.170b
Wedge resection	36 (14.1)	50 (12.2)	…
Segmentectomy	51 (19.9)	71 (17.3)	…
Pneumonectomy	2 (0.8)	7 (1.7)	…
Lymph node dissection ND1[c] or ND2[d]	206 (83.0)	346 (86.1)	0.175[b]
Operative time, minutes	112.8 ± 42.9	139.1 ± 61.5	<0.001[a]
Operative blood loss, mL	25.6 ± 53.6	68.3 ± 15.1	<0.001[a]

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Ann Thorac Surg. 2019 Apr;107(4):1005-1009.

Table 3. Univariate and Multivariate Analyses to Identify Predictors of Pulmonary Complication

	Univariate Analysis			Multivariate Analysis		
Variable	Odds Ratio	95% CI	*p* Value[a]	Odds Ratio	95% CI	*p* Value
Age	1.034	1.009–1.060	0.008	…	…	…
Sex: male	3.922	2.193–6.897	<0.001	…	…	…
Smoker versus never smoker	6.346	3.121–12.905	<0.001	2.832	1.203–6.670	0.017
Smoking status (pack-year)	1.020	1.020–1.020	<0.001	…	…	…
Current smoker or not	3.676	1.927–6.993	<0.001	…	…	…
%VC < 80%	2.488	1.294–4.784	0.006	…	…	…
$FEV_{1.0}/FVC < 0.7$	3.715	2.304–5.991	<0.001	2.656	1.481–4.764	0.001
$\%D_{LCO} < 40\%$	5.909	3.275–10.661	<0.001	4.217	2.238–7.946	<0.001
Surgical procedure	1.543	0.916–2.602	0.103	…	…	…
Cancer stage c-II and III versus I	3.754	2.336–6.032	<0.001	2.320	1.293–4.163	0.005

Ann Thorac Surg. 2019 Apr;107(4):1005-1009.

Table 4. Pulmonary Complications by Smoking Status

Variable	Number	Pulmonary Complications, n (%)	Odds Ratio[a]	95% CI	*p* Value
Overall	660	86	…	…	…
Never smoker	256	9 (3.5)	…	…	…
Smoker	410	77 (22.3)	6.346	3.12–12.91	<0.001
Preoperative smoking cessation duration					
Current	50	16 (32.0)	12.915	5.294–31.509	<0.001
<1 month	22	6 (27.3)	10.292	3.258–32.508	<0.001
1–3 months	21	5 (23.8)	8.576	2.572–28.602	<0.001
3–6 months	16	4 (25.0)	6.333	1.530–26.222	0.011
6–12 months	28	5 (17.9)	5.966	1.845–19.295	0.003
>12 months	248	38 (15.3)	4.966	2.347–10.508	<0.001

Ann Thorac Surg. 2019 Apr;107(4):1005-1009.

Conclusions. A longer period of cessation might be more effective for reducing the risk of pulmonary complications. Smoking cessation at any time is valuable for lung cancer surgery.

Ann Thorac Surg. 2019 Apr;107(4):1005-1009.

Respiratory Medicine 146 (2019) 36–41

Contents lists available at ScienceDirect

Respiratory Medicine

journal homepage: www.elsevier.com/locate/rmed

Airway wall thickening on CT: Relation to smoking status and severity of COPD

Jean-Paul Charbonnier[a,b,*], Esther Pompe[c], Camille Moore[d], Stephen Humphries[e], Bram van Ginneken[b], Barry Make[f], Elizabeth Regan[f], James D. Crapo[f], Eva M. van Rikxoort[a,b], David A. Lynch[e], COPDGene investigators

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[c] Department of Respiratory Medicine, University Medical Center Utrecht, Utrecht, the Netherlands
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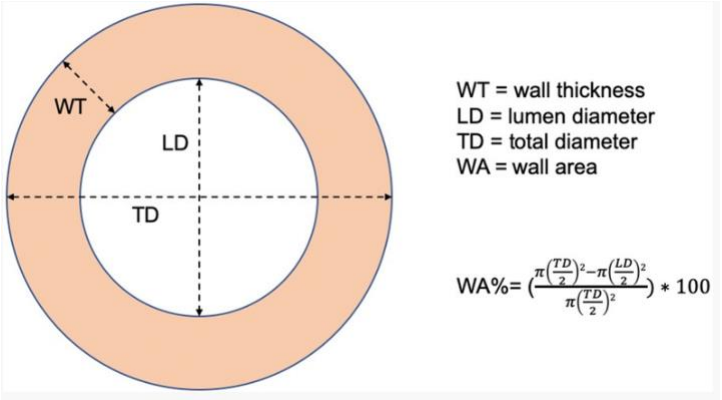
[e] Department of Radiology, National Jewish Health, Denver, CO, USA
[f] Department of Medicine, National Jewish Health, Denver, CO, USA

Respir Med. 2019 Jan;146:36-41.

- 2000 smokers and 46 never-smokers in COPDGene-study
- Baseline → 5 year follow-up
- Imaging characteristics
  - full inspiration CT
  - airway wall thickness(Pi10)
  - Thirona lung quantification software



Respir Med. 2019 Jan;146:36-41.

Table 1
Baseline demographics of all subjects (and stratified by smoking status) that were included in the cross-sectional analysis of visit 1. Data is given as mean ± standard deviation or as percentage of subjects.

	All smokers (n = 1955)	Current smokers (n = 865)	Former smokers (n = 1090)	p-value[a]
Demographic Characteristics				
Age (years)	60.5 ± 8.9	55.8 ± 7.4	64.2 ± 8.1	< 0.001
Gender (% male)	50.8	52.4	49.6	0.229
BMI (kg/m^2)	28.9 ± 6.0	28.3 ± 6.0	29.4 ± 5.9	< 0.001
Pack years (years)	43.7 ± 23.7	42.0 ± 22.3	45.2 ± 24.7	0.003
Clinical Characteristics and Quality of Life				
FEV_1% predicted (%)	78.3 ± 23.9	81.6 ± 22.0	75.7 ± 25.1	< 0.001
BD Responsiveness (% yes)	20.2	17.9	21.9	0.028
COPD (% yes)	44.6	37.3	50.4	< 0.001
GOLD stages				
GOLD 0 (%)	44.1	49.1		
Imaging Characteristics				
TLC (L)	5.54 ± 1.43	5.32 ± 1.40	5.71 ± 1.42	< 0.001
Pi10 (mm)	2.26 ± 0.58	2.34 ± 0.60	2.21 ± 0.55	< 0.001
GOLD 0	1.95 ± 0.41	2.04 ± 0.43	1.86 ± 0.37	< 0.001
GOLD 1	2.06 ± 0.44	2.18 ± 0.48	1.97 ± 0.39	0.001
GOLD 2	2.53 ± 0.54	2.66 ± 0.61	2.45 ± 0.48	< 0.001
GOLD 3/4	2.81 ± 0.49	2.97 ± 0.56	2.74 ± 0.44	< 0.001
PRISm	2.46 ± 0.56	2.59 ± 0.56	2.31 ± 0.54	< 0.001
SGRQ	23.3 ± 21.0	23.8 ± 21.4	21.8 ± 20.3	< 0.001
GOLD 0	14.7 ± 16.5	19.6 ± 18.6	10.1 ± 12.6	< 0.001
GOLD 1	16.6 ± 15.5	19.8 ± 17.4	14.1 ± 13.7	0.020
GOLD 2	29.1 ± 20.2	29.8 ± 20.6	28.7 ± 20.0	0.588
GOLD 3/4	43.0 ± 18.7	47.5 ± 19.2	41.1 ± 18.1	0.007
PRISm	28.2 ± 22.9	30.6 ± 22.9	25.6 ± 22.6	0.104
Imaging Characteristics				
TLC (L)	5.54 ± 1.43	5.32 ± 1.40	5.71 ± 1.42	< 0.001
Pi10 (mm)	2.26 ± 0.58	2.34 ± 0.60	2.21 ± 0.55	< 0.001
GOLD 0	1.95 ± 0.41	2.04 ± 0.43	1.86 ± 0.37	< 0.001
GOLD 1	2.06 ± 0.44	2.18 ± 0.48	1.97 ± 0.39	0.001
GOLD 2	2.53 ± 0.54	2.66 ± 0.61	2.45 ± 0.48	< 0.001
GOLD 3/4	2.81 ± 0.49	2.97 ± 0.56	2.74 ± 0.44	< 0.001
PRISm	2.46 ± 0.56	2.59 ± 0.56	2.31 ± 0.54	< 0.001
LAA%-950 (%)	6.71 ± 9.25	3.86 ± 6.14	8.98 ± 10.58	< 0.001

Respir Med. 2019 Jan;146:36-41.

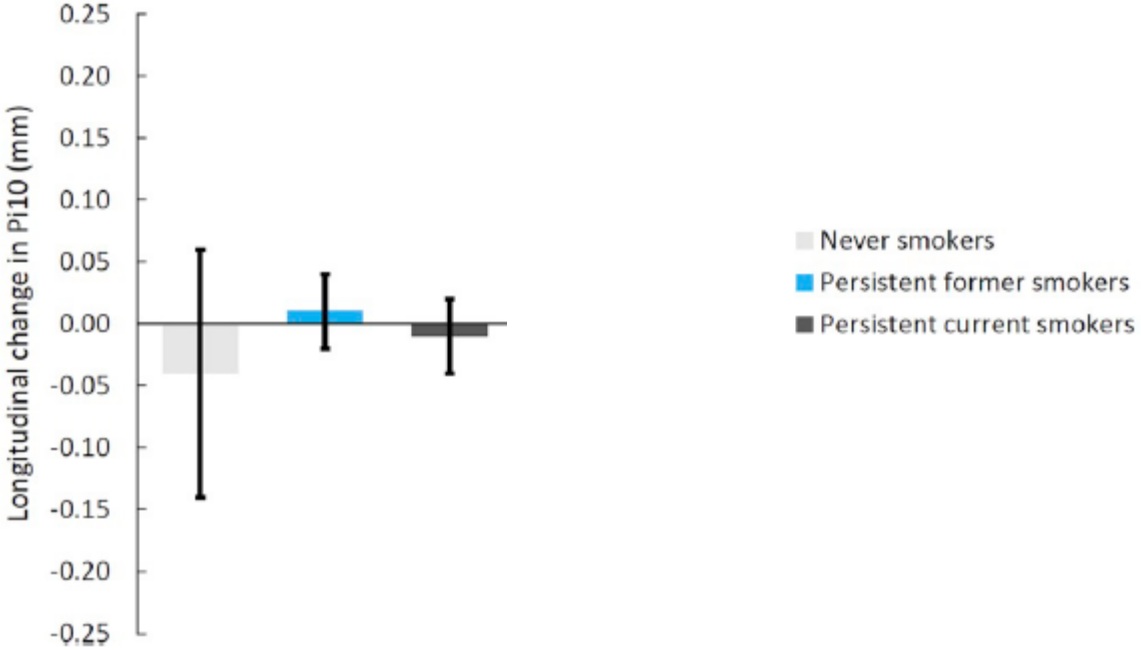
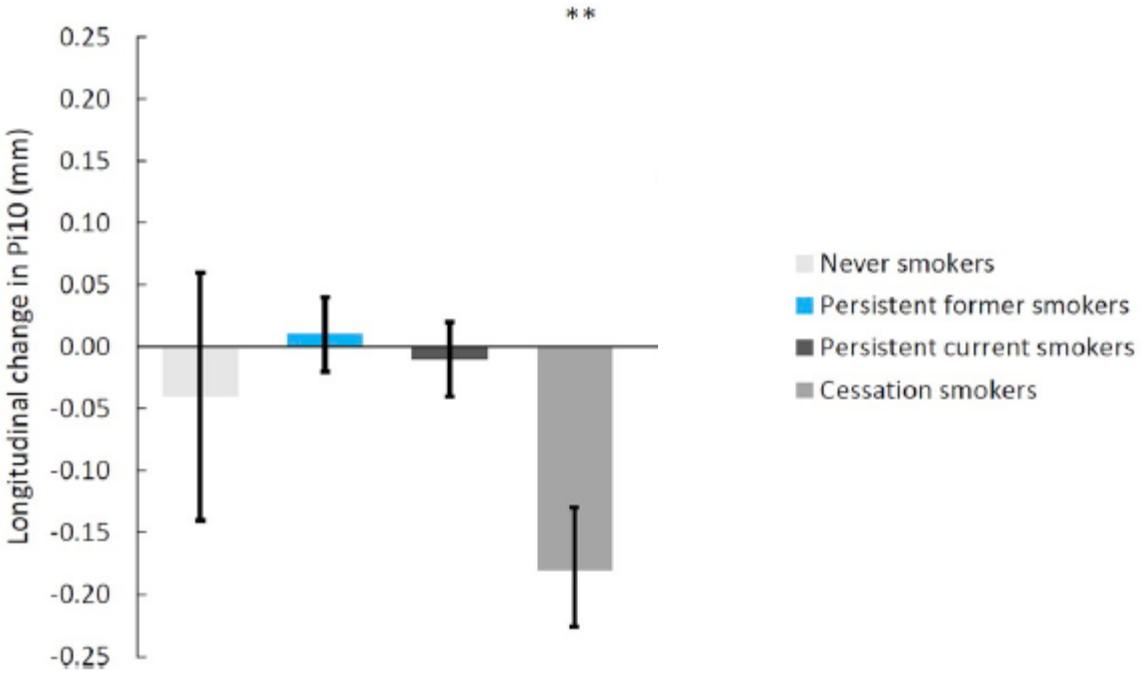


Fig. 2. Estimated longitudinal change in Pi10 stratified by change in smoking status. Pi10 change is the estimated change in Pi10 that is adjusted for gender, age, BMI, pack years, TLC, BDR, smoking status, and LAA%-950 at both visits using a linear mixed model. Whiskers of each bar indicate the 95% confidence interval. *$p < 0.05$. **$p < 0.001$.

Respir Med. 2019 Jan;146:36-41.



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Respir Med. 2019 Jan;146:36-41.

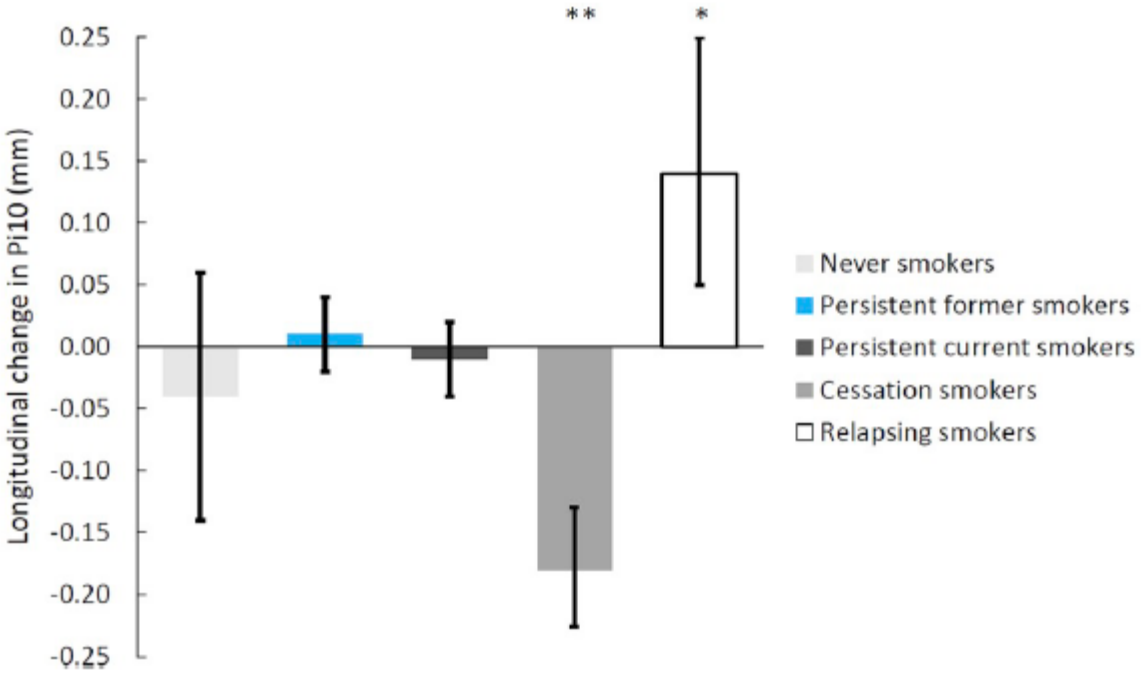
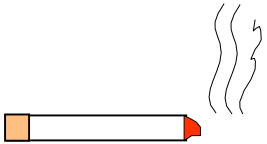


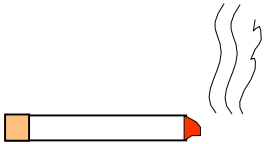
Fig. 2. Estimated longitudinal change in Pi10 stratified by change in smoking status. Pi10 change is the estimated change in Pi10 that is adjusted for gender, age, BMI, pack years, TLC, BDR, smoking status, and LAA%-950 at both visits using a linear mixed model. Whiskers of each bar indicate the 95% confidence interval. *$p < 0.05$. **$p < 0.001$.

Respir Med. 2019 Jan;146:36-41.

Pi10 is a clinically relevant biomarker of smoking-related airway injury in smokers with and without COPD. The change in Pi10 with change in smoking status suggests that it can quantify a reversible component of smoking-related airway inflammation.

Respir Med. 2019 Jan;146:36-41.

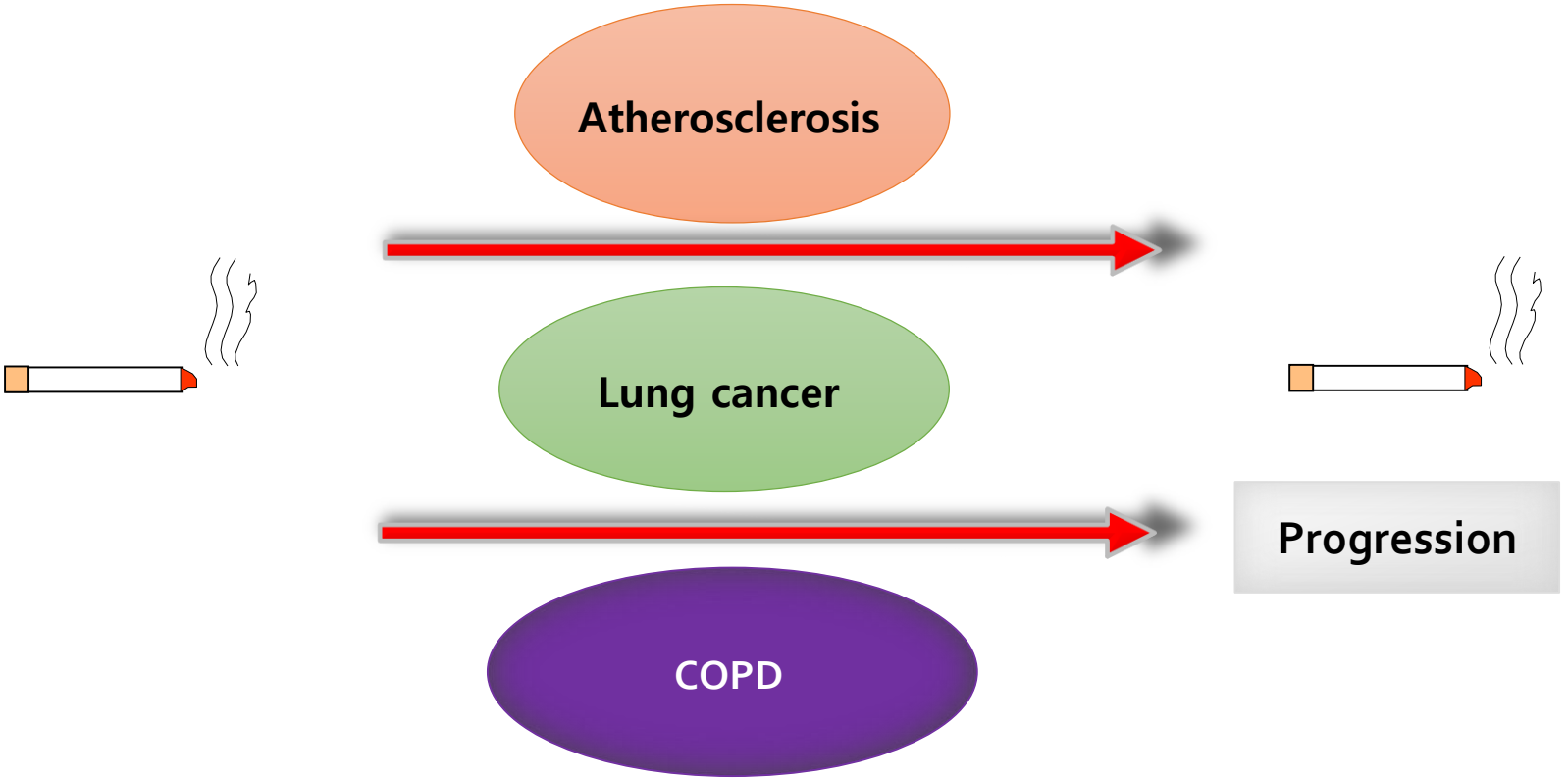


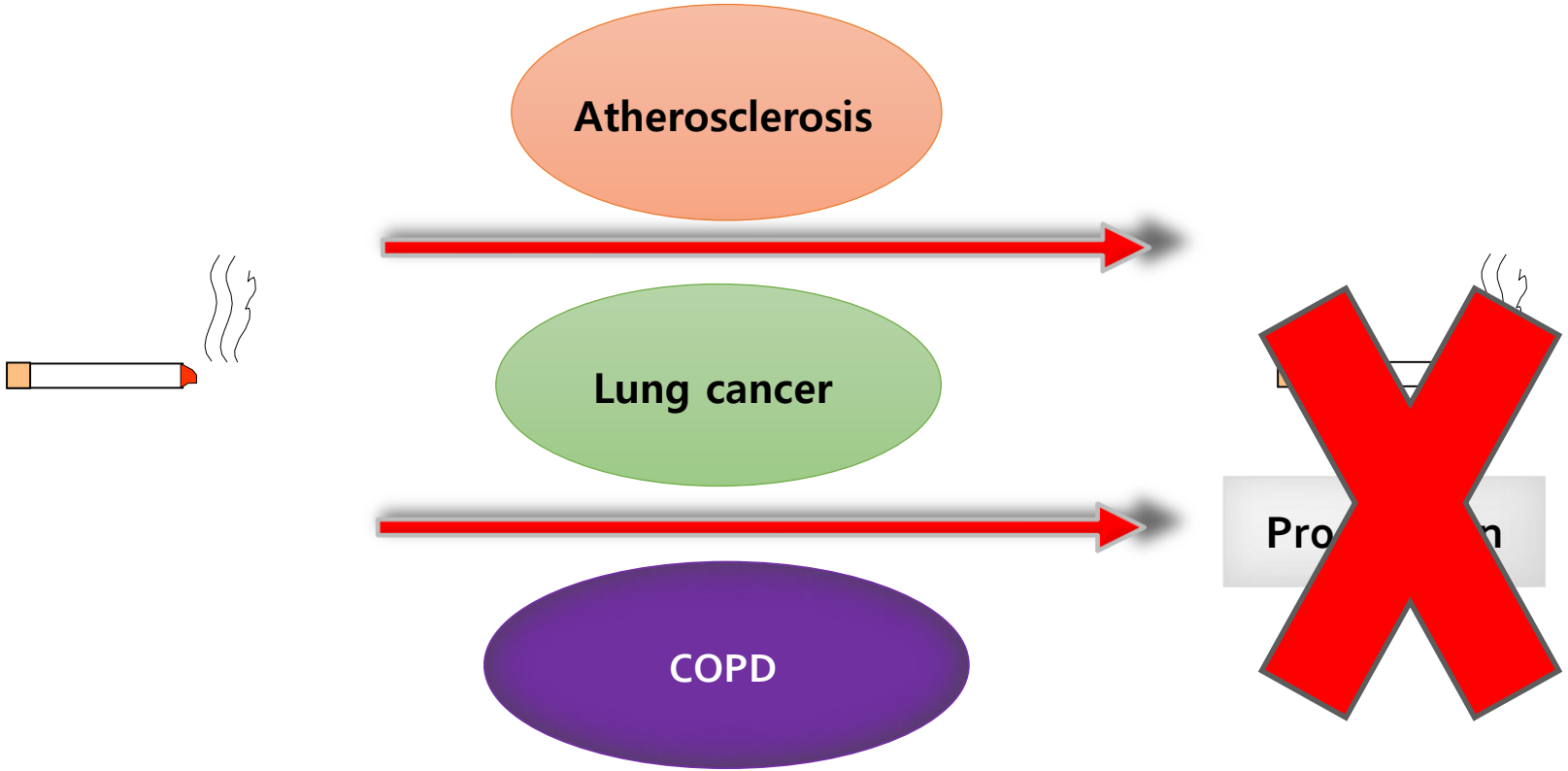


Atherosclerosis

Lung cancer

COPD


Atherosclerosis
Lung cancer
COPD
Progression


Atherosclerosis
Lung cancer
COPD

Contents

- Impact of cigarette smoking, smoking cessation
- Smoking cessation & lung cancer screening
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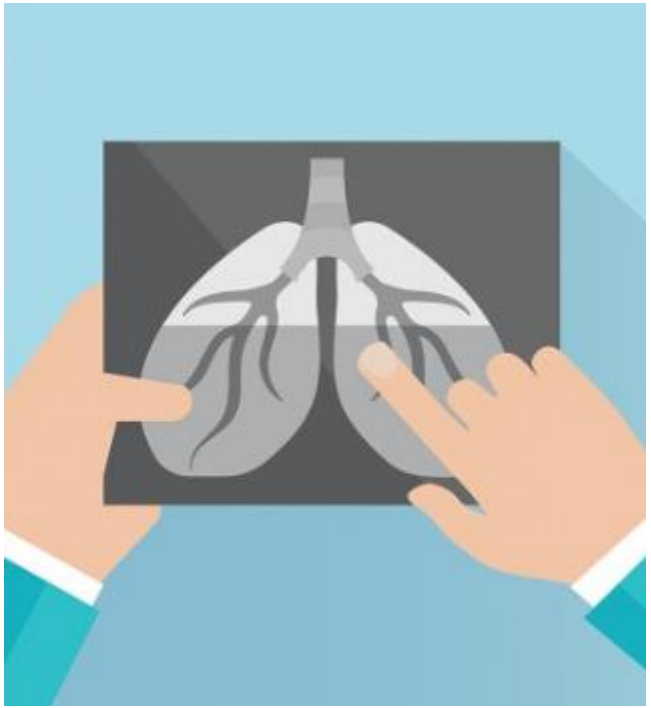
- Useful biomarker for smoking cessation



https://images.agoramedia.com/everydayhealth/gcms/Few-Current-Former-Smokers-Screened-for-Lung-Cancer-1440x810.jpg?width=722

Lung Cancer 135 (2019) 205–216

Contents lists available at ScienceDirect

Lung Cancer

journal homepage: www.elsevier.com/locate/lungcan

Smoking cessation interventions for potential use in the lung cancer screening setting: A systematic review and meta-analysis☆,☆☆

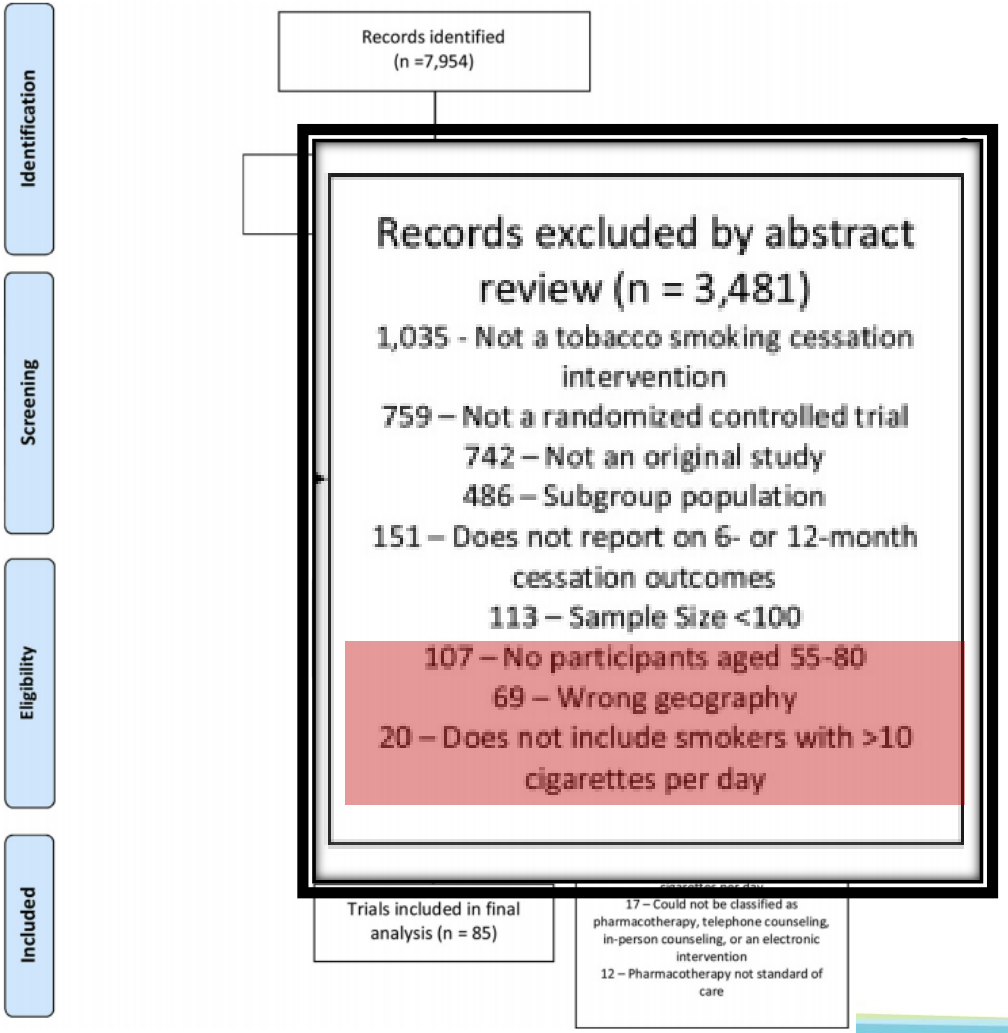
Christopher J. Cadham[a], Jinani C. Jayasekera[a,*], Shailesh M. Advani[a,b], Shelby J. Fallon[a], Jennifer L. Stephens[a], Dejana Braithwaite[a], Jihyoun Jeon[c], Pianpian Cao[c], David T. Levy[a], Rafael Meza[c], Kathryn L. Taylor[a,1], Jeanne S. Mandelblatt[a,1], On behalf of the CISNET-SCALE Collaboration

[a] *Georgetown University Medical Center-Lombardi Comprehensive Cancer Center, Cancer Prevention and Control Program, 3300 Whitehaven St. NW, Washington, DC, USA*

[b] *The National Human Genome Research Institute, National Institutes of Health, 31 Center Drive, Bethesda, MD, USA*

[c] *University of Michigan, School of Public Health, Ann Arbor, 1415 Washington Heights, Ann Arbor, MI, USA*

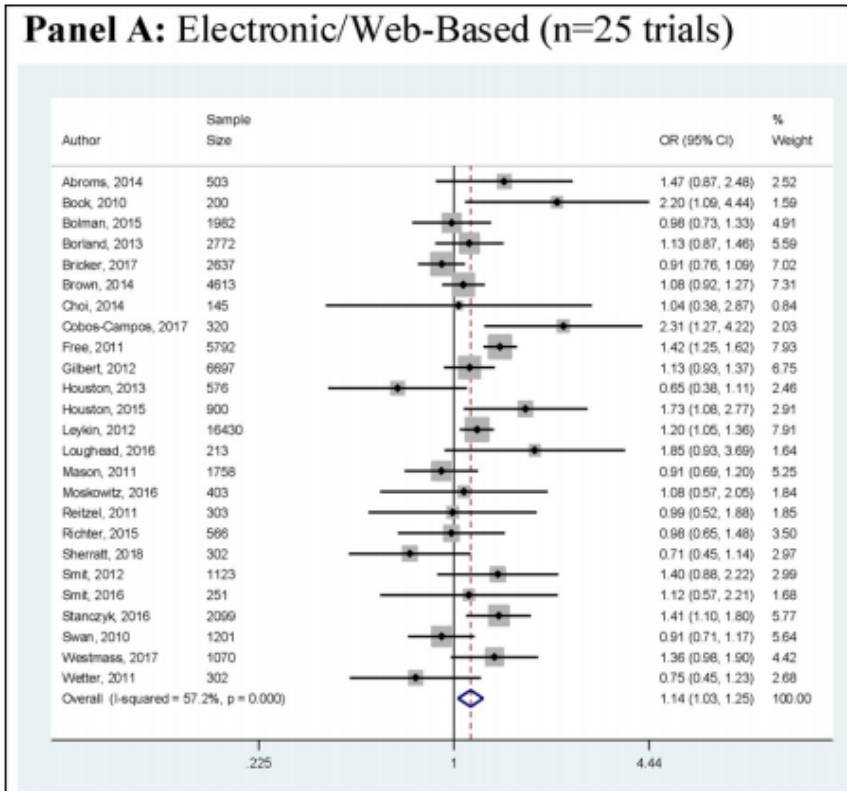
Lung Cancer. 2019 Sep;135:205-216.



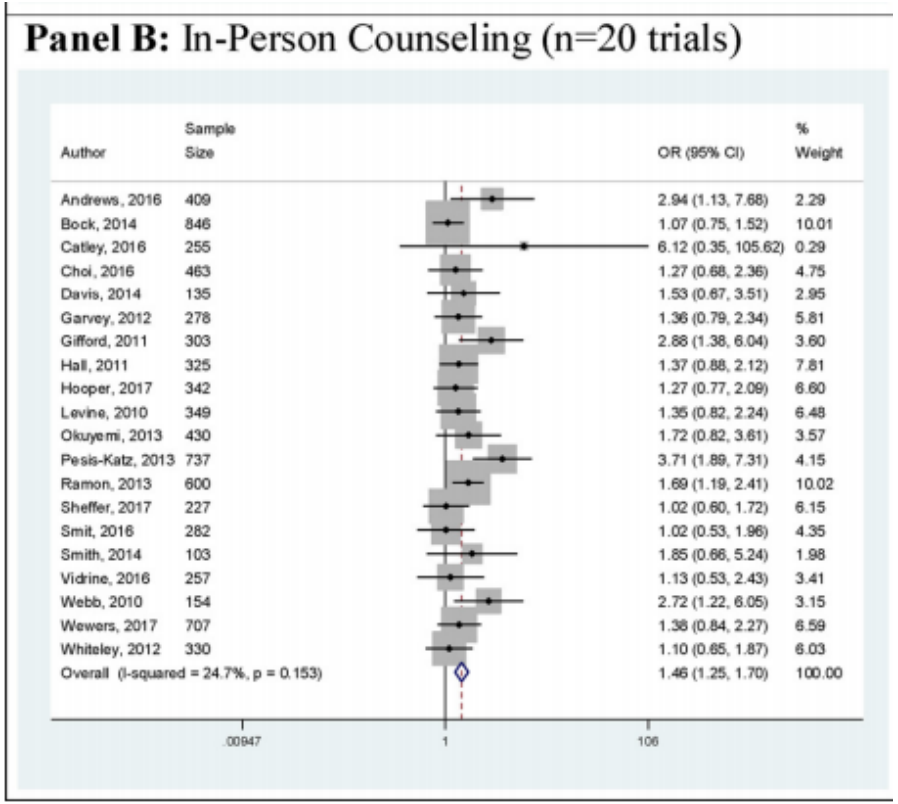
PubMed, Medline, and PsycINFO
RCT of smoking cessation interventions published from 2010-2017

if they sampled individuals **likely to be eligible for LCS** based on age and smoking history, had sample sizes >100, follow-up of 6- or 12-months, and were based in North America, Western Europe, Australia, or New Zealand

Lung Cancer. 2019 Sep;135:205-216.



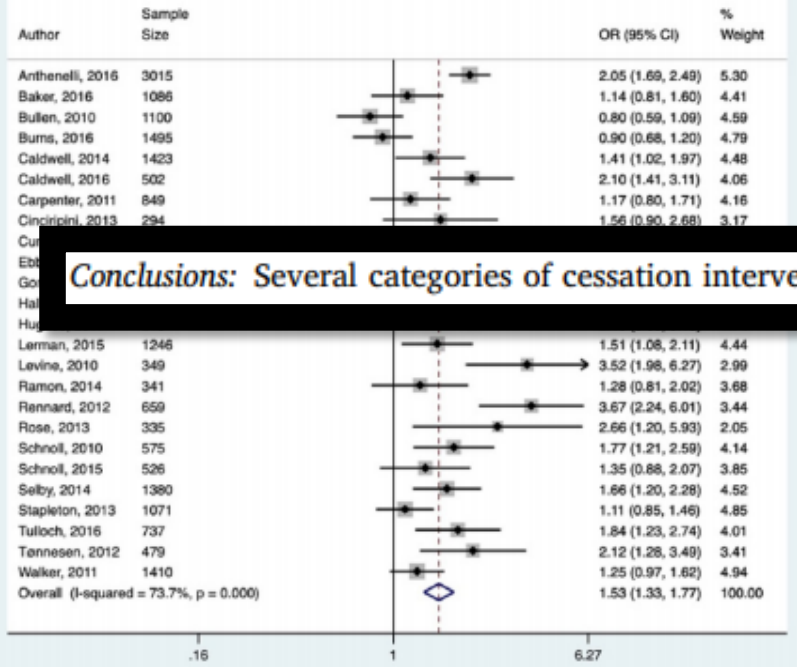
(OR 1.14, 95% CI 1.03–1.25)



(OR 1.46, 95% CI 1.25–1.70)

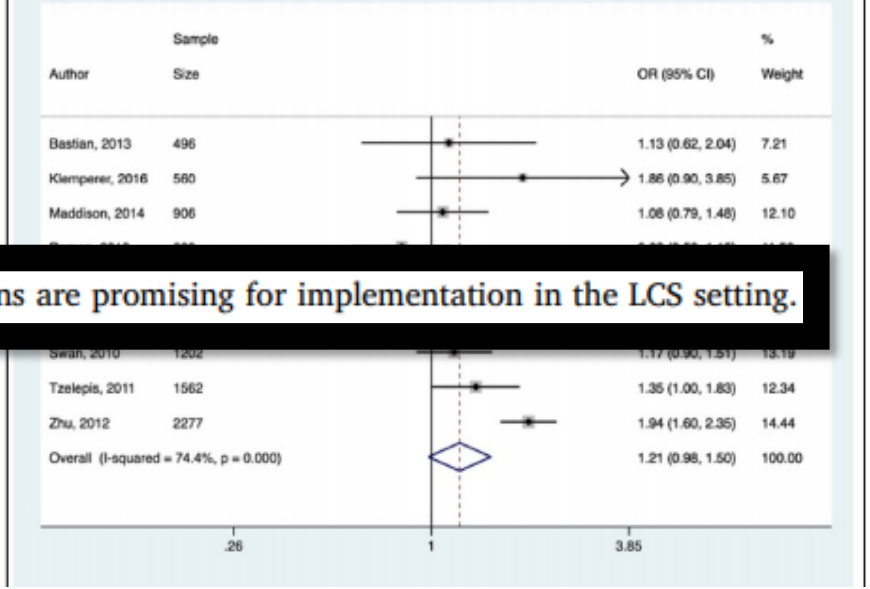
Lung Cancer. 2019 Sep;135:205-216.

Panel C: Pharmacotherapy (n=25 trials)



(OR 1.53, 95% CI 1.33–1.77)

Panel D: Telephone Counseling (n=9 trials)



(OR 1.21, 95% CI 0.98–1.50)

Conclusions: Several categories of cessation interventions are promising for implementation in the LCS setting.

Lung Cancer. 2019 Sep;135:205-216.

ORIGINAL ARTICLE

A Randomized Controlled Study of Integrated Smoking Cessation in a Lung Cancer Screening Program

Alain Tremblay, MDCM,[a,*] Niloofar Taghizadeh, PhD,[a] Jane Huang, MSc,[b] Debra Kasowski, RN,[b] Paul MacEachern, MD,[a] Paul Burrowes, MD,[c] Andrew J. Graham, MD,[d] James A. Dickinson, MB, PhD,[e] Stephen C. Lam, MD,[f] Huiming Yang, MD,[g] Rommy Koetzler, MD, PhD,[a] Martin Tammemagi, PhD,[h] Kathryn Taylor, PhD,[i] Eric L. R. Bédard, MD[j]

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[b]*AlbertaQuits Helpline, Health Links - Alberta Health Services, Edmonton, Alberta, Canada*
[c]*Department of Diagnostic Imaging, Foothills Medical Center, Alberta Health Services, Calgary, Alberta, Canada*
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[e]*Family Medicine and Community Health Sciences, Cumming School of Medicine, University of Calgary, Calgary, Alberta, Canada*
[f]*Department of Integrative Oncology, The British Columbia Cancer Research Center, Vancouver, British Columbia, Canada*
[g]*Population, Public and Indigenous Health, Alberta Health Services, Calgary, Alberta, Canada*
[h]*Department of Medical Sciences, Brock University, St. Catharines, Ontario, Canada*
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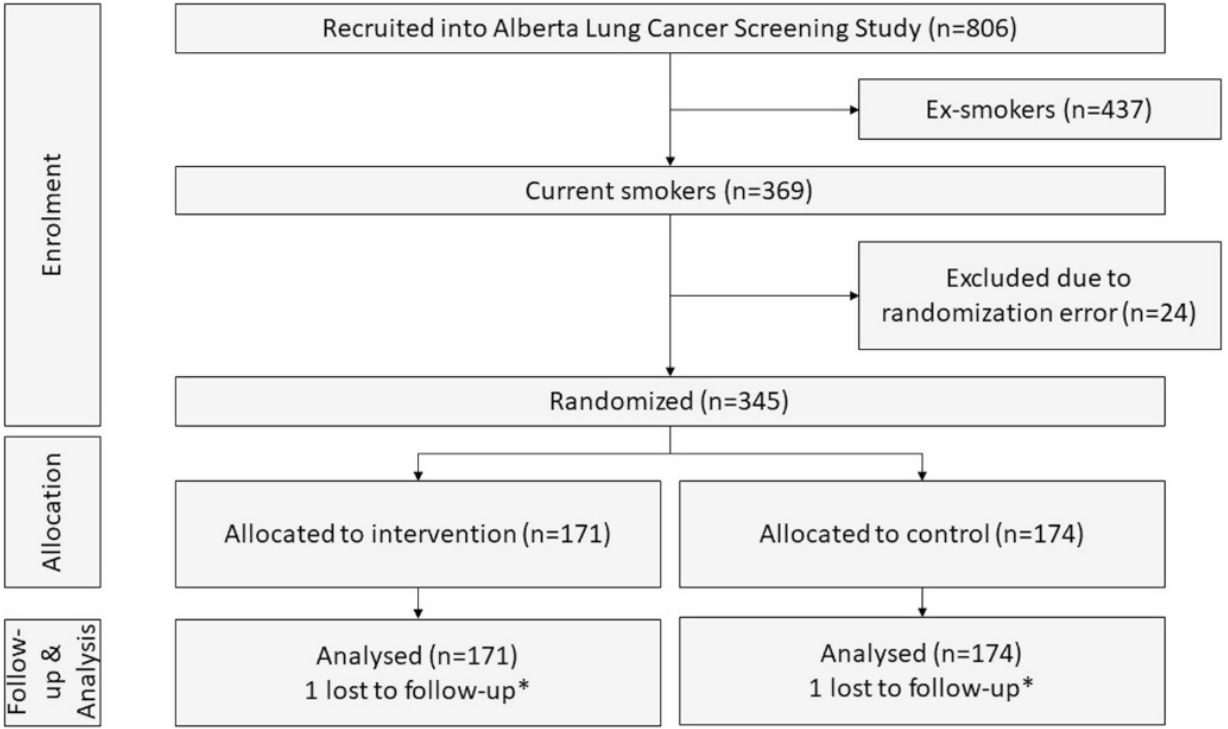
Received 8 March 2019; revised 15 April 2019; accepted 22 April 2019
Available online - 8 May 2019



*analyzed as non-quit at 12 months

- **Intervention**
  intensive telephone-based smoking cessation counseling

VS.

- **Control**
  usual care
  (information pamphlet)

1' endpoint : self-reported 30-day abstinence at 12months

J Thorac Oncol. 2019 Sep;14(9):1528-1537.

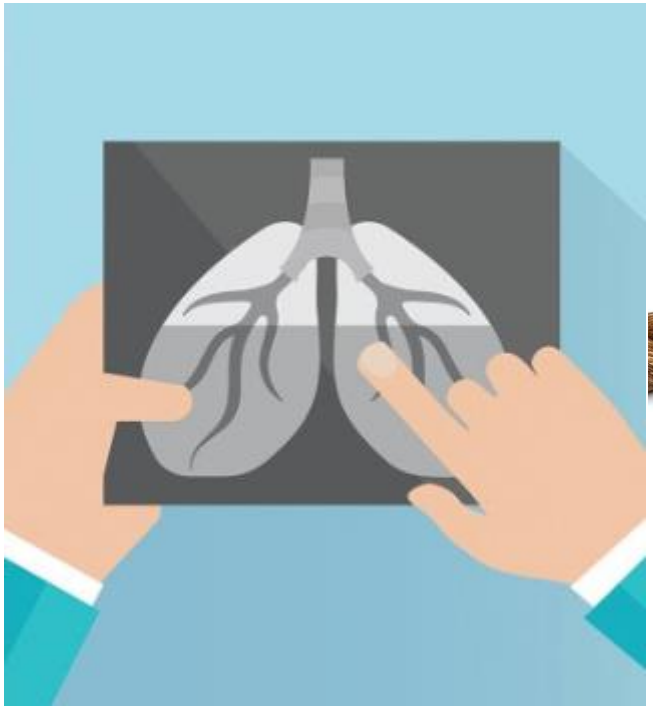
Table 3. Smoking Cessation Outcomes

Cessation Outcomes	Control n (%)	Intervention n (%)	Difference % (95% CI)	*p* Value
6-month assessment	(n = 174)	(n = 171)		
30 day abstinence	18 (10.3)	25 (14.6)	4.3 (-2.74 to 11.40)	0.229
7 day abstinence	27 (15.5)	40 (23.5)	8.0 (-0.38 to 16.30)	0.065
Current abstinence	30 (17.2)	43 (25.1)	7.9 (-0.73 to 16.43)	0.072
12-month assessment	(n = 174)	(n = 171)		
30-day abstinence	**22 (12.6)**	**24 (14.0)**	**1.4 (-5.85 to 8.68)**	**0.704**
30-day abstinence biochemically confirmed	19 (10.9)	22 (12.9)	2.0 (-4.9 to 9.0)	0.577
7-day abstinence	29 (16.7)	37 (21.6)	4.9 (-3.43 to 13.19)	0.241
Current abstinence	32 (18.4)	39 (22.8)	4.4 (-4.15 to 12.91)	0.31
24-month assessment[a]	(n = 81)	(n = 83)		
30-day abstinence	18 (22.2)	18 (21.7)	-0.5 (-12.11 to 13.76)	0.934
7-day abstinence	22 (27.2)	22 (26.5)	-0.7 (-12.71 to 14.13)	0.925
Current abstinence	23 (28.4)	25 (30.1)	1.7 (-12.10 to 15.37)	0.808

J Thorac Oncol. 2019 Sep;14(9):1528-1537.

In conclusion, this randomized trial of an intensive telephone-based smoking cessation counseling intervention incorporating lung cancer screening results could not show a significant increase in quit rates at 12 months or at other periods. Routine referral of all current smokers to telephone-based smoking cessation counseling programs may not be effective in long-term heavy smokers older than 55 years of age undergoing lung cancer screening. Future studies are needed to show the effectiveness of smoking cessation approaches in this group of smokers and determine the optimal method(s) of integrating smoking cessation into a lung cancer screening program.

J Thorac Oncol. 2019 Sep;14(9):1528-1537.



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Contents

- Impact of cigarette smoking, smoking cessation
- Smoking cessation & lung cancer screening
- E-cigarette risks
- Useful biomarker for smoking cessation

Sections

The Washington Post
Democracy Dies in Darkness

Lung illness tied to vaping has killed 5 people as new case reports surge

Health officials are investigating 450 possible cases of a vaping-related illness. (David Paul Morris/Bloomberg News)

By **Lena H. Sun**
September 6

美 액상형 전자담배 사망 잇따라...복지부 "사용자제 권고"

뉴시스 입력 2019-09-20 18:44 수정 2019-09-20 18:44

식약처·질본, 유해성분 및 인체유해성 연구
"필요한 경우 판매금지 등 강력 대책 마련"

최근 미국에서 액상형 전자담배로 중증 폐질환자는 물론 사망사례가 잇따르자 보건당국이 액상형 전자담배 사용 자제를 권고하는 등 대책을 20일 마련했다. 정부는 국내·외 상황이 악화될 경우 판매 금지 등 강력한 추가 대책을 내놓기로 했다.

주요뉴스

현직 검사, 조국 면전서 "검사가 봉

현직 검사, 조국 '검사와의 대화' 비
보다 거슬리는 건 명칭"

'검사와의 대화' 마친 조국 "수사 (
나왔다"

조국 장관 취임 '적절하다' 36% vs
않다' 54%

"曺 손 거친 뒤..." 펀드 운용보

ORIGINAL RESEARCH

American Heart Association.

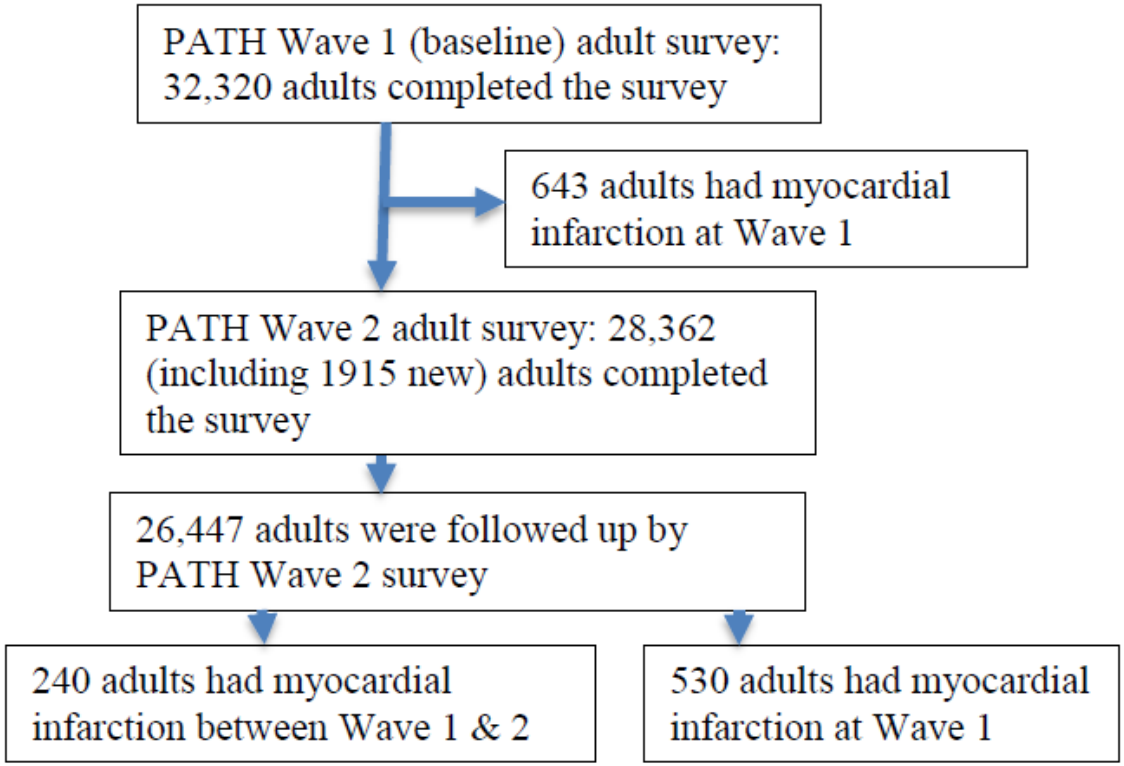
Electronic Cigarette Use and Myocardial Infarction Among Adults in the US Population Assessment of Tobacco and Health

Dharma N. Bhatta, PhD, MPH; Stanton A. Glantz, PhD

- Population Assessment of Tobacco and Health (PATH) Wave 1,2 (2013-2015)
- Cross-sectional analysis
- Causality analysis between E-cigarette use and MI

J Am Heart Assoc. 2019 Jun 18;8(12):e012317.

Figure S1. Flow diagram for sample.



J Am Heart Assoc. 2019 Jun 18;8(12):e012317.

Table 3. Adjusted Odds Ratios for Myocardial Infarction at Wave 1

Variables	AOR (95% CI)	*P* Value
E-cigarette use		
Never	Reference	
Former	1.25 (0.93–1.69)	0.147
Some day	1.99 (1.11–3.58)	0.024
Every day	2.25 (1.23–4.11)	0.010
Cigarette use		
Never	Reference	
Former	1.48 (1.01–2.15)	0.047
Some day	2.38 (1.40–4.06)	0.002
Every day	2.95 (1.91–4.56)	<0.001
High blood pressure		
Yes	2.08 (1.56–2.77)	<0.001
High cholesterol		
Yes	3.01 (2.31–3.92)	<0.001
Diabetes mellitus		
Yes	1.49 (1.09–2.03)	0.013
Age in y	1.07 (1.06–1.08)	<0.001
Body mass index, kg/m^2	1.02 (1.00–1.03)	0.016
Sex		
Women	0.27 (0.18–0.39)	<0.001
Poverty level/income		
At or above poverty	0.72 (0.49–1.04)	0.086
Race/ethnicity		
White	Reference	
Black	0.86 (0.63–1.16)	0.324
Asian	0.31 (0.07–1.38)	0.127
Other	1.37 (0.83–2.25)	0.226
Education		
Less than high school	1.49 (1.05–2.13)	0.030
High school or equivalent	Reference	
Some college and associate	0.97 (0.72–1.29)	0.814
Bachelor and advanced degree	0.62 (0.44–0.87)	0.007
Sample size	32 320	
VIF	<1.1	

Variables	AOR (95% CI)	*P* Value
E-cigarette use		
Never	Reference	
Former	1.25 (0.93–1.69)	0.147
Some day	1.99 (1.11–3.58)	0.024
Every day	2.25 (1.23–4.11)	0.010
Cigarette use		
Never	Reference	
Former	1.48 (1.01–2.15)	0.047
Some day	2.38 (1.40–4.06)	0.002
Every day	2.95 (1.91–4.56)	<0.001

J Am Heart Assoc. 2019 Jun 18;8(12):e012317.

Table 4. Reverse Causality Analysis: Adjusted Odds Ratios for Every Day e-Cigarette Use at Wave 2*

Variables at Wave 1	Among Overall Follow-Up Sample		Among Every-Day Cigarette Smoker at Wave 1†		Among Current Cigarette Smoker at Wave 1†	
	AOR (95% CI)	*P* Value	AOR (95% CI)	*P* Value	AOR (95% CI)	*P* Value
MI						
No	Reference		Reference		Reference	
Yes	0.85 (0.38–1.90)	0.687	0.80 (0.28–2.26)	0.675	0.79 (0.30–2.07)	0.634
Poverty level/income						
At or above poverty	1.01 (0.80–1.28)	0.918	1.36 (1.04–1.76)	0.028	1.26 (0.98–1.62)	0.077
Race/ethnicity						
White	Reference		Reference		Reference	
Black	0.28 (0.18–0.43)	<0.001	0.24 (0.12–0.51)	<0.001	0.26 (0.14–0.50)	<0.001
Asian	0.31 (0.13–0.73)	0.009	0.18 (0.02–2.07)	0.171	0.24 (0.04–1.51)	0.133
Other	0.92 (0.63–1.35)	0.683	0.97 (0.53–1.76)	0.916	0.93 (0.53–1.63)	0.804
Education						
Less than high school	0.62 (0.38–1.00)	0.056	0.95 (0.48–1.89)	0.884	0.83 (0.44–1.56)	0.565
High school or equivalent	Reference		Reference		Reference	
Some college and associate	1.03 (0.82–1.28)	0.814	1.26 (0.96–1.66)	0.099	1.15 (0.90–1.48)	0.257
Bachelor and advanced degree	0.40 (0.28–0.56)	<0.001	1.38 (0.84–2.29)	<0.001	1.01 (0.67–1.52)	0.973
VIF	<1.1		<1.1		<1.1	
Number of new e-cigarette users between Waves 1 and 2	1990		776		946	
Sample size	26 447		7378		9284	
Minimum detectable effect (OR)‡	1.51		1.39		1.35	

Variables at Wave 1	Among Overall Follow-Up Sample		Among Every-Day Cigarette Smoker at Wave 1†		Among Current Cigarette Smoker at Wave 1†	
	AOR (95% CI)	*P* Value	AOR (95% CI)	*P* Value	AOR (95% CI)	*P* Value
MI						
No	Reference		Reference		Reference	
Yes	0.85 (0.38–1.90)	0.687	0.80 (0.28–2.26)	0.675	0.79 (0.30–2.07)	0.634

J Am Heart Assoc. 2019 Jun 18;8(12):e012317.

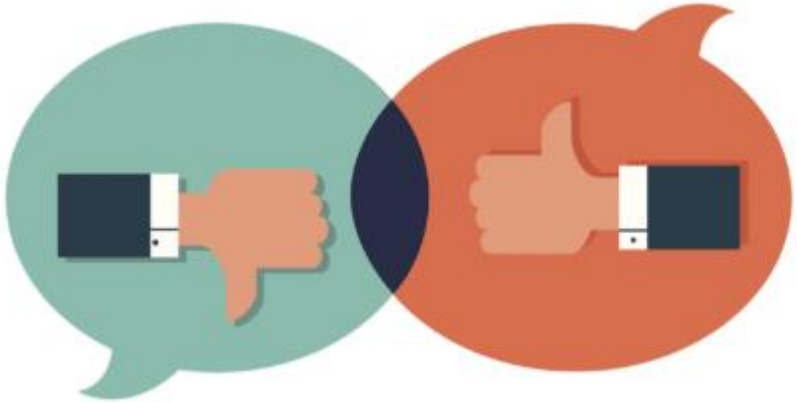
risk. E-cigarettes should not be promoted or prescribed as a less risky alternative to combustible cigarettes and should not be recommended for smoking cessation among people with or at risk of myocardial infarction.

J Am Heart Assoc. 2019 Jun 18;8(12):e012317.


MARVEL
IRON MAN 3
MAY 3
Facebook.com/IronMan
MARVEL

Contents

- Impact of cigarette smoking, smoking cessation
- Smoking cessation & lung cancer screening
- E-cigarette risks
- Useful biomarker for smoking cessation



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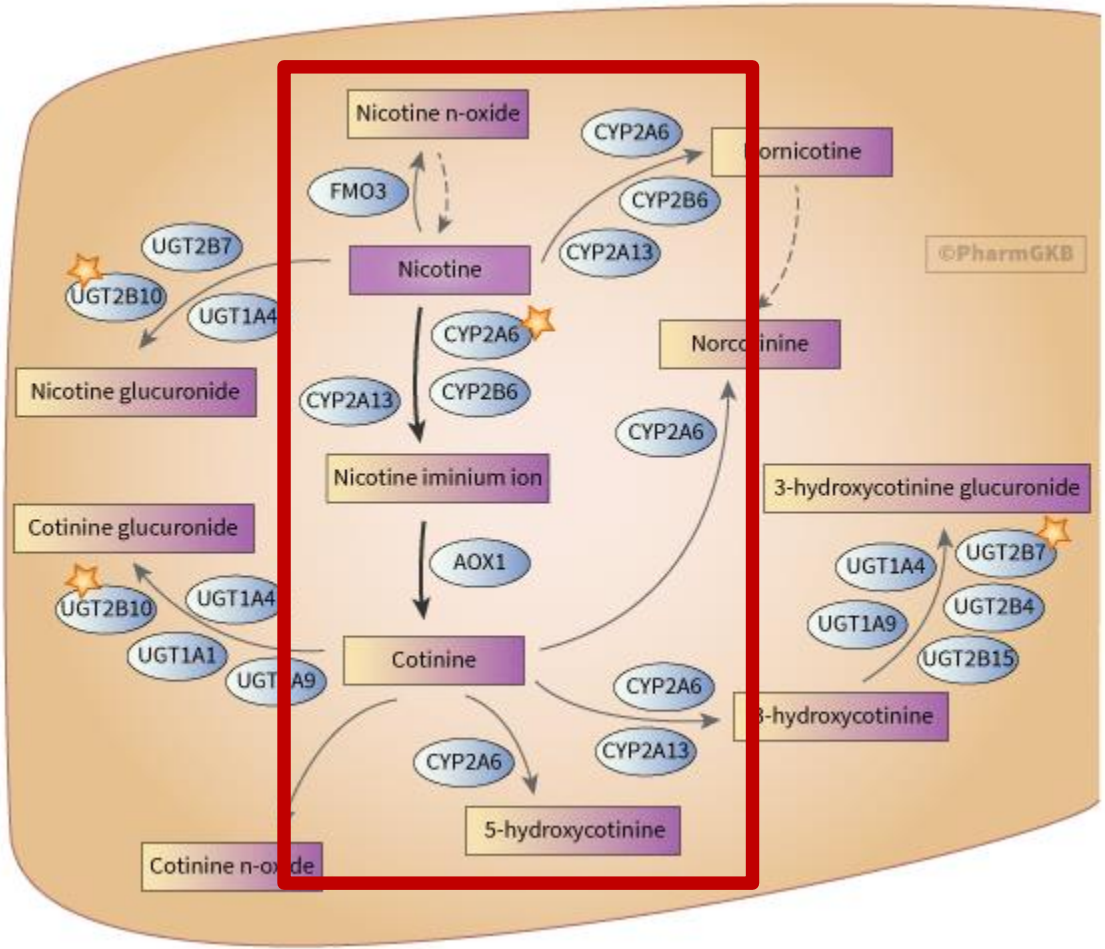

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European Journal of Clinical Pharmacology
https://doi.org/10.1007/s00228-019-02731-z

PHARMACOGENETICS

Cytochrome P450 2A6 and 2B6 polymorphisms and smoking cessation success in patients treated with varenicline

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- 167 patients treated with varenicline in monotherapy
- The CYP2A6 and CYP2B6 polymorphisms were genotyped by real-time PCR
- a possible association of CYP2A6 and 2B6 polymorphisms with varenicline

Table 2 Success rate according to genotypes for the *CYP2A6* and *CYP2B6* polymorphisms

Polymorphisms	Success rate (%)		*P* value
CYP2A6 rs1801272	TT	TA or AA	
	43.0	50.0	0.52
CYP2A6 rs28399433	AA	AC or CC	
	41.4	43.8	0.86
CYP2B6 rs8109525	AA	AG or GG	
	33.3	51.2	0.03

Table 3 Analysis of multiple logistic regression for success of smoking cessation in patients submitted to varenicline treatment ($n = 167$) for *CYP2B6* rs8109525

Variables	OR	CI95%	*P* value
Genotypes AG or GG	2.01	1.01–4.00	0.047
Gender (male)	1.50	0.76–2.97	0.244
Age	0.99	0.97–1.03	0.947
Self-declared race/color (white)	1.21	0.43–3.46	0.720
FTND score	0.94	0.83–1.06	0.311

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https://d1btnptfaoroeu.cloudfront.net/wp-content/uploads/2018/04/892-CS-634.jpg

Take home messages

- Impact of cigarette smoking, smoking cessation
  - atherosclerosis, lung cancer outcome, airway inflammation
- Smoking cessation & lung cancer screening
  - need for more effective cessation interventions
- E-cigarette risks
  - acute pulmonary illness, MI
- Useful biomarker for smoking cessation
  - emerging tailored medicine in smoking cessation

THANKS FOR LISTENING