Bale/Doneen Method Live Chat

November 14, 2012
5:30-6:30 pm PST

Amy L. Doneen
MSN, ARNP

American Heart Association Scientific Sessions November 5-7, 2012

Los Angeles California

Statistics

AHA 2012 statistics

Approximately every 34 seconds, an American will have a MI

About 29% of patients with MI are patients with STEMI

Average age at first MI is 64.5 yrs/men and 70.3 yrs/women.

Average number of years of life lost because of an MI is 16.6.

Lifetime risk for developing CVD at age 40 is:

2 in 3 for men

1 in 2 for women.

American Heart Association Scientific Sessions Nov 6, 2012

ACS Hidden and Long Term Costs are Significant

- 37,340 employees of service companies with ACS claims; 95% were younger than 65
- Direct out of pocket first year cost to pt. ~$8,170
- Short term (~2mos.) disability cost: $2,263 to pt. ; $7,943 to employer
- Long term (~398 days) disability cost: $20,609 to pt. ; $52,473 to employer

Dr Robert L Page (University of Colorado School of Pharmacy, Aurora) 11/5/2012 American Heart Association (AHA) 2012 Scientific Sessions.

ACS Hidden and Long Term Costs are Significant

- About 47% of patients with ACS in the US are younger than the eligibility age for **Medicare**
- Enhanced focus on ACS prevention should yield greater-than-expected savings
- Economic benefit of avoiding ACS should be incentive for employers to expand coverage of prevention efforts

Dr Robert L Page (University of Colorado School of Pharmacy, Aurora) 11/5/2012 American Heart Association (AHA) 2012 Scientific Sessions.

Gender differences in assoc with DM with incident CAD in two populations

GeneSTAR study (all with fmhx CVD) n=1448, 54% women – median age 47-52 years. NHANES III mortality follow-up study (n=9440, 54% women, median age 40. 7.2% with family history of CVD)

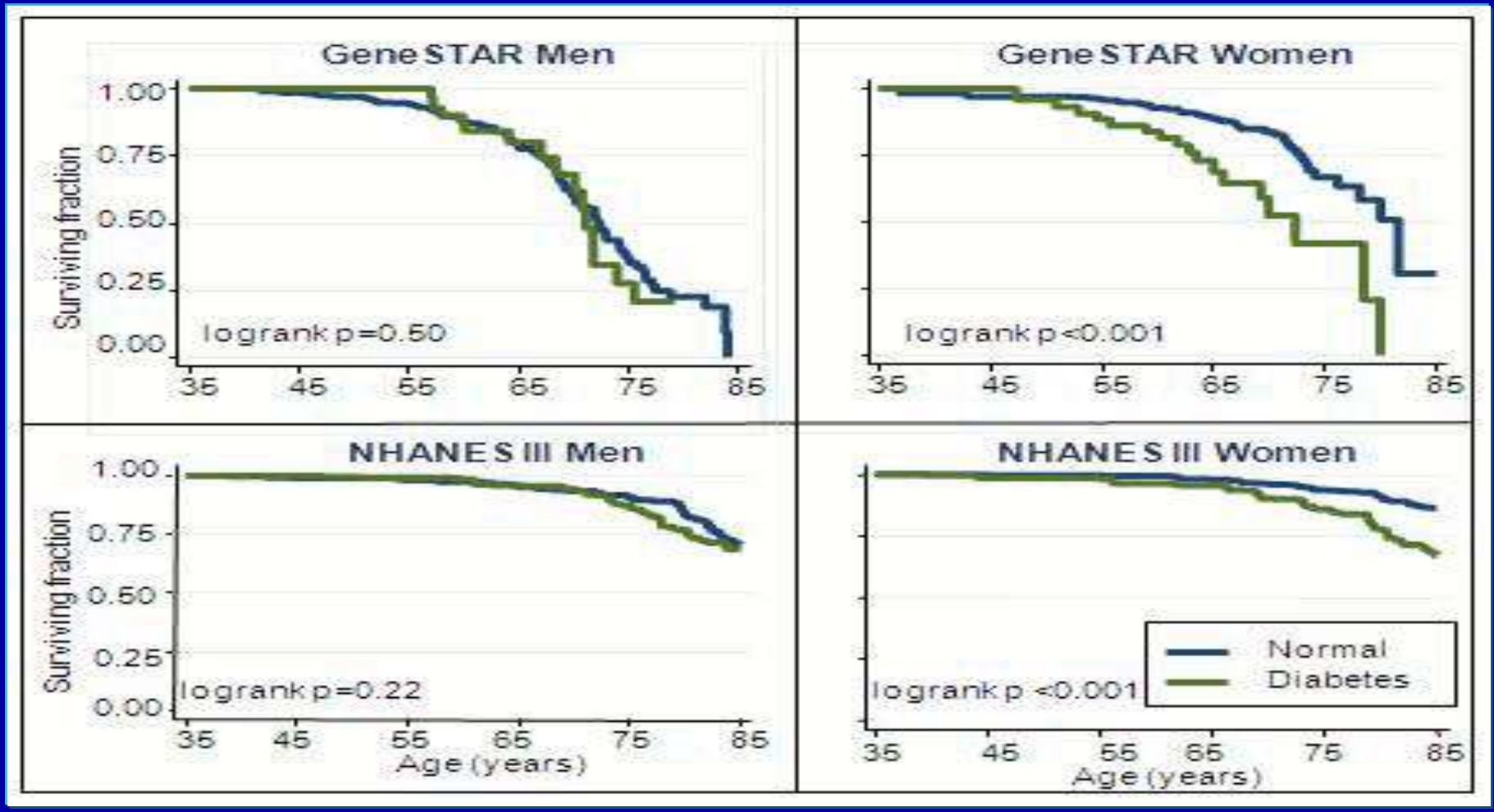
Over 12.3 years in GeneSTAR, 27% of men and 23% of women with DM had incident CHD. (vs 23% & 8% in normals)

Over 14.4 years in NHAINES III, 11% of men and 10% of women with DM had incident CHD. (vs 2.7% & 2.3% in normals)

Accounting for age, race, education, DM, association with increased CHD in women: GeneSTAR HR 3.06 [1.68-5.56], NHAINES III – only trend to sign.

Kalyani, R, Lazo, M, et al. Gender differences NHAINES III, American Heart Association scientific sessions. Nov 7, 2012, abstract number 14149

Gender differences Gender differences in assoc with DM with incident CAD in two populations



Kalyani, R, Lazo, M, et al. Gender differences NHAINES III, American Heart Association scientific sessions. Nov 7, 2012, abstract number 14149

Red Flags

Miscarriages a Red Flag for Possible CV Risk

- 1,031,279 women; 151,880 experienced 1 miscarriage; 28,398 had 2; 5,979 had 3; 2,406 had ≥4; 8,191 ≥ 1stillbirth; follow-up 15 yrs.
- 2,798 MIs; 4,053 strokes; 1,269 renovascular hypertension
- Risk of having any of the three outcomes was doubled given a history of any stillbirth
- Miscarriage was also significantly associated albeit more modest; it was also dose-responsive

Dr Mattis F Ranthe (Statens Serum Institute, Copenhagen, Denmark. American Heart Association 2012 Scientific Sessions, 11/6/2012

Risk of atherosclerotic outcomes by history of pregnancy losses[a]

All analyses adjusted for age, calendar period, and number of live births

Outcome	MI IRR	p	Cerebral infarctions IRR	p	Renovascular hypertension IRR	p
History of stillbirth						
No	1 (ref)		1 (ref)		1 (ref)	
Yes	2.69	< 0.001	1.74	< 0.001	2.42	< 0.001
Number of miscarriages						
0	1 (ref)		1 (ref)		1 (ref)	
1	1.11		1.13		1.15	
2	1.18	0.02	1.22	< 0.001	1.12	< 0.001
3	0.85		1.43		1.78	
4	2.98		1.89		3.78	
Trend for miscarriages[b]	1.09	0.007	1.13	< 0.001	1.19	< 0.001

[b] Additional risk by experiencing one additional miscarriage, all other variables held even

Ethnicity – a red flag?

Hispanic/Latino Americans have High Rate of CV Risk Factors

- >15,000 subjects aged 18-74 yo; 70% lived in US ≥10 yrs; ~ 40% Mexican, 17% Puerto Rican, 15% Cuban, 11% Central Amer., 9% Dominican, 7% South Amer.
- CV risk factors: lipids, BP, obesity, DM and smoking
- 71% of women and 80% of men had at least one risk factor

Daviglus ML, et al. *JAMA 11/7*/2012; 308; 1775-1784

Hispanic/Latino Americans have High Rate of CV Risk Factors

- Puerto Rican's had highest obesity rate (40.9% for men and 34.7%; for women)
- Puerto Rican's had highest current smoking rate (51.4% for men and 31.7% for women)
- Puerto Rican women had highest high lipid rate at 41.0%
- Central American men had highest high lipid rate at 54.9%

Daviglus ML, et al. *JAMA 11/7/*2012; 308; 1775-1784

Hispanic/Latino Americans have High Rate of CV Risk Factors

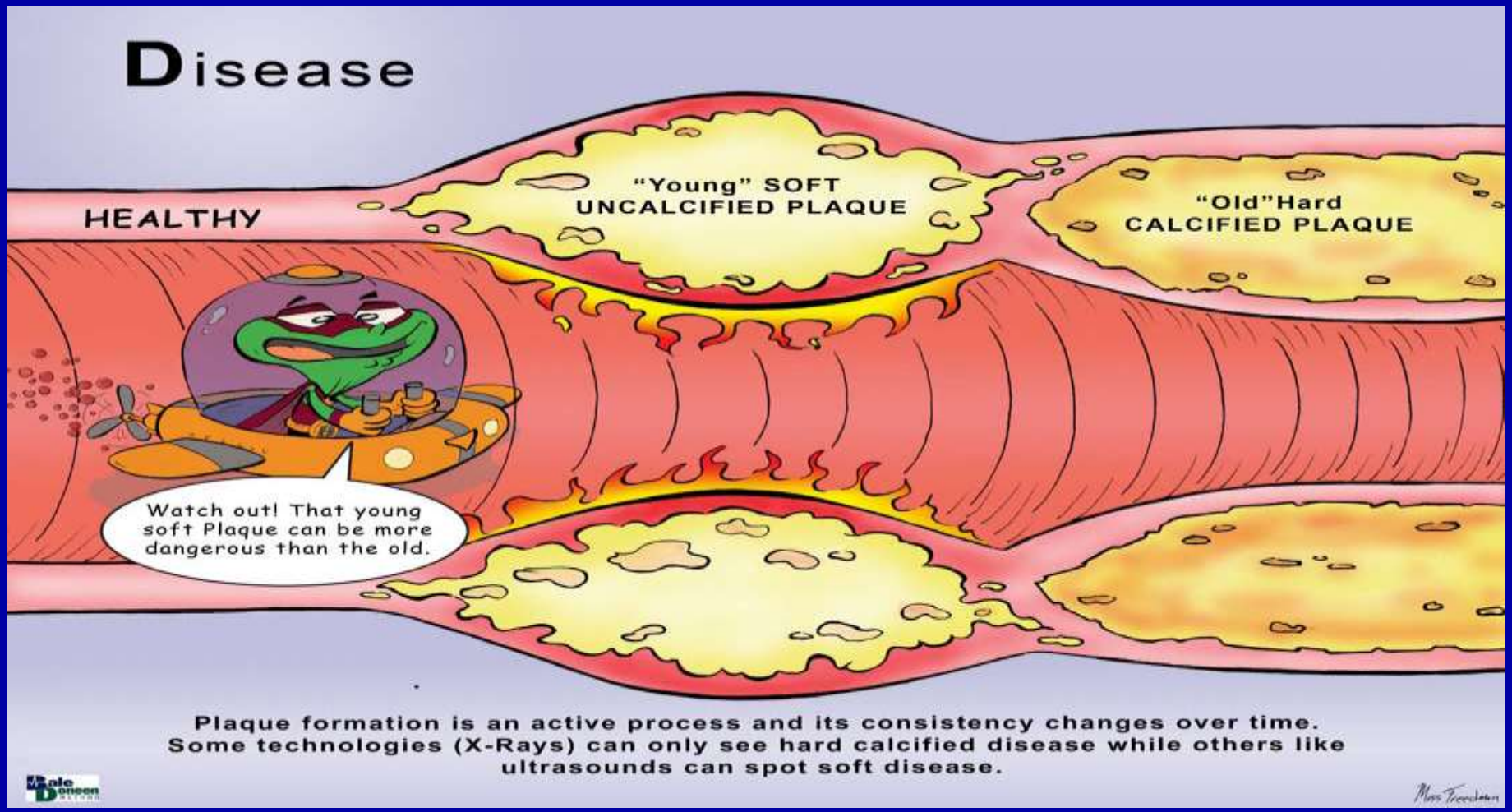
Risk for CHD associated with: BP and smoking in both men and women; high cholesterol and obesity in women;

DM in men (OR 1.5-2.2)

Risk for stroke, association with: BP in both sexes; smoking in women; DM in men (OR 1.7-2.6)

Daviglus ML, et al. *JAMA 11/7/*2012; 308; 1775-1784

Disease



Differences in Prevalence of Peripheral Vascular Disease: An age-sex interaction

3.6 million participants (2.3 mill women and 1.3 million men). 40-100 y.o. (mean age 64.1) Life-Line screening.

CAS (Internal carotid >50% stenotic)

40-50 y/o subjects: women more likely to have CAS ($p<0.0001$)

>50 y/o subjects: women less likely to have CAS than men ($p<0.001$)

PVD (ABI <0.9)

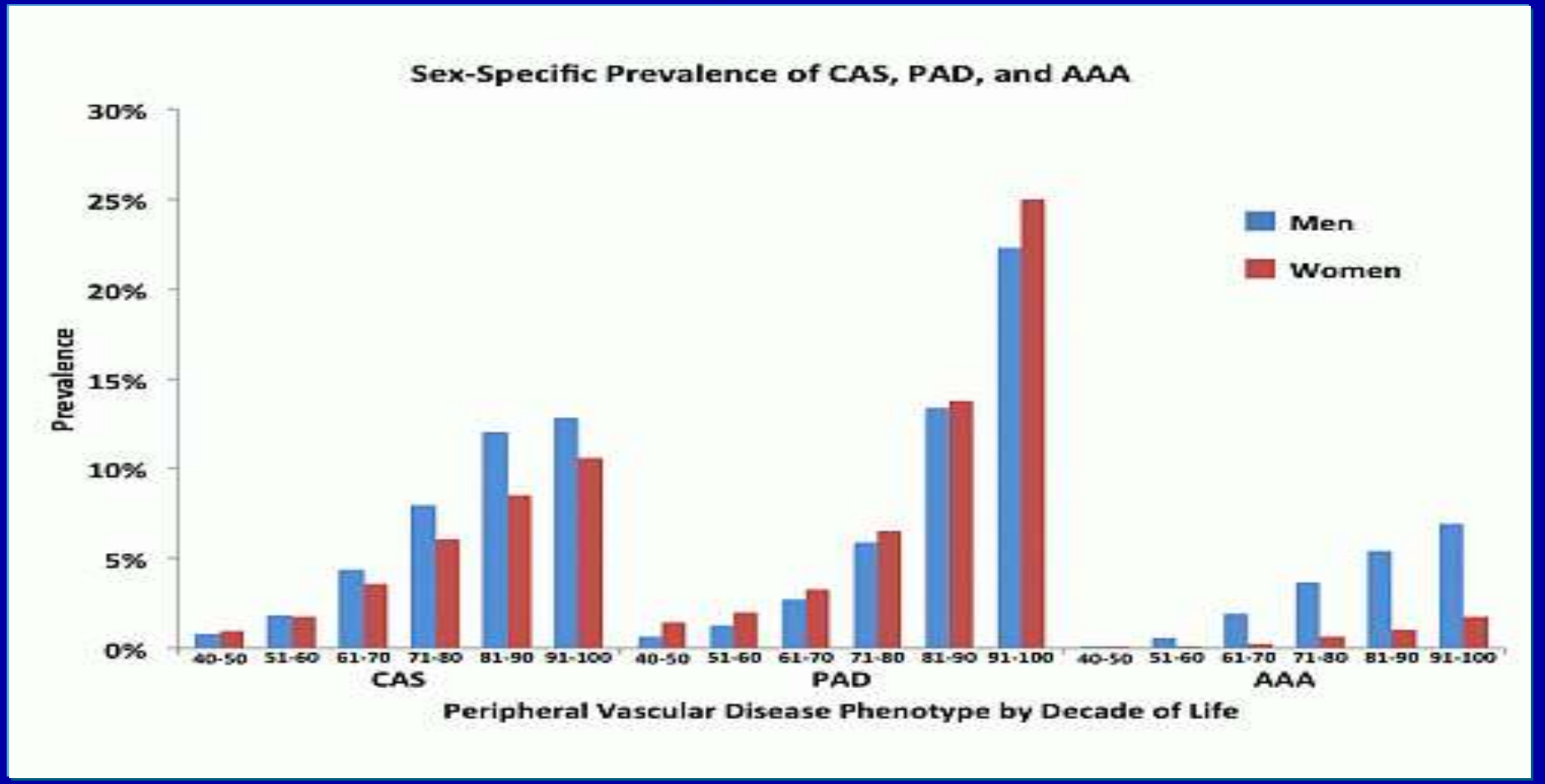
More frequent in women across every age decile

AAA (Abdominal Aorta >3cm)

More frequent in men across every age decile.

Savji, N, Rockman, C, et al. American Heart Association Scientific Sessions Core 2. Nov 7, 2012 Abstract number 12277

Differences in Prevalence of Peripheral Vascular Disease: An age-sex interaction



Savji, N, Rockman, C, et al. American Heart Association Scientific Sessions Core 2. Nov 7, 2012 Abstract number 12277

HAPPY ASAP Study

CIMT and Carotid Plaques in 771 asymptomatic volunteers (40 ± 14 years with unknown vascular disease).

Plaque: >1.5mm, automatic CIMT mean – goal to see if effective.

Results:

- Mean CCA IMT 0.55mm ± 0.13mm
- Plaque found in 69 subjects (8.9%) – only 3 were self reported smokers, none reporting consuming alcohol or meat.

Conclusion: Mass screening of traditional risk factors for CVD in remote communities can be enhanced with cIMT that is automated and can identify plaque, starting as early as 30 years for developing nations like India.

Singh, S., Bedi, R., et al. HAPPY ASAP. American Heart Association Scientific Sessions November 5, 2012. Abstract number: 14219

Cardiovascular Health Study
CIMT prediction of CVD and the Elderly

- CIMT and plaque to help predict incident stroke and CVD in older adults. 10 years prediction Cox model. CIMT included Mean and plaque $\geq$ 1.5mm.

- 61% women, 14% black, 72 $\pm$ 5 years without CVD at baseline.

- Addition of CIMT improved FRS to discriminate cases from non-cases of incident stroke (p=0.001) and higher CIMT and plaque were both associated with higher incidence rates for stroke per 1000 person years.

Gardin, J.M., Bartz, T.M., Polek, J.F., et al. CMT and plaque. American Heart Association Scientific Sessions 11/5/2012. Abstract number 16019

Cardiovascular Health Study
CIMT prediction of CVD and the Elderly

Incidence of Stroke and CVD as a Function of CIMT and Plaque

CIMT ± plaque	Total no. in each group	Stroke		Stroke/CHD/CHF	
		Cases	IR*	Cases	IR*
<25th %tile, no plaque	675	85	8.38	281	31.01
<25th %tile, plaque	420	61	10.35	201	38.67
25th-75th %tile, no plaque	363	54	10.73	166	38.71
25th-75th %tile, plaque	1,831	321	13.73	987	50.41
>75th %tile, no plaque	18	5	22.15	12	61.57
>75th %tile, plaque	1,077	262	23.87	712	80.98

*Incidence rate per thousand person-years.
CHD = coronary heart disease; CHF = congestive heart failure
°p=0.061 +p=0.924 Δp=0.033 ■p=0.351

Gardin, J.M., Bartz, T.M., Polek, J.F., et al. CMT and plaque. American Heart Association Scientific Sessions 11/5/2012. Abstract number 16019

Carotid Distensibility ARIC Trial

CIMT and decreased carotid distensibility are associated with an increased risk of MI and CVA. Question if the carotid indices are related to AF. ARIC cohort – assessed whether carotid indices are associated with an increased risk of AF and improved risk prediction of AF.

N=10,077 (mean age 56.8 $\pm$ 5.7 yrs). Follow-up 17.8 years. Incident AF identified with ECG's at study exams, hospitalization discharge codes. (1,028 cases of AF)

Results: cIMT and decreased Carotid dispensability are associated with an increased risk of AF and modestly improve risk prediction of AF.

Conclusion: AF is not purely an electrical disease – but also a "vascular" disease.

Lopez, Fl, Huxley, R., CIMT, carotid distensibiity ARIC. American Heart Association Scientific Sessions November 5, 2012. and Abstract number: 9962

Table 1. Hazard ratio (95% confidence interval) of Atrial Fibrillation by Carotid Indices, ARIC, 1990-2009

	Carotid Intima-Media Thickness Quintiles (um)					
	<600	600-674	675-739	740-839	840+	P for trend*
Model 1	1 (ref.)	1.04 (0.82-1.30)	1.17 (0.93-1.47)	1.30 (1.04-1.62)	1.76 (1.43-2.17)	<0.0001
Model 2	1 (ref.)	0.98 (0.78-1.24)	1.04 (0.83-1.30)	1.11 (0.89-1.38)	1.35 (1.09-1.67)	0.0008
	Arterial Diameter Change Quintiles (um)					
	<290	290-349	350-409	410-499	500+	
Model 1	1 (ref.)	0.96 (0.79-1.17)	1.02 (0.84-1.24)	1.19 (0.99-1.43)	1.18 (0.97-1.43)	0.02
Model 2	1 (ref.)	0.98 (0.81-1.19)	0.99 (0.82-1.21)	1.15 (0.95-1.39)	1.10 (0.91-1.34)	0.11
	Peterson's Elastic Modulus Quintiles (kPa)					
	<92	92-112	113-139	140-179	180+	
Model 1	1 (ref.)	1.19 (0.95-1.15)	1.31 (1.06-1.64)	1.37 (1.10-1.70)	1.53 (1.23-1.91)	<0.0001
Model 3	1 (ref.)	1.16 (0.92-1.46)	1.27 (1.02-1.58)	1.30 (1.04-1.62)	1.35 (1.08-1.69)	0.008
	Young's Elastic Modulus Quintiles (kPa)					
	<460	460-599	600-759	760-989	990+	
Model 1	1 (ref.)	0.90 (0.72-1.11)	1.05 (0.86-1.29)	0.97 (0.79-1.19)	1.17 (0.95-1.43)	0.08
Model 3	1 (ref.)	0.90 (0.73-1.12)	1.07 (0.87-1.31)	0.99 (0.80-1.21)	1.10 (0.90-1.35)	0.21
	β Index Quintiles					
	<7.6	7.6-9.1	9.2-10.9	11-13.6	13.7+	
Model 1	1 (ref.)	0.98 (0.77-1.24)	1.20 (0.96-1.50)	1.28 (1.03-1.59)	1.31 (1.05-1.63)	0.001
Model 3	1 (ref.)	0.99 (0.78-1.26)	1.18 (0.95-1.48)	1.27 (1.02-1.59)	1.21 (0.97-1.51)	0.02

* P for trend across quintiles

Model 1: Cox proportional hazard model adjusted for age, sex, race, and field center

Model 2: Model 1 + adjusted for height, weight, systolic blood pressure, use of antihypertensive medication, smoking, diabetes, prevalent heart failure, prevalent coronary heart disease and ECG-based left ventricular hypertrophy

Model 3: Model 1 + adjusted for height, weight, use of antihypertensive medication, smoking, diabetes, prevalent heart failure, prevalent coronary heart disease and ECG-based left ventricular hypertrophy

Lopez, Fl, Huxley, R., CIMT, carotid distensibiity ARIC. American Heart Association Scientific Sessions November 5, 2012. Abstract number: 9962

Aortic Calcification, CACS, CV Mortality with MESA

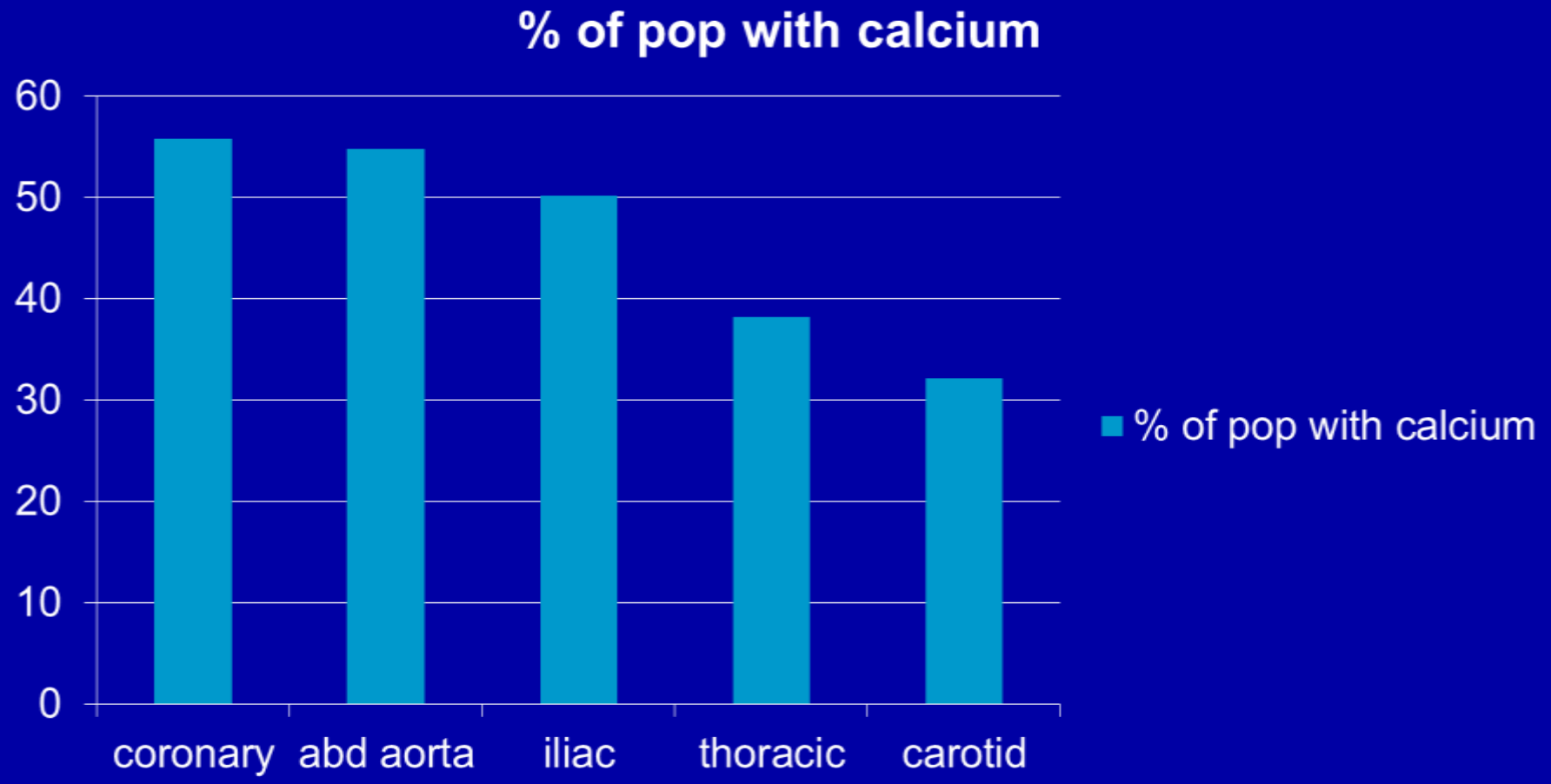
Compared: AAC & CAC in predicting CVD events and mortality in 1974 men and women randomly selected from a multi-ethnic cohort with CT scans of abdominal aorta and chest. 4.7 years of follow-up, 46 CHD events, 72 total CVD events, 19 fatal and 82 total deaths.

AAC & CAC both significantly predictive of CHD and CVD.

Only AAC was independently related to CVD mortality and total mortality. AAC much stronger association with fatal CVD events than CAC. (HR 12.7 for AAC vs 1.1 for CAC)

Criqui, M., Allison, M., et al. AAC and CAC with CV Mortality. American Heart Association Scientific sessions Nov 6, 2012. Abstract number: 11332.

Calcium Revealed by Total Body CT Scans in Various Arterial Beds



43% female; mean age 57

Allison M A., et.al. ***Arterioscler Thromb Vasc Biol. 1/2012;32:00-00***

CACS Significantly Enhances FRS in Intermediate Risk Subjects

- Independent significant predictors:
  - CAC – HR- 2.60 (95% CI, 1.94-3.50)
  - Famhx- HR- 2.18 (95% CI, 1.38-3.42)
  - hsCRP- HR- 1.28 (95% CI, 1.00-1.64)
  - ABI - HR- 0.79 (95% CI, 0.66-0.95)
- Non-significant independent predictors:
  - CIMT - HR-1.17 (95% CI, 0.95-1.45) (mean)
  - BFMD- HR-0.95 (95% CI, 0.78-1.14)
- CAC provided superior discrimination and risk reclassification compared with other risk markers

Yeboah, J. MD, MS, et. al. *JAMA*. 8/21/2012;308(8):788-795

Treatments

Smoking Bans Reduce CV Risk

- Meta-analysis of 33 anti-smoking laws before 12/2011; 2 yr median follow-up
- Examined impact on four dx'ic groups: coronary events; other heart disease; strokes; respiratory disease
- Laws significantly lowed rates of hospital admissions (or deaths): relative risk (RR) for above in respective order

  RR- 0.848 (95% CI 0.816–0.881)

  RR- 0.610 (95% CI 0.440–0.847)

  RR- 0.840 (95% CI 0.753– 0.936)

  RR- 0.760 (95% CI 0.682– 0.846)
- More comprehensive laws = greater change in risk

Tan C E , Glantz S A Circulation 10/2012;126:2177-2183

Colesevelam and Niacin on LDL and Plasma Glucose

140 adults with dyslipidemia, HDL <60, FBS 90-145 mg/dL randomized to colesevelam 3750mg/d with niacin (n=70) or placebo with niacin (n=70) followed x 12 weeks. Niacin titrated from 500mg to 2000mg/d as tol.

	LDL	FBS	A1C increase
Col +Niacin	-20.67%	1.8mg/dL	0.06%
Niacin alone	-12.86%	6.7mg/dL	0.18%
	(p=0.0088)	(p=0.0046)	(p=0.005)

Colesevelam adjunct to niacin therapy effectively lowered LDL in patients with IFG and sign improved glycemic indices.

Davidson, M, Rooney, M., Pollock, E, et al. American Heart Association Scientific Sessions Core 2. Nov 7, 2012

Multiple Vitamins Provide no CV Risk Reduction in the Physician's Health Study

- 14,641 male docs; ≥ 50 yo; randomized to different daily MV or placebo; followed 11 yrs; 1,732 CV events
- Rates of major CV events were 11 and 10.8 per 1000 person-years in the multivitamin and placebo groups, respectively
- Did find an 8% reduction in total cancer risk with p = 0.04*

•Sesso HD, et al. *JAMA* 2012; 3081:1751-1760.
•*Gaziano JM, et al. *JAMA* 2012; DOI:10.1001/jama.2012.14641.
•http://jama.jamanetwork.com/journal.aspx.

Fish Consumption Reduces Stroke Risk

- 38 studies; 794,000 subjects; 34,817 cerebrovascular events
- RR for CVD with consuming fish 2-4 servings a week versus ≤1 servings a week was 0.94 (95% CI-0.90 to 0.98)
- RR for CVD with consuming fish ≥5 servings a week versus 1 serving a week was 0.88 (95%CI-0.81 to 0.96)
- Long chain omega 3 fatty acids measured as circulating biomarkers in observational studies or supplements in primary and secondary prevention trials were not associated with CVD

Chowdhury, R., et. al., *BMJ 10/30/*2012;345:e6698 doi: 10.1136/bmj.e6698

Fish Consumption Reduces Stroke Risk

- RR for CVD with long chain omega 3 fatty acids measured as circulating biomarkers and self reported dietary exposures were 1.04 (95%CI-0.90 to 1.20) and 0.90 (0.80 to 1.01), respectively

- The beneficial effect of fish intake on cerebrovascular risk is likely mediated through the interplay of a wide range of nutrients abundant in fish.

- The lack of assoc. with risk reduction for long chain omega 3 fatty acids was consistent in primary or secondary prevention

- Findings suggest that single nutrients may have limited effects on chronic disease outside of their original food sources.

Chowdhury, R., et. al., *BMJ 10/30/*2012;345:e6698 doi: 10.1136/bmj.e6698

OPERA

Double-blind, placebo-controlled, randomized clinical trial, a total of 1516 patients scheduled for cardiac surgery in 28 centers.

Randomized to either olive oil (as a placebo) or supplements containing 8 to 10 g of n-3 PUFAs in the form of a prescription product, Omega-3

Preoperative loading dose of the fish oil of 10 g over three to five days (or 8 g over two days), followed postoperatively by 2 g daily until hospital discharge or postop day 10, whichever came first.

The primary end point occurrence of documented postop AF or flutter of >30-s duration and documented by rhythm strip or 12-lead ECG. No difference in the primary end point between those who got fish oil, 30.0% of whom developed postoperative AF.

Mozaffarian D, Marchioli R, Macchia A, et al. Fish oil and postoperative atrial fibrillation:. JAMA 2012; DOI:10.1001/jama.2012.28733

Flaxseed may be a good Antihypertensive

- 110 PAD pts.; 58 received 30g flaxseed/d; 52 placebo
- At six months: SBP reduced 10 mm/Hg; DBP reduced 7 mm/Hg
- Reductions should generate ~50% decrease in stroke and a ~30% reduction in MI

Dr Delfin Rodriguez (University Hospital Holguin, Cuba)
American Heart Association 11/5/2012 Scientific Sessions

Calcium Supplementation and CV events – MESA Trial

2,870 MESA patients took calcium supplements, age 45-84, data on dietary calcium intake, supplements and covariates. COX regression analysis, 1-500mg, 500-1000mg and >1000 mg followed for 6.1 years.

Total of 357 CVD events -

Any Calcium supplement events: 5.5% N.S.

No supplement events: 6.4% N.S.

postmenopausal women (n=2,703) – NS with/without calcium

Adjusted for age, race, sex, education, household income, site, total and HDL cholesterol, dietary calcium intake, lipid medication use, systolic blood pressure, anti-hypertensive medications, diabetes status, body mass index (BMI), estimated GFR, physical activity and smoking.

Agarwal, S., Nettleton, J.A., et al. American Heart Association Scientific Sessions Core 2. Nov 7, 2012 Abstract number: 9231

Calcium Supplements (even with Vitamin D) show increase CV risk

- Total 30,000 women from placebo controlled trials, most recently the WHI added data set of 17,000:

- Randomized to new supplement use (calcium with Vitamin D) was associated with a statistically significant increase in risk of "clinical MI" (hazard ratio 1.22; p=0.05) and clinical MI and stroke (hazard ratio 1.16; p=0.05)

- 1000 people taking calcium with or without vitamin D would cause six additional MIs or strokes (a number needed to harm of 178) yet prevent only three fractures (a number needed to treat of 302)

- *Borland MJ, et al. Calcium supplements with or without vitamin D and risk of cardiovascular events: reanalysis of the WHI. BMJ 4.19.2011*

Daily coffee consumption Does not Impact All-Cause or CV Mortality: National Health and Nutrition Examination Survery

NHAINES III data: 8,608 patients included –

No Coffee, < 1 cup/day, 1 cup/day, 2-3 cup/day, 4-5 cup/day, 6 cup/day

Adjusted for: race, gender, BMI, SBP, Current Smoking, DM, Lipids

No difference with mortality (using p value of < 0.05) for all cause or CV mortality

Weakness: Only mortality data (not event data), observational, time?

Strength: Nationally representative sample

Conclusion: Coffee isn't harmful!

Loomba, R.S., Aggarwal, S., Raskin, A., et al. American Heart Association Scientific Sessions Core 2. Nov 6 2012, Abstract numer: 14459

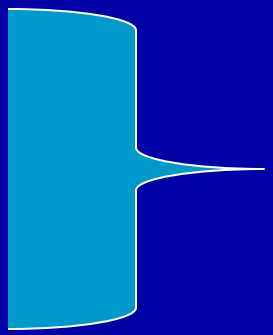
All-cause mortality						
	No coffee a day	Less than one cup of coffee a day	One cup of coffee a day	Two or three cups of coffee a day	Four or five cups of coffee a day	More than six cups of coffee a day
N	2602	845	3266	1391	290	214
Unadjusted odds ratio and 95% confidence interval		0.698 [0.597 to 0.816]*	0.951 [0.858 to 1.055]	0.799 [0.701 to 0.910]*	0.578 [0.450 to 0.741]*	0.590 [0.444 to 0.786]*
Unadjusted p-value		P < 0.001*	P = 0.342	P = 0.001*	P < 0.001*	P < 0.001*
Adjusted odds ratio and 95% confidence interval		0.856 [0.549 to 1.333]	0.955 [0.710 to 1.283]	0.861 [0.555 to 1.337]	0.962 [0.429 to 2.155]	0.954 [0.344 to 2.653]
Adjusted p-value		P = 0.491	P = 0.758	P = 0.505	P = 0.924	P = 0.929
Ischemia related mortality						
	No coffee a day	Less than one cup of coffee a day	One cup of coffee a day	Two or three cups of coffee a day	Four or five cups of coffee a day	More than six cups of coffee a day
N	2602	845	3266	1391	290	214
Unadjusted odds ratio and 95% confidence interval		0.735 [0.577 to 0.935]*	0.934 [0.806 to 1.083]	0.799 [0.657 to 0.972]*	0.686 [0.462 to 1.015]	0.513 [0.309 to 0.851]*
Unadjusted p-value		P = 0.012*	P = 0.369	P = 0.025*	P = 0.060	P = 0.010*
Adjusted odds ratio and 95% confidence interval		0.657 [0.342 to 1.256]	0.606 [0.399 to 0.918]*	0.677 [0.374 to 2.494]	0.919 [0.385 to 2.189]	0.411 [0.092 to 1.824]
Adjusted p-value		P = 0.206	P = 0.018*	P = 0.145	P = 0.848	P = 0.242

Chronic Meds with Metabolic Effects and Risk for Incident DM in Postmenopausal women

Thiazide Diuretics(TD), statins (S), beta blockers (BB), antidepressants (AD) – investigated the association between multiple medication use and incidence of diabetes in the Women's Health Initiative Clinical Trials and Observational Study – 141,370 women with DM at baseline – 7.6 years follow-up. DM self reported. There was a total of 12, 048 cases of DM reported (8.4%).

Self reported use of meds at baseline of 4 drug classes and compared those taking 1,2 or 3-4 drugs compared to those taking 0 drugs.

0 drugs (n=106,647)
1 drug (n=27,208)
2 drugs (n=6,639)
3-4 drugs (876)



As meds increased so did age, BMI, waist, glucose, SBP, HTN, CVD, lipids ($p<0.001$)
**Conclusion: risk of DM increased with drugs

BD: Root cause(s) – DIAGNOSE EARLY!!!

Cooper-DeHoff, R, Garvan, C, et al. American Heart Association Scientific Sessions Core 2. Nov 7, 2012 Abstract number 10050

Pharmacodynamic response to Clopidogrel in men vs women: Insights from PRINCIPLE-TIMI 44

Efficacy and safety of antiplatelet therapy in women.

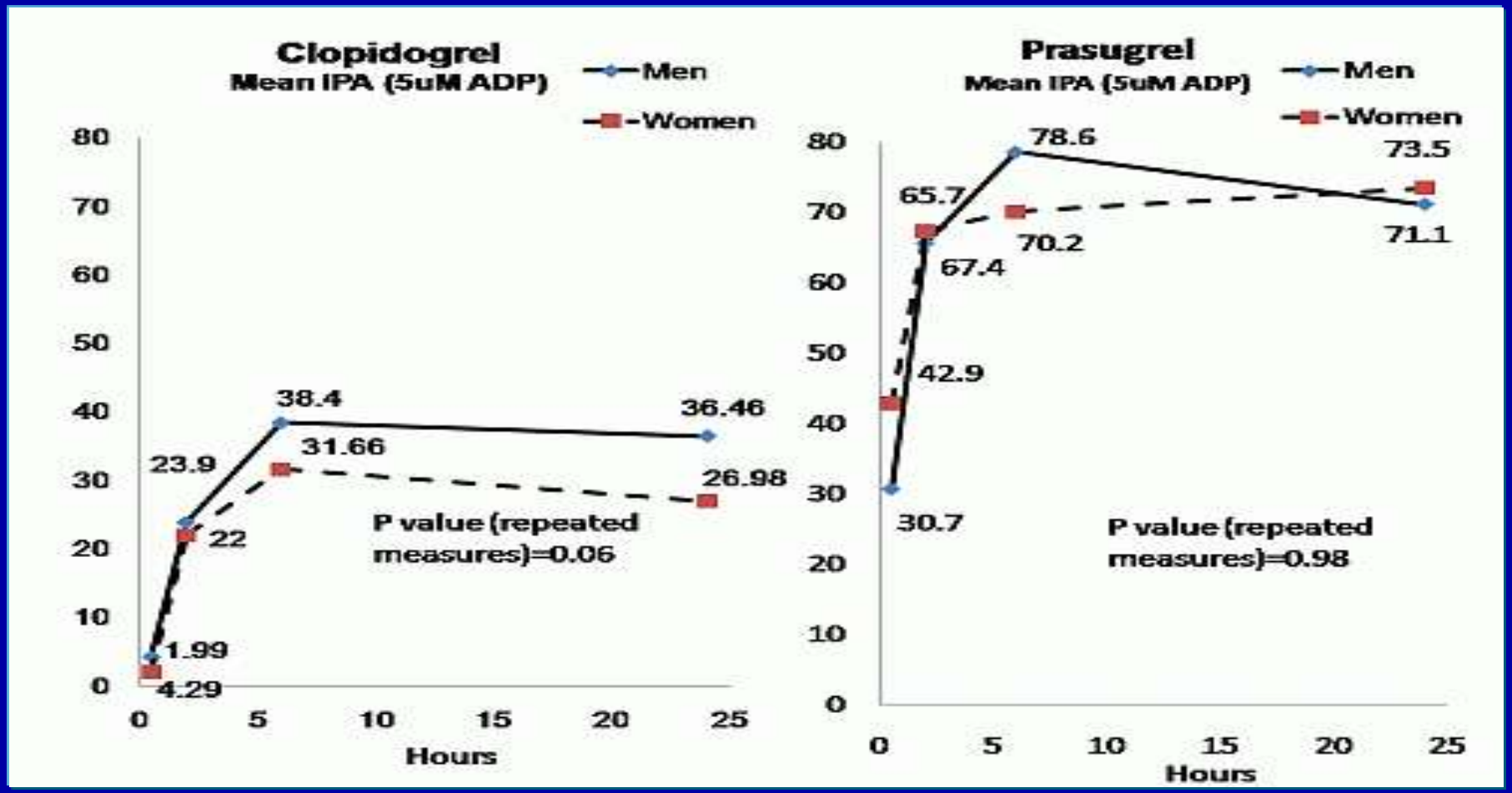
Randomized double blind trial of high-dose clopidogrel 600mg LD, 150 QD in 201 patients undergoing planned PCI. VerifyNow and VASP were performed.

Clopidogrel-treated patients, trend toward women having a lesser degree of inhibition of platelet aggregation (IPA) than men (p=0.06) that was apparent at 6h, 18-24 h following loading dose.

Pharmacodynamic response to Clopidogrel may be diminished in women compared with men while Prasugrel was similar between sexes.

Sarma, A, Wiviott, S, et al. American Heart Association LA California. Abstract 17455

Pharmacodynamic response to Clopidogrel in men vs women: Insights from PRINCIPLE-TIMI 44



Sarma, A, Wiviott, S, et al. American Heart Association LA California. Abstract 17455

Perceptions…who's job is it?

Oral Health Care Providers as an Essential Component for Disease Prevention and Control

- Integration of oral health care providers into strategies to enhance identification of patients at risk of for chronic disease
- Successful prevention demands an integrated approach incorporating health care professionals across disciplines
- Condition being addressed should have modifiable risk factors and screening tools which are simple, safe, and effective

Greenberg, B. L., MSc, PhD, Glick, M., DMD, *Dent Clin N Am 10/2012,* 56: 863–874

Oral Health Care Providers as an Essential Component for Disease Prevention and Control

- Why screen for medical conditions in a dental setting?
- 65% to 70% of adults visit the dentist in a given year, 10% to 20% of whom have not seen a physician in the preceding year.
- Adult pt survey of those attending a university-based dental clinic or seen by community dental practitioners indicate most pts felt medical screening in a dental setting is important and they were willing to participate in such activity.

Greenberg, B. L., MSc, PhD, Glick, M., DMD, *Dent Clin N Am 10/2012,* 56: 863–874

Oral Health Care Providers as an Essential Component for Disease Prevention and Control

- Why screen for medical conditions in a dental setting?

- Most pts felt it was important for dentists to conduct medical screening (94%); and were willing to have dentists conduct screening for CVD (81%), hypertension (90%), and DM (83%)

- Most felt their opinion of the dentist would improve for competence (76%), compassion (76%), knowledge (80%), and professionalism (80%), suggesting that patients felt screening was beneficial.

Greenberg, B. L., MSc, PhD, Glick, M., DMD, *Dent Clin N Am 10/2012,* 56: 863–874

Oral Health Care Providers as an Essential Component for Disease Prevention and Control

- The involvement of oral health care professionals in strategies to identify individuals at risk for CVD and DM will extend preventive and screening efforts necessary to:

  a) slow the development of these diseases.

  b) provide a portal for pts who do not see a physician on a regular basis to enter into the general health care system.

  c) an additional resource and an essential component of an integrated public health initiative to control these growing epidemics.

Greenberg, B. L., MSc, PhD, Glick, M., DMD, *Dent Clin N Am 10/2012,* 56: 863–874

AHA 2012 Scientific Sessions
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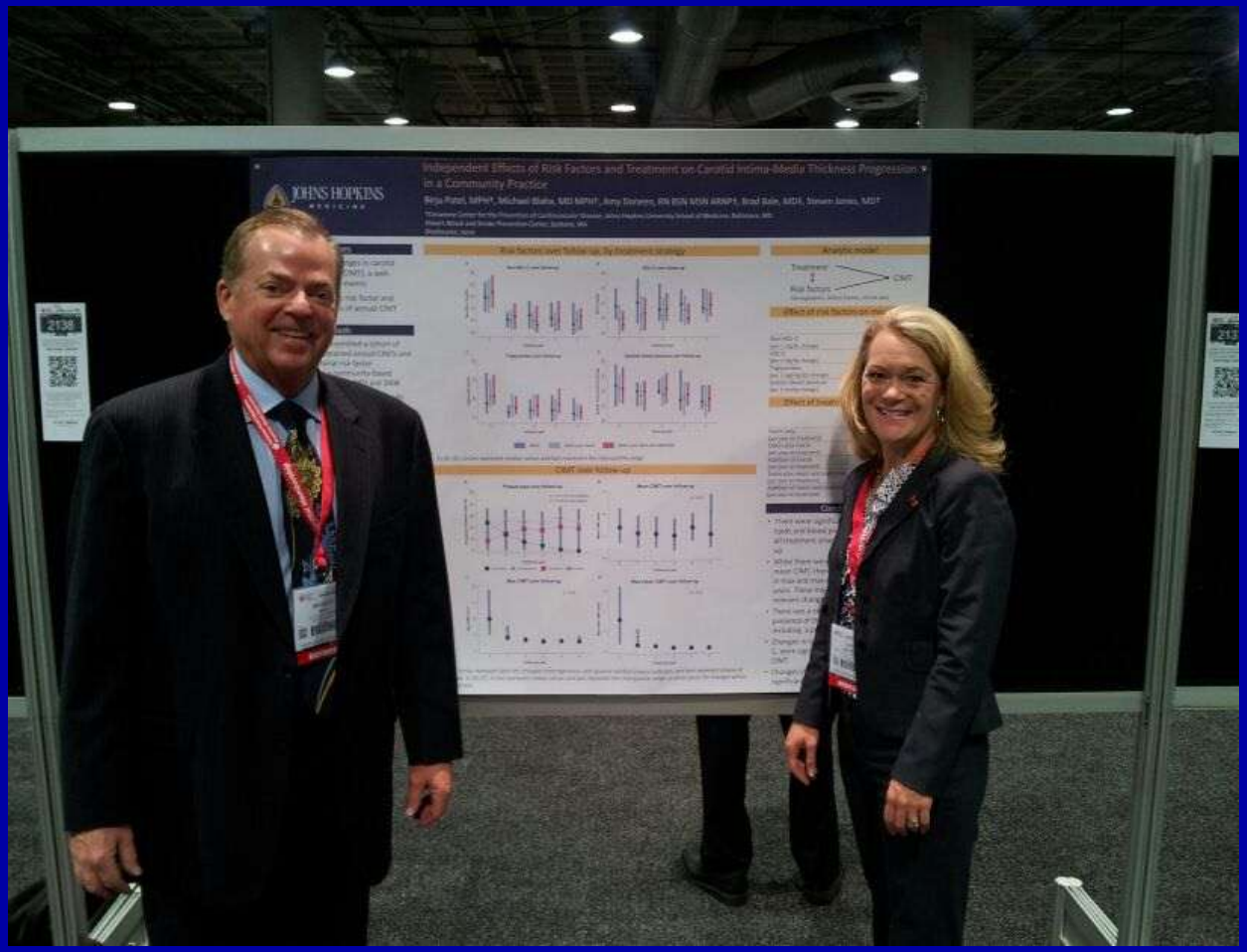
November 6, 2012



Independent Effects of Risk Factors and Treatment on Carotid Intima-Media Thickness Progression in a Community Practice

Birju Patel, MPH, Michael Blaha, MD MPH, Amy Doneen, RN BSN MSN ARNP, Brad Bale, MD, Steven Jones, MD

Objectives

- We examined annual changes in carotid intima-media thickness (CIMT), a well-known predictor of CHD events

- We further assessed the risk factor and treatment determinants of annual CIMT change

American Heart Association Scientific Sessions November 6, 2012. Los Angeles California.

Methods

- 448 patients who obtained annual CIMTs and received multifactorial risk factor management from a community-based prevention clinic between 2002 and 2008

- Clinicians were not blinded to CIMT results

- CIMT outcomes included mean CIMT, maximum CIMT (max CIMT), maximum-mean CIMT (max-mean CIMT), and presence and classification of carotid plaque (any focal thickness > 1.3 mm) as calcified, heterogeneous, and lipid-rich (i.e., echolucent) subtypes.

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Demographics

- Median time between scans was 12.3 months (interquartile range 11.7 to 13.1 months). The median follow-up was 2.6 years (range 1-5 years).
- At baseline, mean (SD) age was 55 (10), 39% were female, 16% had CAD, 5% had diabetes, and 33% had a history of cigarette smoking.
- Risk factors over follow-up, by treatment strategy Demographics and treatment strategies CIMT over follow-up Risk factors (demographics, clinical history, clinical labs) Treatment CIMT

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Effect of risk factors on mean CIMT Change in mean CIMT (mm)

Rick Factor	mean CIMT Change (mm)	p-value
non-HDL-C		
(per 1 mg/dL change)	0.00022	0.03
HDL-C		
(per 1 mg/dL change)	0.00050	0.03
Triglycerides		
(per 1 log(mg/dL) change)	0.016	0.21
Systolic blood pressure		
(per 1 mmHg change)	-0.00025	0.53

Treatment

	Change in mean CIMT (mm)	p-value
Statin only		
(per year on treatment)	-0.0034	0.53
Statin plus niacin		
(per year on treatment)	-0.0026	0.23
Addition of niacin		
(per year on treatment)	0.00071	0.90
Statin plus niacin and ezetimibe		
(per year on treatment)	0.022	0.34
Addition of niacin and ezetimibe		
(per year on treatment)	0.025	0.27

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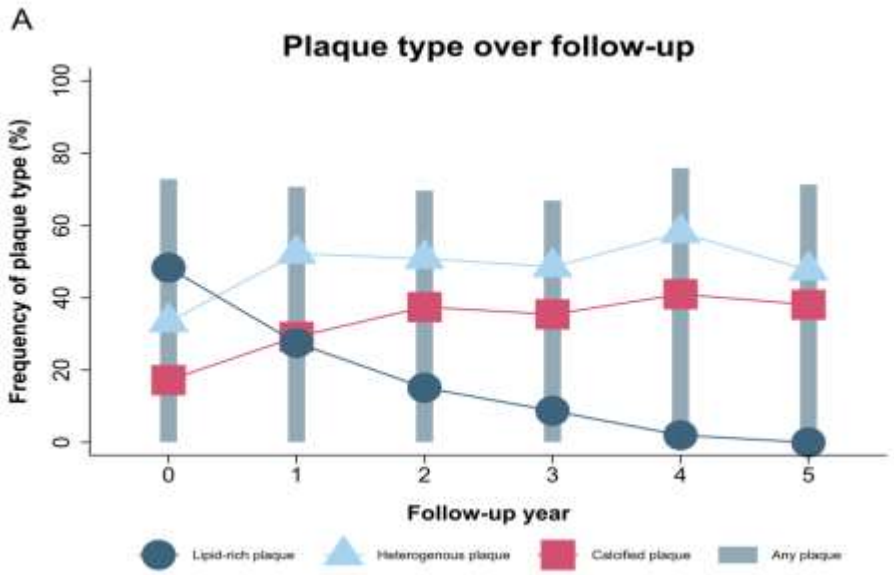

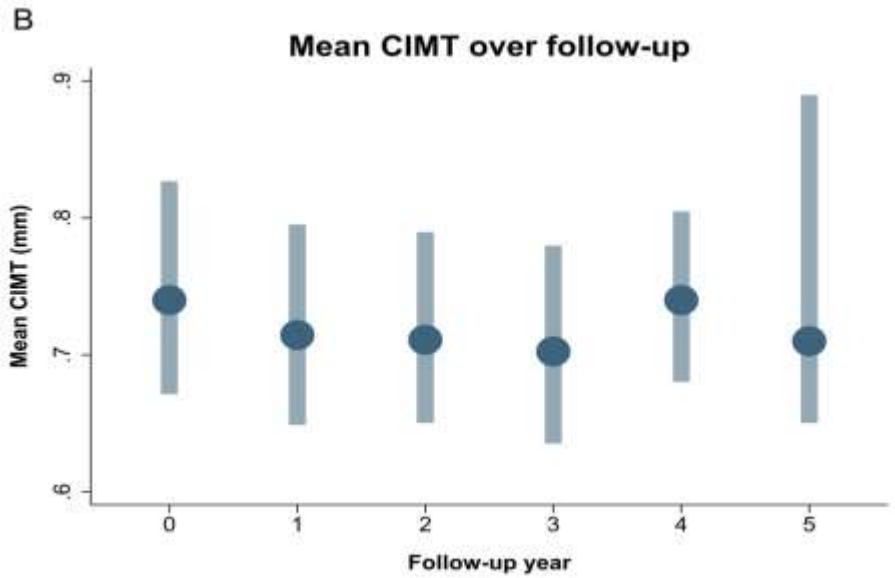

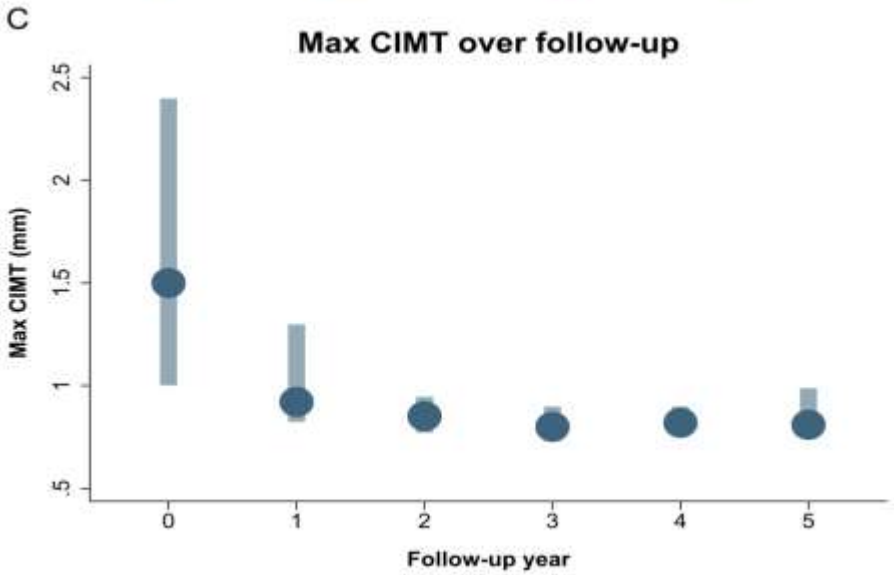

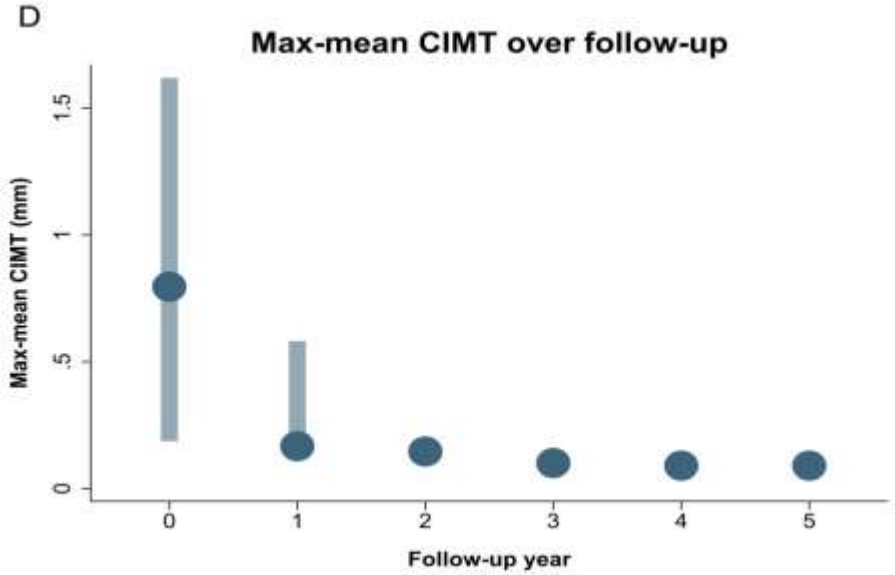

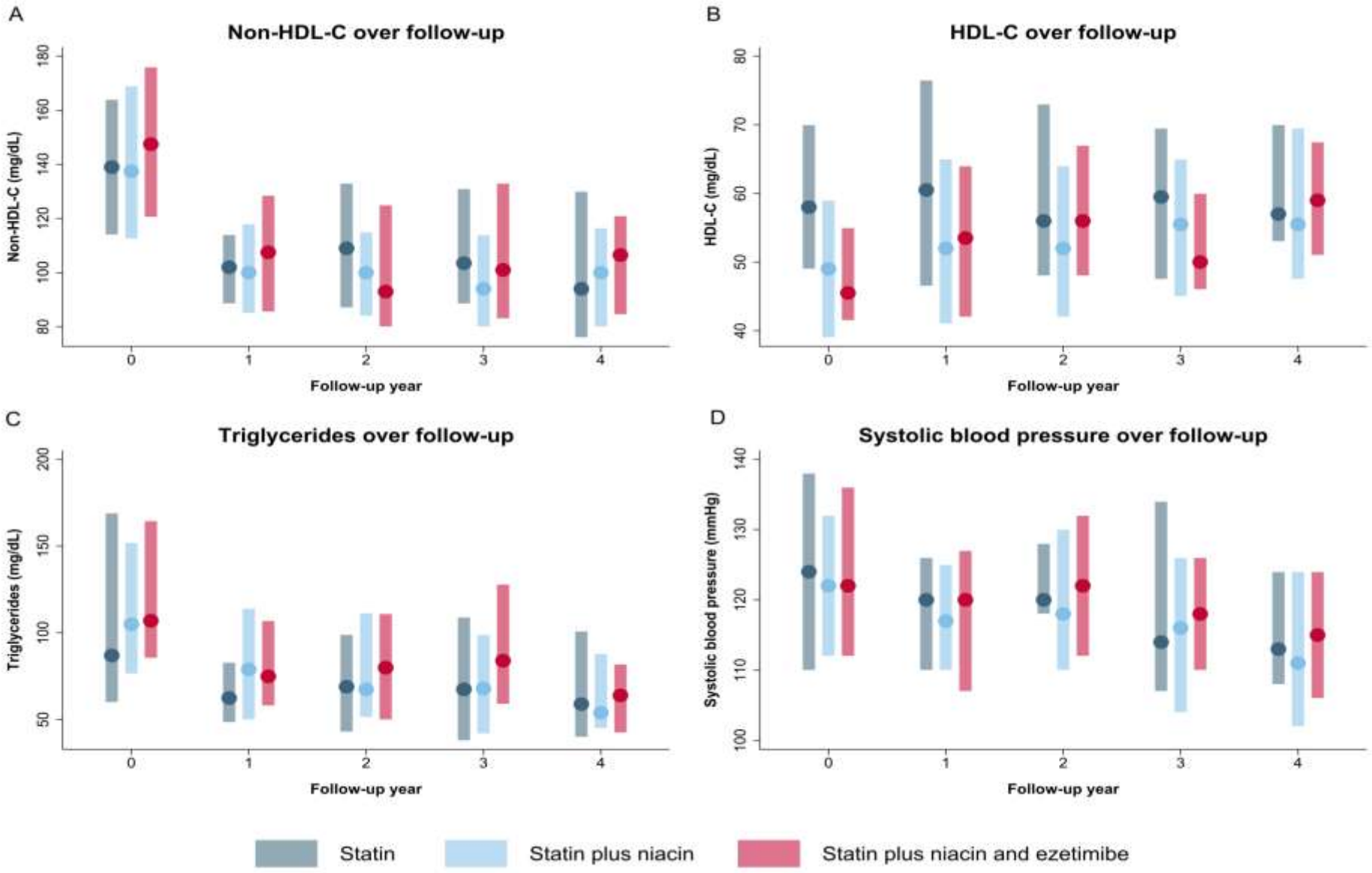

Conclusions

Lipids and blood pressure observed among all treatment strategies throughout follow-up

While there were modest decreases in mean CIMT, there were dramatic decreases in max and max-mean CIMT within 1-2 years. These may represent clinically relevant changes in atherosclerotic plaque

There was a striking decrease in the presence of the lipid-rich plaque subtype, including a prevalence of 0% at 5 years

Changes in risk factors, including non-HDL-C, were significantly associated with mean CIMT

Changes in mean CIMT did not differ significantly by treatment strategy

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