Atrial Fibrillation in Older Adults:

Patient-Centered Care & Anticoagulation

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FACULTY DISCLOSURE DECLARATION

FINANCIAL OR OTHER RELATIONSHIP(S) DISCLOSURE:

Dr. Chen has indicated that he has not had financial or other relationships with commercial interests, related to this presentation, within the past 12 months.

Objectives

1. Understand the basics of management of atrial fibrillation.

2. Effectively reduce the risk for older adults with atrial fibrillation.

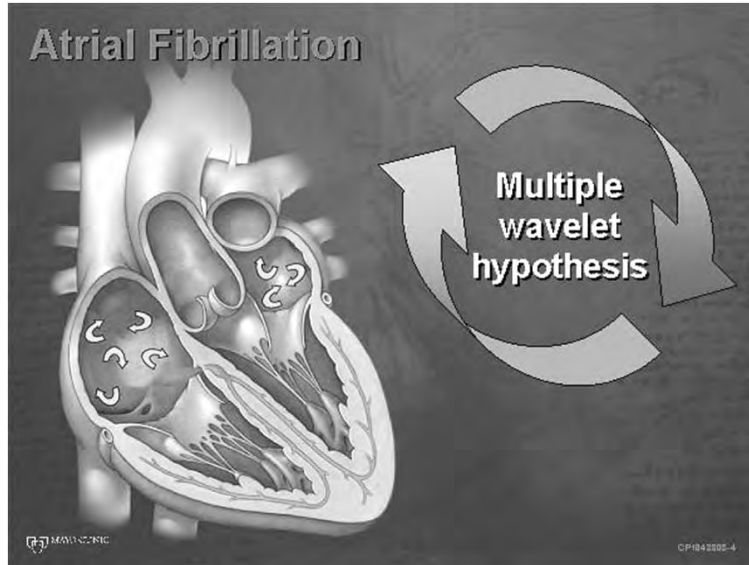3. Understand the current options for stroke risk reduction.

Case

- 83 y/o W with h/o HTN, DM, CRI and h/o GI Bleed presents with mild palpitations and is noted to be in atrial fibrillation (see EKG)
- TTE shows normal LV size and function. There is aortic sclerosis and mitral annular calcification but normal valve function
- TSH is normal, she has otherwise been well
- How can you approach reducing her risk of adverse events?
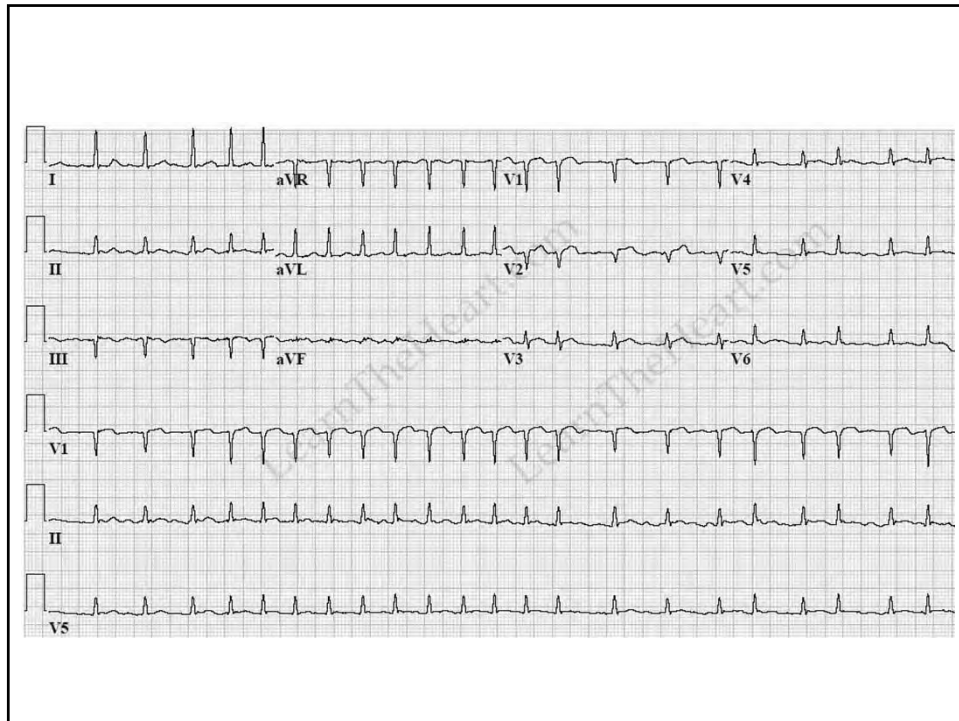
Outline

- Background
- Management
  - Rate vs. Rhythm Control
 - Strict vs. Lenient Rate Control
  - Stroke Risk Reduction

Background

Background
Predisposing Factors

|	
Abnormal left ventricular ejection fraction	Hypovolemia
Alcohol (intoxication/withdrawl/"holiday heart")	Hypoxia
Atrial myxoma	Infiltrative diseases—amyloid, sarcoid,
Atrial septal defect	hemochromatosis
Cardiomyopathies (hypertrophic, dilated,	Left atrial enlargement
restrictive, alcoholic)	LVH
Chronic lung disease	Myocarditis
Cocaine	Neoplastic disease
Congestive heart failure	Obesity
Coronary heart disease/Ischemia/Infarction	Pericarditis
Diabetes mellitus	Pneumonia
Drugs (especially sympathomimetics,	Pneumothorax
theophylline, caffeine, cocaine,	Postoperative state (especially after heart or chest
psuedoephedrine, diet pills)	surgery)
Endocarditis	Pulmonary embolism
Emotional stress	Sick sinus syndrome
Excessive coffee	Systemic infection
Hypertension	Tachy/Brady Syndrome
Hyperthyroidism	Valvular Heart Disease (MS/MR>AR/AS, Mitral
Hypoglycemia	annular Ca++).
Hypokalemia	Vomiting
	Wolff-Parkinson-White syndrome

Background

- Most common sustained arrhythmia
- About 10% of 80 y/o
  - Age 40+, lifetime risk of ~25%
- From asymptomatic to disabling
  - Palpitations, dyspnea, fatigue, decreased ex tolerance, anxiety
  - Heart failure

Prevalence of Atrial Fibrillation and Atrial Flutter by Age and Sex
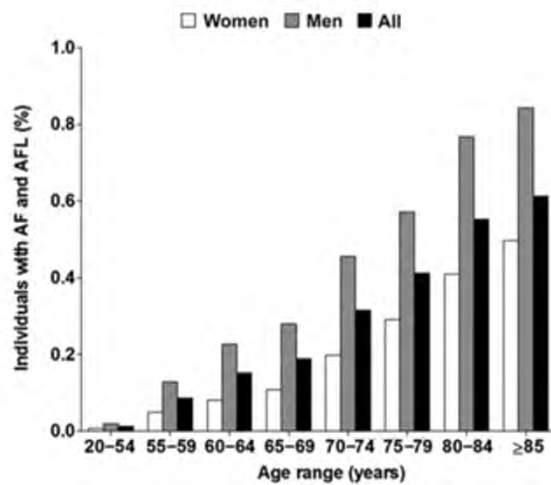
Naccarelli GV, Varker H, Lin J, et al. Am J Cardiol 2009;104:1537.

Aging of the Population
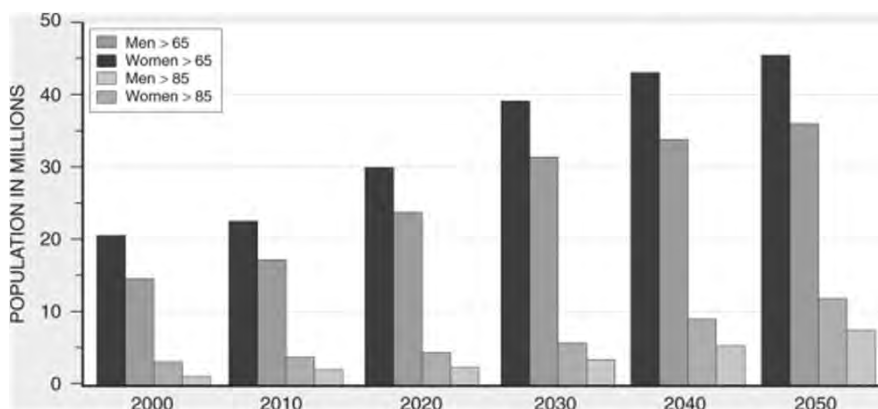
Older adults with afib are different

- High incidence and prevalence rates of AF
- Higher thrombo-embolic and bleeding risks
- More often permanent
- Often have atypical symptoms and complaints
- Under-diagnosed vs. younger patients
- Are often fragile/frail, multiple cardiac & non-cardiac co-morbidities
- Less sensitive to sympathetic effects on ventricular response rates in AF ('auto rate controlled')
- More sensitive to pro-arrhythmic effects of drugs (decreased renal & hepatic function)

ESC Afib Guidelines, 2010

Outline

- Background
- Management

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Rate vs. Rhythm Control

- Definition
- Anticoagulation
- Multiple trials have not shown a mortality benefit to a rhythm control strategy
  - Some patients are highly symptomatic, however

Rhythm Control

- Anti-arrhythmic Drugs
- Cardioversion
- Ablation

Ablation

- Procedure done with catheters by an electrophysiologist
- Not 100% effective
- Older patients have higher risks for complications
- While done as first line therapy for some, it is usually reserved for patients who opt to avoid anti-arrhythmic drugs or who don't tolerate them (and are symptomatic from their afib)

Rate Control

- Medications & Heart Rate Goals
- Medications
  - Beta Blockers
    - Metoprolol, Carvedilol, Atenolol, Labetalol, Propranolol
    - Adverse Effects: May worsen lung disease, ?depression
  - Calcium Channel Blockers
    - Diltiazem, Verapamil
    - Adverse Effects: Constipation, Lower Extremity Edema
  - Digoxin
    - Not as effective, particularly w/ exercise
    - Narrow theraputic window

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Strict vs. Lenient Rate Control

- IIa. A heart rate control (resting heart rate <80 bpm) strategy is reasonable for symptomatic management of AF. (Level of Evidence: B)

- IIb. A lenient rate-control strategy (resting heart rate <110 bpm) may be reasonable <u>as long as</u> patients remain asymptomatic <u>and</u> LV systolic function is preserved. (Level of Evidence: B)

2014 ACC/AHA Afib guidelines. JACC 2014;64:e1–76.

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It's the stroke, stupid

- Stroke increases with age with and without Afib

Prevalence of stroke by age and sex (NHANES: 2005–2008)

Source: National Center for Health Statistics and National Heart, Lung, and Blood Institute.
©2011 American Heart Association, Inc. All rights reserved.
Roger VL, et al. Published online in Circulation Dec. 15, 2011
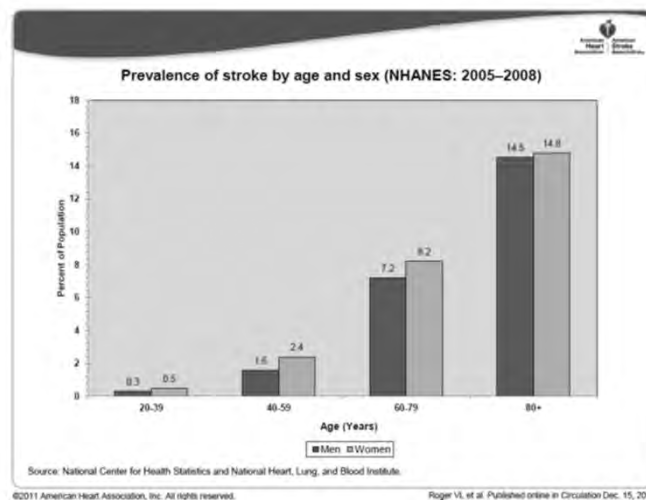
Afib is a Powerful Risk Factor for Stroke

- Percentage of strokes attributable to AFib increases steeply from **1.5%** at 50-59y to **23.5%** at 80-89y
- Nearly 50% of afib-related strokes occur in patients >75y
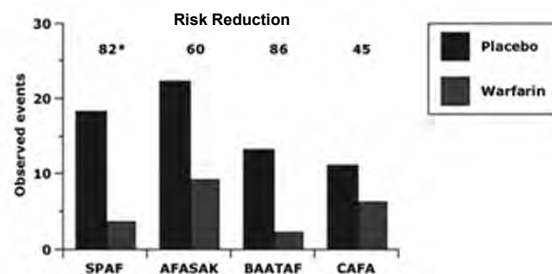- Other strong risk factors include: Prior stroke/TIA, DM, HTN, Heart Failure

AHA Heart Attack & Stroke Statistical Update 2012

Afib increases risk of stroke more than any other CV condition
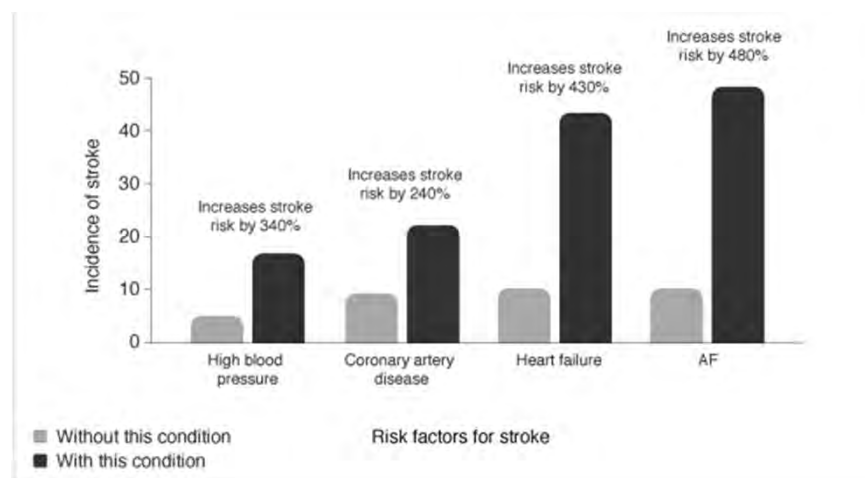
Wolf PA, et al. Stroke 1991;22:983–8

Anticoagulation Reduces Stroke Risk

Risk Reduction

- SPAF: Stroke Prevention in Atrial Fibrillation; AFASAK: Copenhagen AFASAK Study; BAATAF: Boston Area Anticoagulation Trial for Atrial Fibrillation; and CAFA: Canadian Atrial Fibrillation Anticoagulation Study

Connolly SJ, et al. J Am Coll Cardiol 1991; 18:349.

Graphics from UpToDate

CHADS$_2$ and CHA$_2$DS$_2$-VASc Risk Stratification Scores for Subjects With Nonvalvular Atrial Fibrillation

Definition and Scores for CHADS$_2$ and CHA$_2$DS$_2$-VASc	Score		Stroke Risk Stratification With the CHADS$_2$ and CHA$_2$DS$_2$-VASc Scores	
	Score			**Adjusted stroke rate (% per y)**
CHADS$_2$			**CHADS$_2$***	
Congestive HF	1		0	1.9
Hypertension	1		1	2.8
Age ≥75 y	1		2	4.0
Diabetes mellitus	1		3	5.9
Stroke/TIA/TE	2		4	8.5
Maximum score	6		5	12.5
CHA$_2$DS$_2$-VASc			6	18.2
Congestive HF	1		**CHA$_2$DS$_2$-VASc†**	
Hypertension	1		0	0
Age ≥75 y	2		1	1.3
Diabetes mellitus	1		2	2.2
Stroke/TIA/TE	2		3	3.2
Vascular disease (prior MI, PAD, or aortic plaque)	1		4	4.0
Age 65–74 y	1		5	6.7
Sex category (i.e., female sex)	1		6	9.8
Maximum score	9		7	9.6
			8	6.7
			9	15.20

Gage BF, et al. JAMA 2001;285:2864; Go AS, et al. JAMA 2003;290:2685; Lip GY, et al. Chest 2010; 137:263.

Underutilization of Anticoagulation

- Estimates that only 30-50% of older patients without a contraindication to anticoagulation are receiving it
  - Survey of AF patients:
    - 44% of patients with AF 65-74y and
    - 11% of patients >75 y were treated (warfarin)
  - Among patients who were <u>not</u> anticoagulated in one series, a contraindication was present in 17%
  - Chart review of Medicare patients--warfarin prescribed in only 53% of patients with AF <u>&</u> prior stroke.
    - Ideal candidates for anticoagulation w/ AF (increased risk of stroke & a low risk of bleeding)--only 62% were discharged from the hospital on warfarin

Sudlow CM, et al. Service provision and use of anticoagulants in atrial fibrillation. BMJ 1995; 311:558.
Lip GY, et al. A survey of atrial fibrillation in general practice: the West Birmingham Atrial Fibrillation Project. Br J Gen Pract 1997; 47:285.
Brass LM, et al. Warfarin use following ischemic stroke among Medicare patients with atrial fibrillation. Arch Intern Med 1998; 158:2093.

When all you change is the age

Study author and date	Percentage of physicians recommending warfarin for patient in AF with no contraindications to warfarin (age)	
	Patient <70 years	Patient >70 years
Chang *et al.* (1990) [18]	47% (59)	31% (73)
McCrory *et al.* (19__ 20]	90% (65)	88% (75)
King *et al.* (199__)	45% (<40)	26% (74)
Lip *et al.* (1996) [2__]	86% (40)	43% (72)
Beyth *et al.* (1996) [2__]	81% (65)	45% (85)
Peterson *et al.* (200__)	98% (65)	91% (75)
Gross *et al.* (2003) [35]	78% (62)	91% (76)
Vassilikos *et al.* (2010) [47]	64% (25–50)	90% (>75)

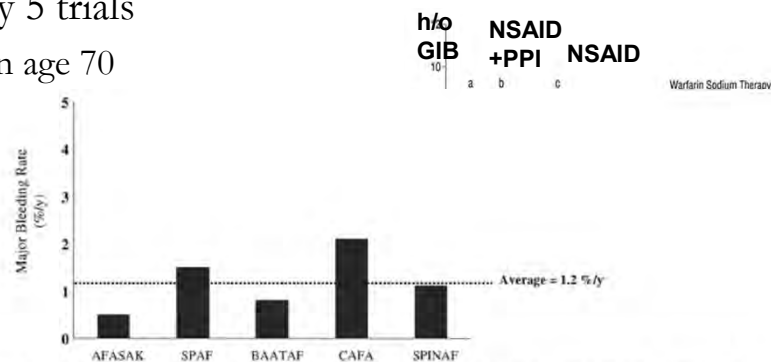Pugh D, et al. Age and Ageing 2011;40:675; J Am Med Dir Assoc 2006;7:23-8

Reasons given to withhold

- Bleeding
- Falls
- Age/Life expectancy
- Cognitive Impairment
- Alcoholism
- Compliance Concerns

Pugh D, et al. Age and Ageing 2011;40:675; J Am Med Dir Assoc 2006;7:23-8

Risk of Major Hemorrhage

- 1.2%/y 5 trials
  - Mean age 70

Figure 11. Annual rates of major hemorrhage during anticoagulation in primary prevention trials involving patients with nonvalvular atrial fibrillation. The mean age of participants was 69 years. Major hemorrhage was variously defined but typically involved bleeding severe enough to require hospitalization, transfusion or surgical intervention, involved a critical anatomical site, or was permanently disabling or fatal. Data adapted from Hart RG, Benavente O, McBride R, et al. Antithrombotic therapy to prevent stroke in patients with atrial fibrillation: a meta-analysis. *Ann Intern Med* 1999;131:492–501 (420). AFASAK indicates Copenhagen Atrial Fibrillation, Aspirin, Anticoagulation; BAATAF, Boston Area Anticoagulation Trial for Atrial Fibrillation; CAFA, Canadian Atrial Fibrillation Anticoagulation; SPAF, Stroke Prevention in Atrial Fibrillation; and SPINAF, Stroke Prevention in Nonrheumatic Atrial Fibrillation.

Hart RB, et al. Ann Intern Med 1999;131:492; Arch Int Med 1994;154:1449; Arch Int Med 1996;156:409.

What about the patient with a prior GI bleed?

- Ulcer related GI bleeding recurrences have been reduced
  - Detection & treatment of H. Pylori
  - Treated patients are at no greater risk of re-bleeding
- NSAID use, confers ongoing GI bleeding risk
  - PPI, misoprostal can reduce risk

Man-Son-Hing M, et al. Arch Intern Med 2002 2002;162(5):541;
Hernandez-Diaz S, et al. Arch Intern Med 2000 24 Jul 2000;160(14):2093.

What about the patient who has fallen?

- Patients who fall are older, have more co-morbidities
- But also have an increased risk of stroke
- Retrospective analysis of 1245 Medicare beneficiaries with Afib & at high risk for falls

- CHADS2 score ≥ 2, tx with warfarin was significantly protective against the endpoint of: out-of-hospital death or stroke hosp, MI, or hemorrhage

Table 4 Hazard ratio of warfarin for composite outcome—out-of-hospital death or hospitalization for stroke, myocardial infarction, or hemorrhage—in 1245 patients at high risk for falls

CHADS$_2$ score	Hazard ratio (95% CI)	P value	Recommended antithrombotic therapy
0–1	0.98 (0.56,1.72)	0.94	Aspirin or nil
2–6	0.75 (0.61,0.91)	0.004	Anticoagulant

CHADS$_2$ stroke score was calculated by adding 1 point for each of the following conditions: congestive heart failure, hypertension, age > 75 years, or diabetes and 2 points for a prior stroke or transient ischemic attack. CI indicates confidence interval.

Gage BF, et al. Am J Med 2005; 118:612.

Falls

- A Markov decision model: Regardless of age or baseline risk of stroke, the risk of falling was <u>not</u> an important factor for determining the optimal antithrombotic therapy (i.e., aspirin, warfarin or no therapy)
    - 33% of people >65 fall/y
    - Average number of falls (in fallers) is 1.8/y
    - Risk of SDH from falling in patients with Afib with an average risk of stroke (6% per year in the absence of anticoagulation) would have to fall ~300 times in a year for the risk of anticoagulation to outweigh benefits
- Low CHADS2-Vasc patients*****

Pugh D, et al. Attitudes of physicians regarding anticoagulation for atrial fibrillation: a systematic review. Age Ageing 2011; 40:675.
Man-Son-Hing M, et al. Anticoagulant-related bleeding in older persons with atrial fibrillation: physicians' fears often unfounded. Arch Intern Med 2003; 163:1580.
Man-Son-Hing M, at al. Choosing antithrombotic therapy for elderly patients with atrial fibrillation who are at risk for falls. Arch Intern Med 1999; 159:677.
Sellers MB, et al. Atrial fibrillation, anticoagulation, fall risk, and outcomes in elderly patients. Am Heart J 2011; 161:241.

Providers & Patients

- Physicians underestimate stroke prevention by as much as 22%
- Physicians overestimate bleeding risk by as much as 670%
- When Afib pts. 70-85 y educated on risk/benefits
    - 61% chose warfarin
    - 47% of those not on warfarin would have chosen it
- Interview study of physicians and patients at high risk
    - Minimum number of strokes prevented (100 pts/2y) to justify warfarin was lower for patients than for physicians (1.8 vs. 2.5, p=0.009)
    - Maximum number of bleeds acceptable to patients (100 pts/2y) was higher than for physicians (17.4 vs. 10.3, p<0.001)

Bungard TJ, et al. CMAJ 2001;165:301; Protheroe J, et al. BMJ 2000;320:1380; Devereaux PJ et al. BMJ 2001; 323(7323):1218.

Bleeding Risk Scores in Atrial Fibrillation

ATRIA		HAS-BLED		HEMORR$_2$HAGES	
Anemia[1]	3	Hypertension[4]	1	Hepatic[10] or Renal disease[2]	1 1
Severe renal disease[2]	3	Abnormal Renal[5] or Liver function[6]	1 1	Ethanol abuse	1
Age ≥75 yrs	2	Stroke	1	Malignancy	1
Any prior hemorrhage	1	Bleeding	1	Older Age (>75 yrs)	1
Hypertension[3]	1	Labile INR[8]	1	Reduced platelet number or function[11]	1
		Elderly (>65 yrs)	1	Rebleeding[12]	2
			1 1	Hypertension[4]	1
				Anemia[13]	1
				Genetic factors[14]	1
				Excessive fall risk[15]	1
				Stroke	1

1. Hemoglobin <13 g/dl men; <12 g/dl women
2. Estimated glomerular filtration rate <30 ml/min or dialysis-dependent
3. Diagnosed hypertension
4. Systolic blood pressure >160 mmHg
5. Presence of chronic dialysis or renal transplantation or serum creatinine ≥200 mmol/L
6. Chronic hepatic disease (eg cirrhosis) or biochemical evidence of significant hepatic derangement (eg bilirubin 2 x upper limit of normal, in association with aspartate aminotransferase/alanine aminotransferase/alkaline phosphatase >3 x upper limit normal, etc.)
8. Unstable/high INRs or poor time in therapeutic range (eg <60%)
9. Concomitant use of drugs, such as antiplatelet agents, non-steroidal anti-inflammatory drugs, or alcohol abuse etc.
10. Cirrhosis, two-fold or greater elevation of AST or APT, or albumin <3.6 g/dl
11. Platelets <75,000, use of antiplatelet therapy (eg daily aspirin) or NSAID therapy; or blood dyscrasia
12. Prior hospitalization for bleeding
13. Most recent hematocrit <30 or hemoglobin <10 g/dl
14. CYP2C9*2 and/or CYP2C9*3
15. Alzheimer's dementia, Parkinson's disease, schizophrenia, or any condition predisposing to repeated falls

Apostolakis, S. JACC 2012;60:000. 2012 Jul 24.

Clinical Characteristics Comprising the HAS-BLED Bleeding Risk Score

Letter	Clinical Characteristic*	Score	HAS-BLED Score	Bleeds per 100 Patient-years†
H	Hypertension	1	0	1.13
A	Abnormal renal and liver function (1 point each)	1 or 2	1	1.02
S	Stroke	1	2	1.88
B	Bleeding	1	3	3.74
L	Labile INRs	1	4	8.70
E	Elderly	1		
D	Drugs or alcohol (1 point each)	1 or 2		
		Maximum 9 points		

*"Hypertension" is defined as systolic blood pressure >160 mm Hg. "Abnormal kidney function" is defined as the presence of chronic dialysis or renal transplantation or serum creatinine ≥200 μmol/L. "Abnormal liver function: is defined as chronic hepatic disease (eg, cirrhosis) or biochemical evidence of significant hepatic derangement (eg, bilirubin >2× upper limit of normal, in association with aspartate transaminase/alanine transaminase/alkaline phosphatase >3× upper limit normal). "Bleeding" refers to previous bleeding history or predisposition to bleeding (eg, bleeding diathesis, anemia). "Labile INRs" refers to unstable/high international normalized ratios or poor time in therapeutic range (eg, <60%). Drugs/alcohol use refers to concomitant use of drugs, such as antiplatelet agents and nonsteroidal anti-inflammatory drugs.

†Based on initial validation cohort reported by Pisters et al,[12] with insufficient events at HAS-BLED scores ≥5 to give rates; actual rates of stroke in contemporary cohorts may vary from these estimates.

Lip GY. Am J Med 2011;124:111.

Risk of major bleeding in NRAF participants on warfarin, by HEMORR$_2$HAGES score

HEMORR$_2$HAGES score*	n	No. of bleeds	Bleeds per 100 point-years warfarin (95% CI)
0	209	4	1.9 (0.6-4.4)
1	508	11	2.5 (1.3-4.3)
2	454	20	5.3 (3.4-8.1)
3	240	15	8.4 (4.9-13.6)
4	106	9	10.4 (5.1-18.9)
≥5	87	8	12.3 (5.8-23.1)
Any score	1604	67	4.9 (3.9-6.3)

*HEMORR$_2$HAGES is scored by adding 1 point for each bleeding risk factor: hepatic or renal disease, ethanol abuse, malignancy older (age > 75 years), reduced platelet count or function, rebleeding risk (2 points), hypertension (uncontrolled), anemia, genetic factors (not available in this study), excessive fall risk, and stroke.

Gage et al. Am Heart J 2006;Mar;151(3):713.

How best to approach patients?

- In order to balance stroke and bleeding risk:
  - **A.** Calculate CHADS2-VASC score & the HAS-BLED risk score
    - If CVA risk > Bleeding risk → Rx a-coagulation
    - If CVA risk < Bleeding risk Ø Rx a-coagulation
  - **B.** Calculate CHADS2-VASC score & the HEMORR$_2$HAGES risk score
    - If CVA risk > Bleeding risk → Rx a-coagulation
    - If CVA risk < Bleeding risk Ø Rx a-coagulation
  - **C.** Calculate CHADS2-VASC score and if ≥ Rx a-coagulation, but if h/o bleeding make goal INR 1.5-2.0
  - **D.** Calculate CHADS2-VASC score and if ≥ 2 with a h/o bleeding Rx: ASA & Plavix

Not so fast

- The bleeding risk scores have poor predictive accuracy

Although these scores may be helpful in defining patients at elevated bleeding risk, their clinical utility is insufficient for use as evidence for the recommendations in this guideline.

January CT et al. JACC 2014;64(21):e1.

Not so fast

- HAS-BLED better than ATRIA or HEMORRHAGES at discriminating risk

A score ≥3 indicates potentially "high risk" for bleeding and may require closer observation of a patient for adverse risks, closer monitoring of INRs, or differential dose selections of oral anticoagulants or aspirin.

January CT et al. JACC 2014;64(21):e1.

Anticoagulation

- Warfarin
- Novel/Direct/Target-specific oral anticoagulants ("NOAC/DOAC/TSOAC")

DOAC/TSOACs Trials

Table 2
Clinical trials comparing TSOACs to warfarin in AF and VTE

TSOAC	Trial (Year)	Indication	Dose	Dose in Renal Impairment	Dose in Hepatic Impairment
Dabigatran (direct thrombin inhibitor)	RE-LY (2009)	AF	150 mg twice daily	If CrCl is 15–30 mL/min: 75 mg twice daily	Administration in Child-Pugh B showed no change in exposure or pharmacodynamics
	RE-COVER (2009)	Acute VTE	150 mg twice daily after 5–10 d of parenteral anticoagulation	—	
Rivaroxaban (factor Xa inhibitor)	ROCKET-AF (2011)	AF	20 mg daily with evening meal	If CrCl is 15–50 mL/min: 15 mg with evening meal	Avoid use in Child-Pugh B/C
	EINSTEIN-DVT (2010) EINSTEIN-PE (2012)	Acute PE or DVT	15 mg twice daily for 3 weeks followed by 20 mg once daily	—	—
Apixaban (factor Xa inhibitor)	ARISTOTLE (2011)	AF	5 mg twice daily	If patient has ≥2 of following: age >80, weight <60, SCr >1.5 mg/dL: 2.5 mg twice daily	Mild impairment: no change recommended. Moderate impairment: no dosing recommendation available; severe impairment: avoid use
	AMPLIFY (2013)	Acute VTE	10 mg twice daily for 7 d followed by 5 mg twice daily	—	
Edoxaban (factor Xa inhibitor)	ENGAGE AF-TIMI 48 (2013)	AF	If CrCl is between 50 and 95 mL/min: 60 mg/d	If CrCl >95: do not use; if CrCl 15–50: 30 mg daily	Avoid use in Child-Pugh B/C
	Hokusai-VTE (2013)	Acute VTE	After initial 5–10 d parenteral anticoagulation, 60 mg once daily if CrCl >50 mL/min or 30 mg once daily if CrCl 30–50 mL/min or body weight ≤ 60 kg	—	—

Abbreviations: CrCl, creatinine clearance; DVT, deep venous thrombosis; PE, pulmonary embolism; TSOACs, target-specific oral anticoagulants; VTE, venous thromboembolism.

Parks AL, Fang MC. Clin Geriatr Med 32(2016): 331-346.

Table 3
Comparison of TSOACs and warfarin in AF and VTE

	TSOACs	Warfarin	Relative Risk (95% CI)
Atrial fibrillation			
Ischemic stroke	Same		0.92 (0.83–1.02)
Intracranial hemorrhage	TSOACs better		0.48 (0.39–0.59)
Gastrointestinal bleeding	TSOACs worse		1.25 (1.01–1.55)
Mortality	TSOACs better		0.90 (0.85–0.95)
VTE			
Recurrent VTE	Same		0.88 (0.74–1.05)
Major bleeding	TSOACs better		0.60 (0.41–0.88)
Mortality	Same		0.97 (0.83–1.14)
Special Considerations			
Dosing	Fixed dosing	Adjusted dosing	—
Adherence	Very important	Very important	—
Monitoring	No	Yes	—
Interactions	Fewer	Many	—
Cost	High	Low	—
Reversibility	One,	Yes	—
Special concerns	Renal, liver	Liver	—

Abbreviations: AF, atrial fibrillation; TSOACs, target-specific oral anticoagulants; VTE, venous thromboembolism.

Parks AL, Fang MC. Clin Geriatr Med 32(2016): 331-346.

DOAC contraindicated/not preferable

- Prosthetic heart valves
- Pregnancy (LMWH)
- Renal impairment, as discussed
  - Apixaban least renally dependent
- Antiphospholipid antibody syndrome
- When compliance is difficult/Multiple daily doses
- Antidote "needed." Dabigatran (idarucizumab)

What about patients ineligible for anticoaguation?

e.g. Prior ICH, severe GI bleeding

Peritz DC, Chung EH. Clev Clin J Med. 2015;82(3)167-176.
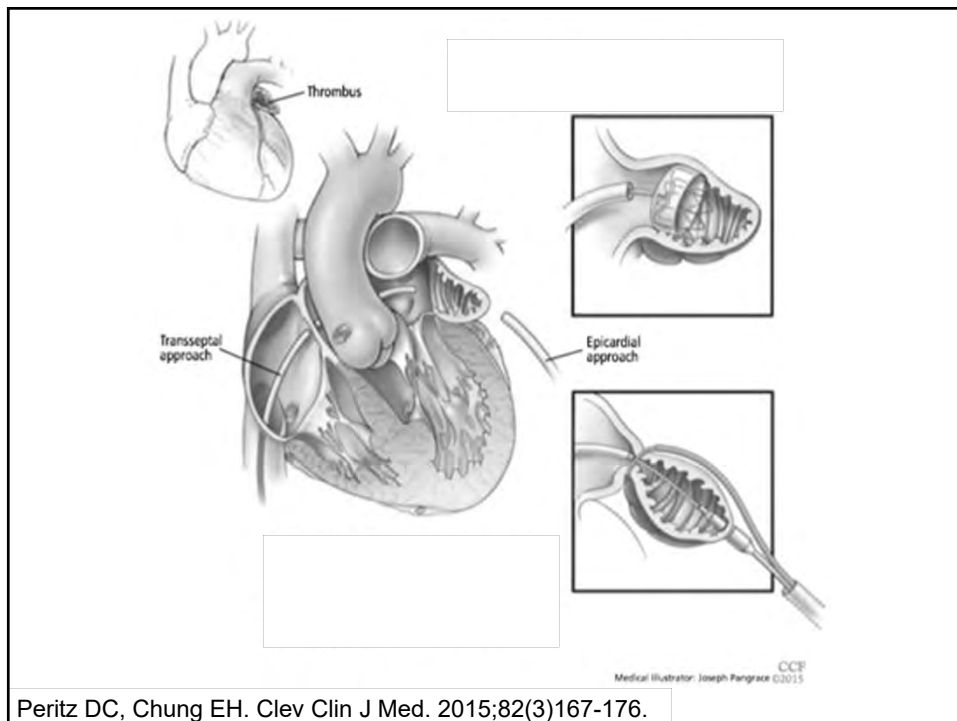
Other stroke risk reduction options

- Left atrial appendage interventions
  - How this fits into the treatment paradigm is somewhat uncertain
    - ESC 2016: weak recommendation for those with CI to oral anticoagulation
    - FDA: approved for those eligible for OA, with other indications for non-pharm tx (lifestyle, labile INR)
    - ACC/AHA/HRS 2014: Weak recommendation for LAA excision at the time of cardiac surgery. No recommendation on device closure

Blood Pressure Control Reduces ICH

- Risk of spontaneous ICH is highly correlated with blood pressure
- Randomized trial of > 6000 pts with prior CVA and a mean baseline BP of 147/86 mmHg
- Reducing BP 9/4 mmHg decreased the annual rate of ICH by one-half (1.2 vs. 2.4%/y)
- Uncontrolled hypertension (ie, BP consistently >160/90mmHg) is a relative contraindication to anticoagulation with warfarin
- Consider aggressive BP control in anticoagulated pts

PROGRESS Collaborative Group. Randomised trial of a perindopril-based blood-pressure-lowering regimen among 6,105 individuals with previous stroke or transient ischaemic attack. Lancet 2001; 358:1033.

Other strategies to reduce risks

- Close monitoring & lifestyle modification when using warfarin or other anticoagulants
- Aggressive management of excessive anticoagulation with Warfarin
- Control of HTN
- Interventions to reduce the risk of falls
- Avoid NSAIDs
- Treatment of GI pathology (Ulcers, H. Pylori)
- Close attention to patients with cognitive impairment

ESC Afib Guidelines, 2010

Take Home Points

- Age is a potent RF for stroke with and without afib
- Opportunity to practice shared decision making
  - Anti-thromboembolic strategies need to be individualized
  - Discuss patients values and prior experiences (e.g. family/friends)
- Calculate risks (for those who like #s)
- Anticoagulation is under-prescribed
  - Underestimation of benefits
  - Overestimation of risks
- Decisions are <u>not</u> final

Questions?

References

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