Chest Pain of Recent Onset
Insights from the ISCHAEMIA Trial

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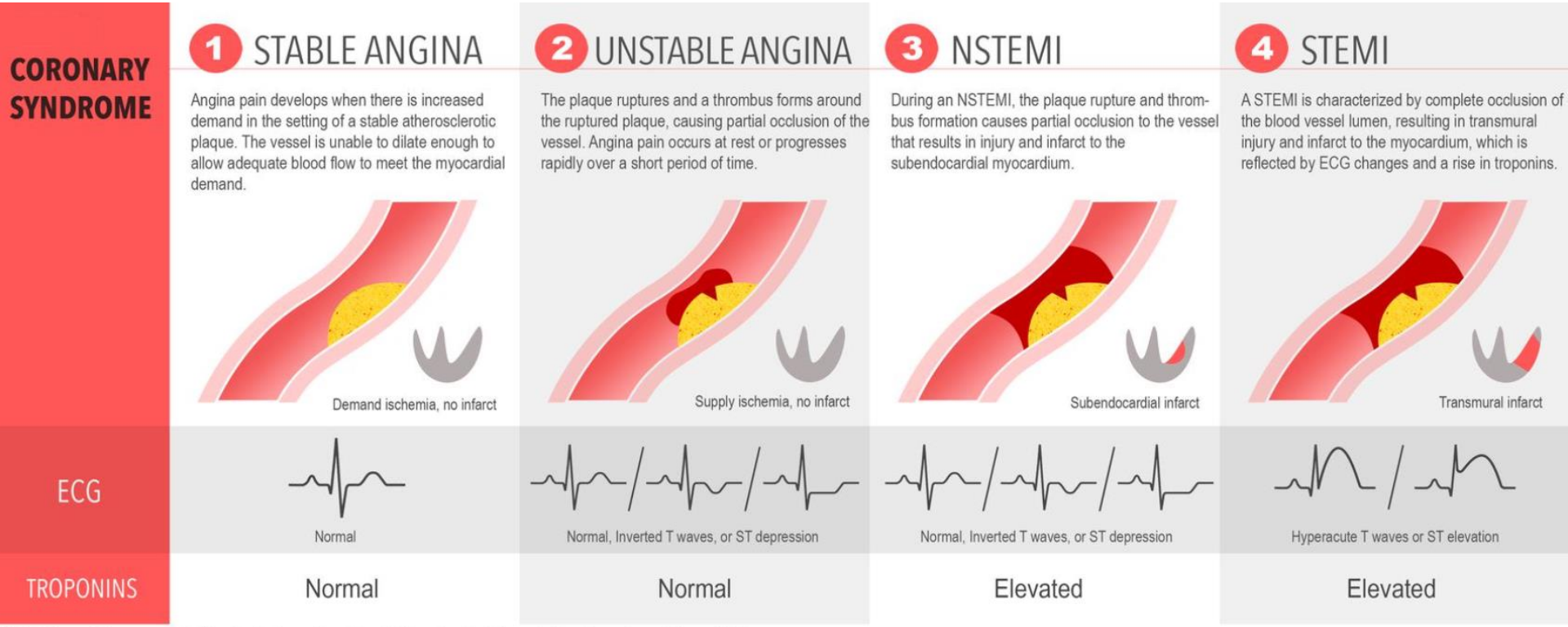
Coronary artery disease – clinical presentation

Chronic Coronary Syndromes

- Stable plaque

Acute Coronary Syndromes

- Unstable plaque
- Plaque rupture → acute vessel occlusion



Patient Mr X, 68 year old male

- Previous medical history of:
  - Hypertension – on Lisinopril 10mg od
  - Smoker 5-10/day
- Presents with:
  - Fatigue, SOBOE and occasional chest discomfort following strenuous exertion
  - Can now only manage 9 holes of golf
  - Concerned as younger brother had a MI recently

What would you do?

1. Reassure and advise smoking cessation?

2. Organise tests?

3. Prescribe medication and re-review?

4. Refer to General Cardiology clinic?

5. Refer to RACPC? (**Does he meet referral criteria?)

6. Prescribe medication and refer?

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The ISCHEMIA study

320 sites from 37 countries: > 5000 patients

International Study Of Comparative Health Effectiveness With Medical And Invasive Approaches (ISCHEMIA)

Primary Report of Clinical Outcomes

Funded by the National Heart, Lung, and Blood Institute

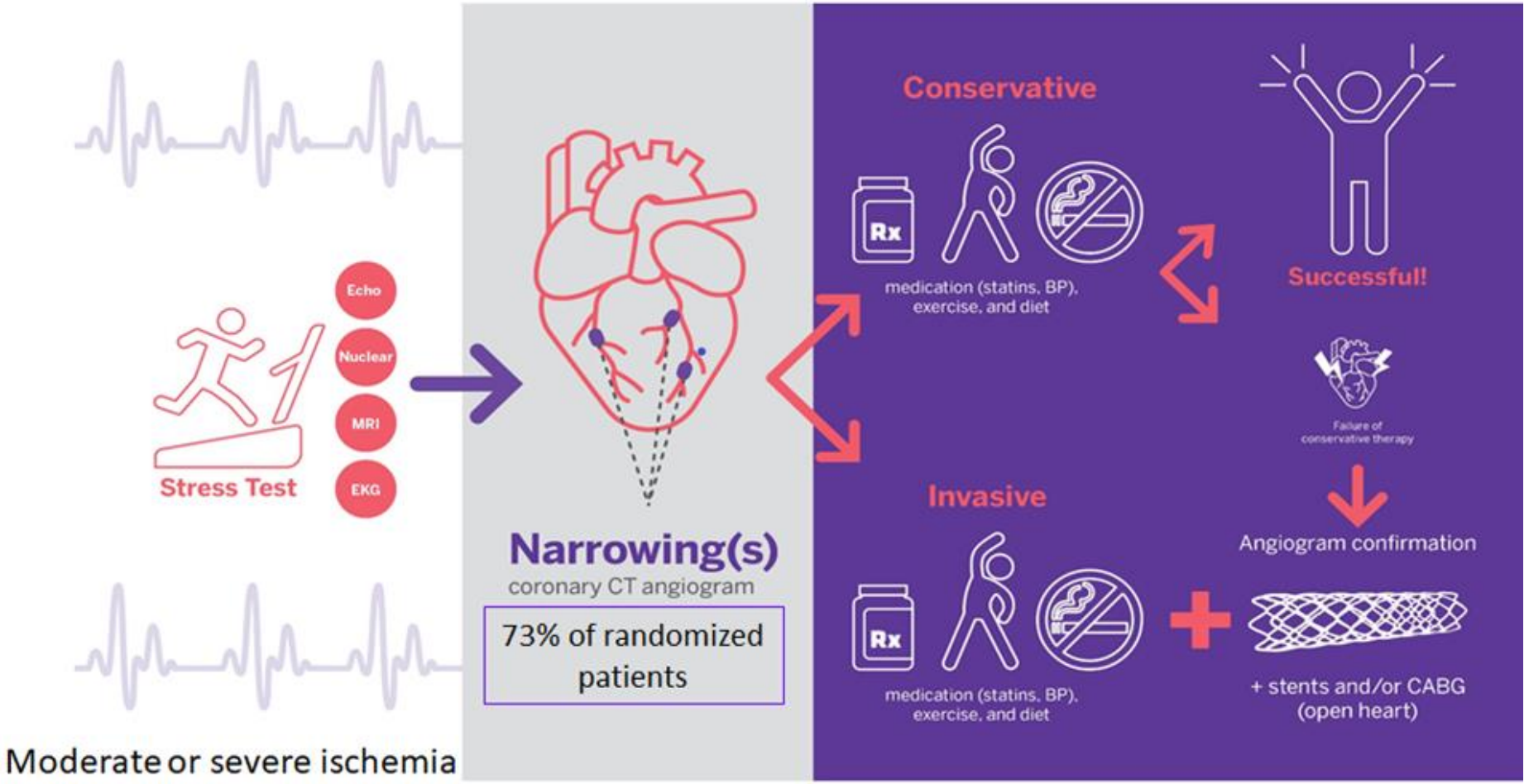
NYU School of Medicine

NYU Langone Health #AHA19

Question:

In patients with with *at least moderate ischemia on a stress test*, is there a benefit to adding cardiac catheterization and revascularization to optimal medical therapy?

ISCHAEMIA trial design overview



Endpoints

Primary Endpoint:

- Time to CV death, MI, hospitalization for unstable angina, heart failure or resuscitated cardiac arrest

Major Secondary Endpoints:

- Time to CV death or MI
- Quality of Life

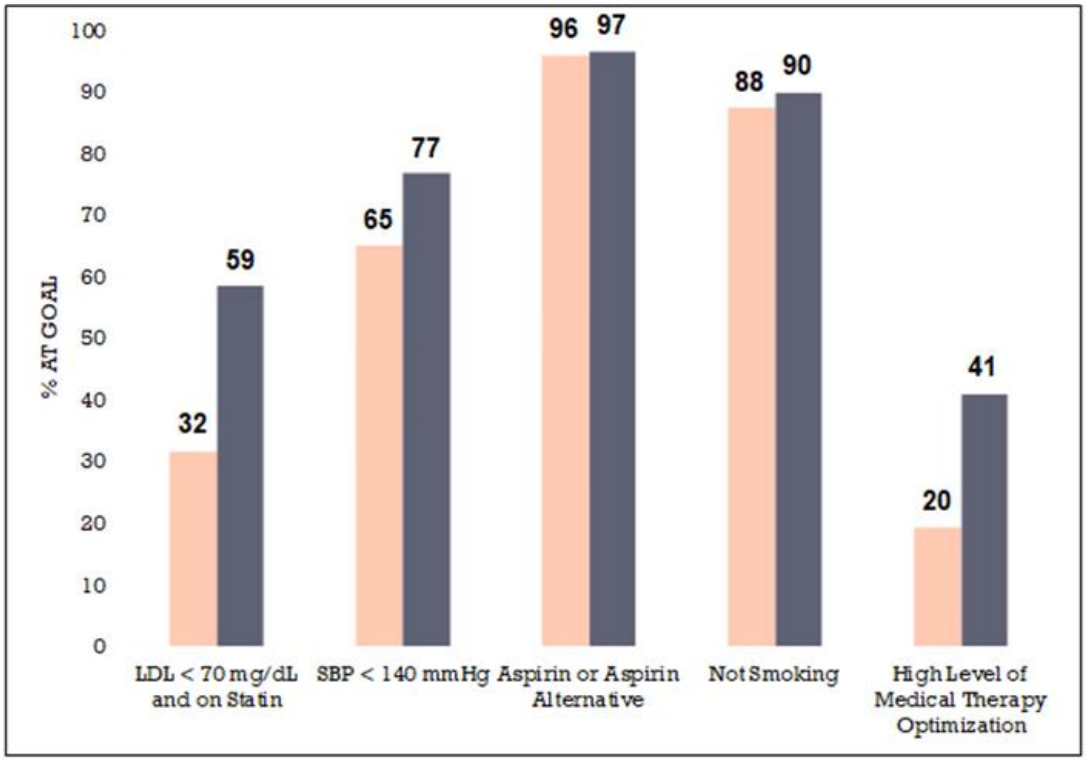
Other Endpoints include:

- All-Cause Death
- Net clinical benefit (stroke added to primary endpoint)

Risk Factor Management

Baseline vs last visit

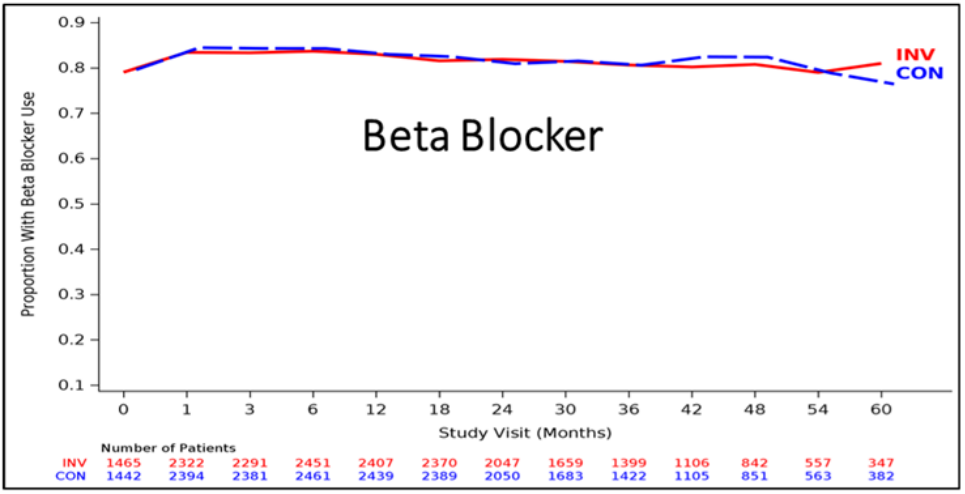
No between group differences INV vs CON

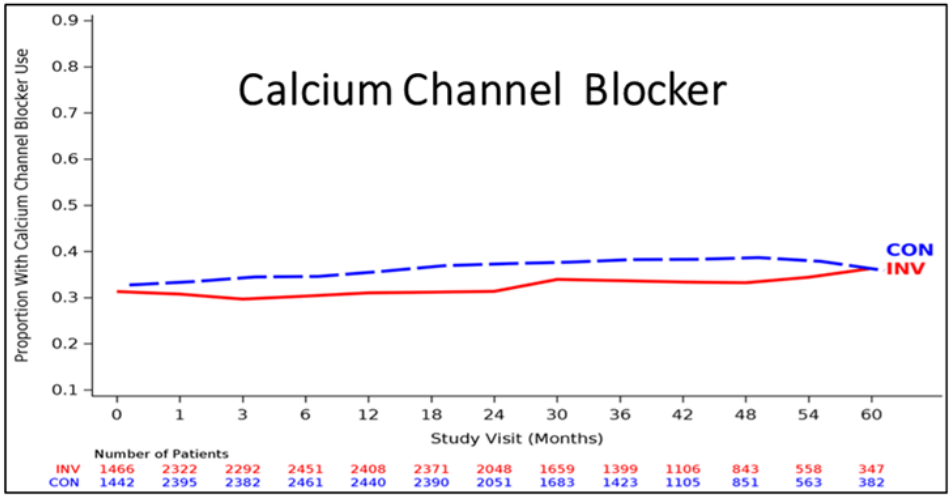


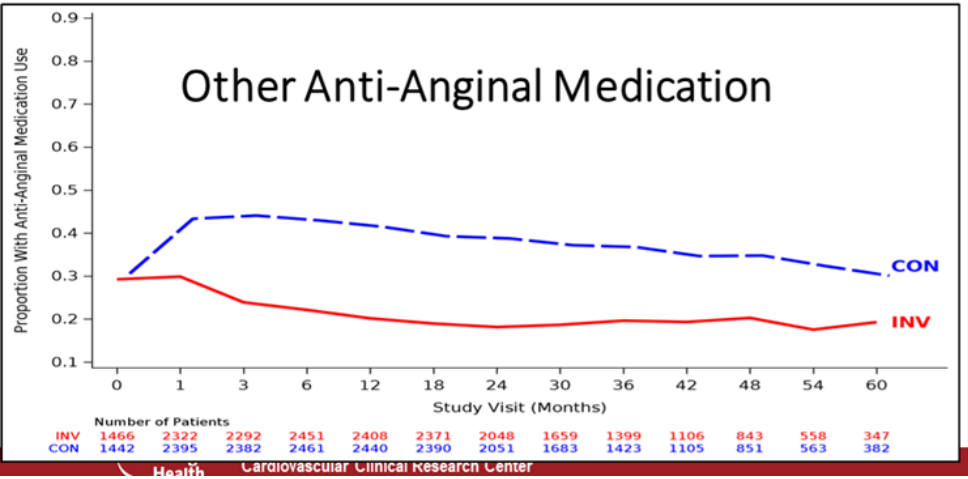
High Level of Medical Therapy Optimization is defined as a participant meeting all of the following goals: LDL < 70 mg/dL and on any statin, systolic blood pressure < 140 mm/Hg, on aspirin or other antiplatelet or anticoagulant, and not smoking. High level of medical therapy optimization is missing if any of the individual goals are missing.

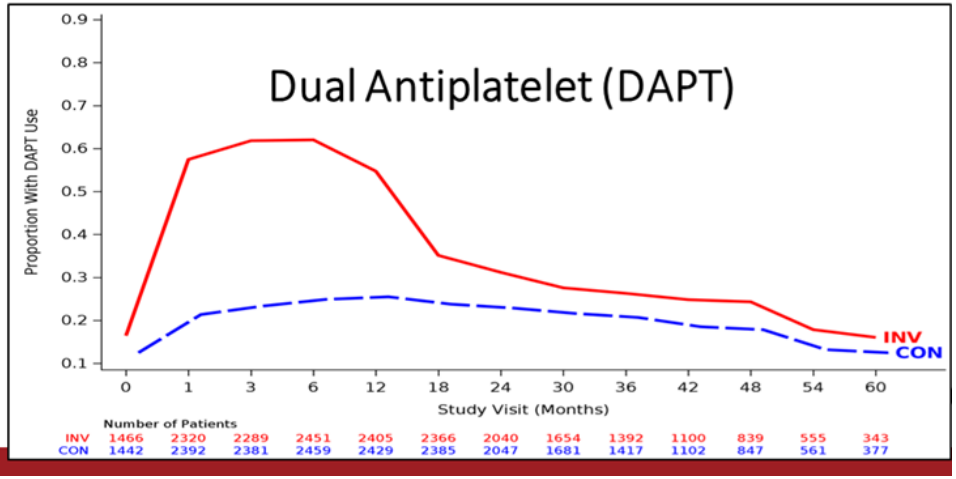
ISCHEMIA

Medication use over time

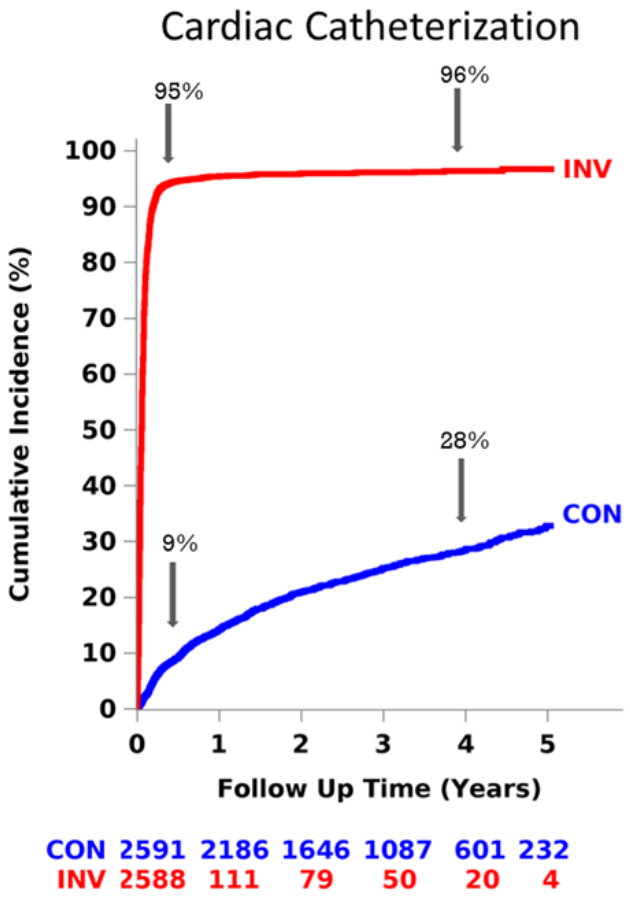


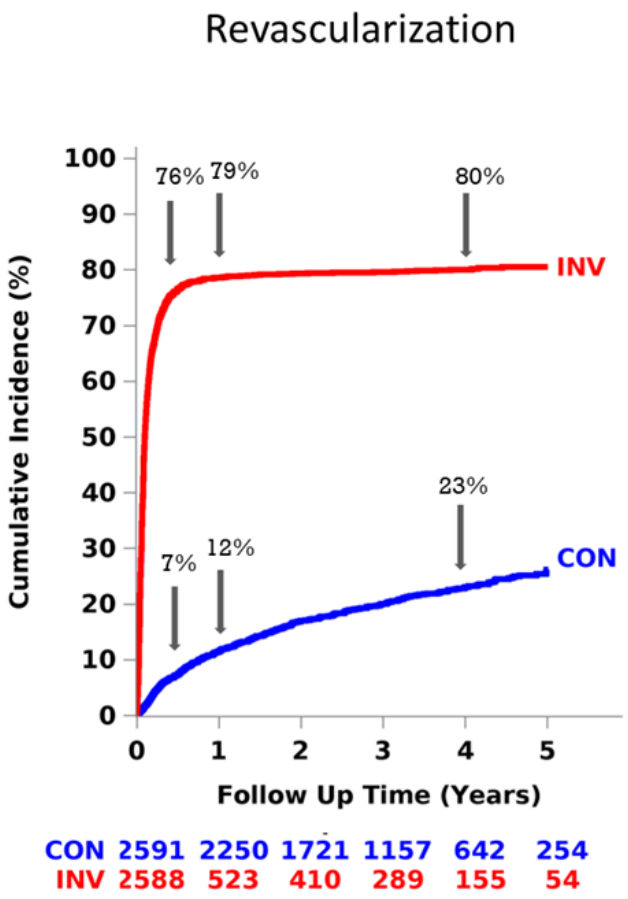






Angiography and revascularisation





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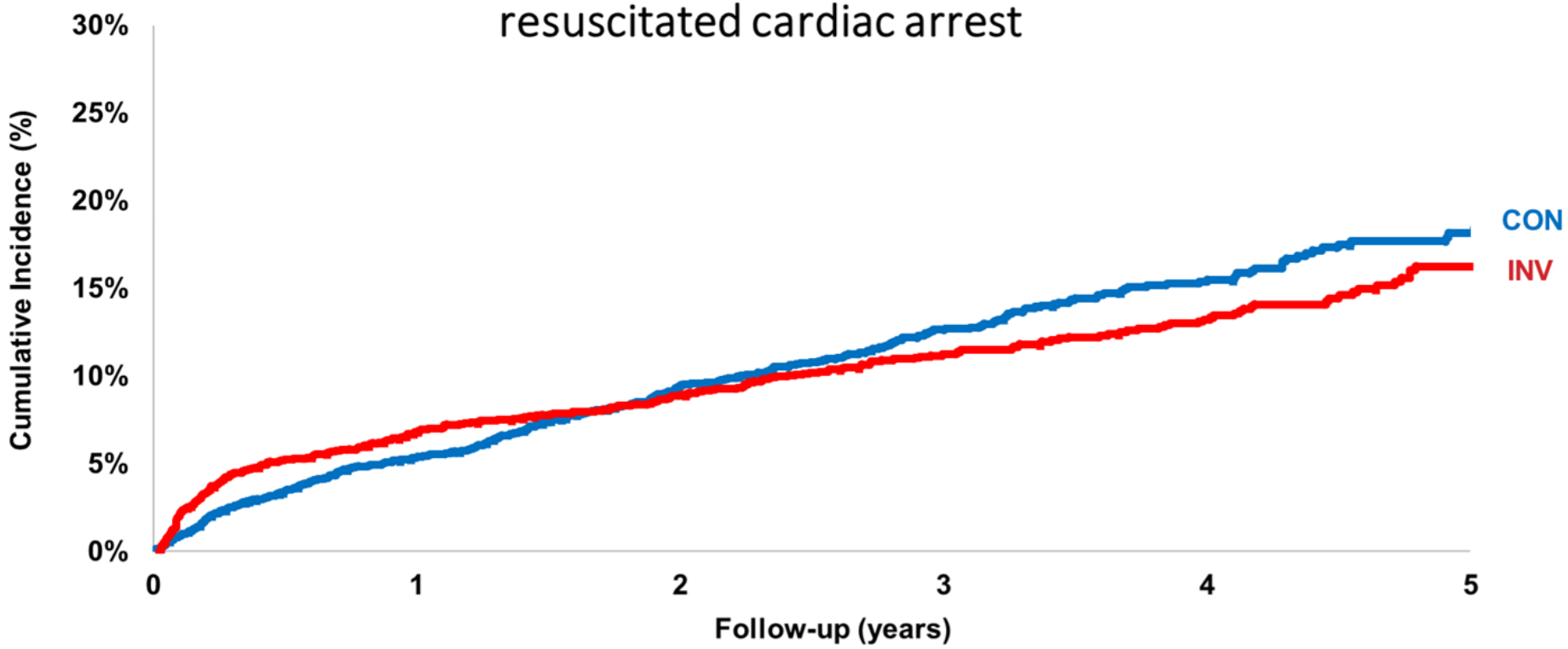
Primary Outcome: CV Death, MI, hospitalization for UA, HF or resuscitated cardiac arrest



Subjects at Risk

CON	2591	2431	1907	1300	733	293
INV	2588	2364	1908	1291	730	271

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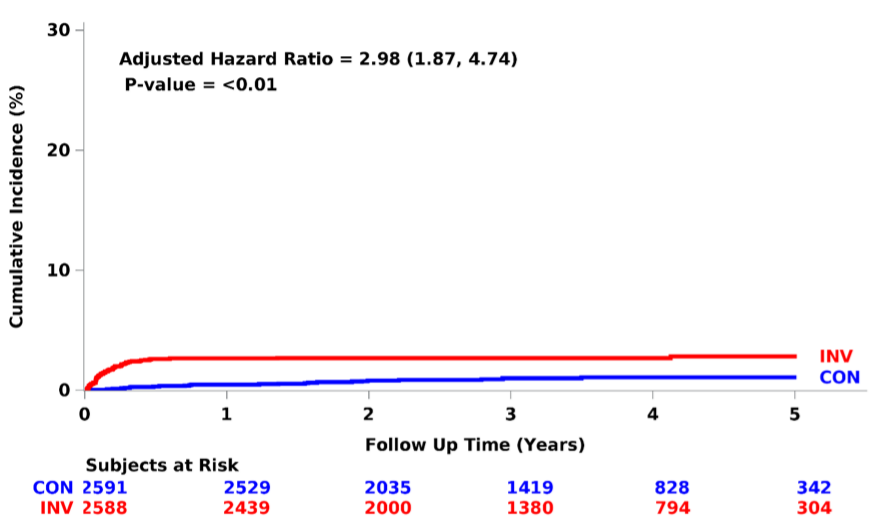
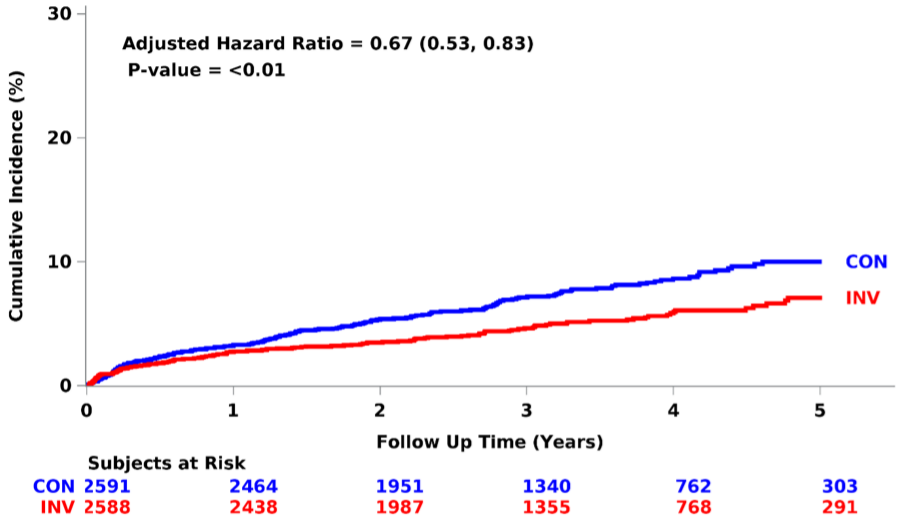
Procedural MI



Spontaneous MI



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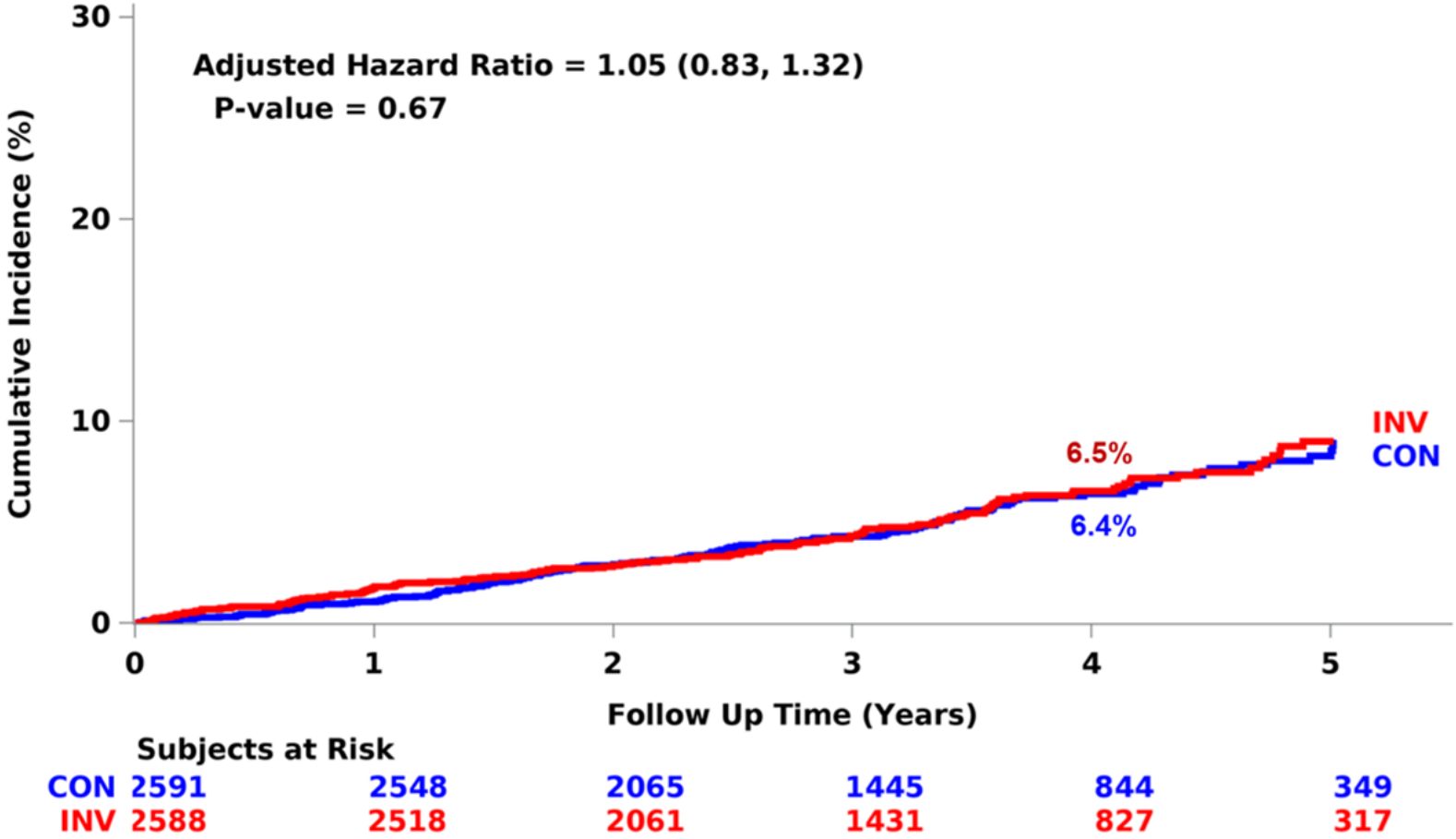
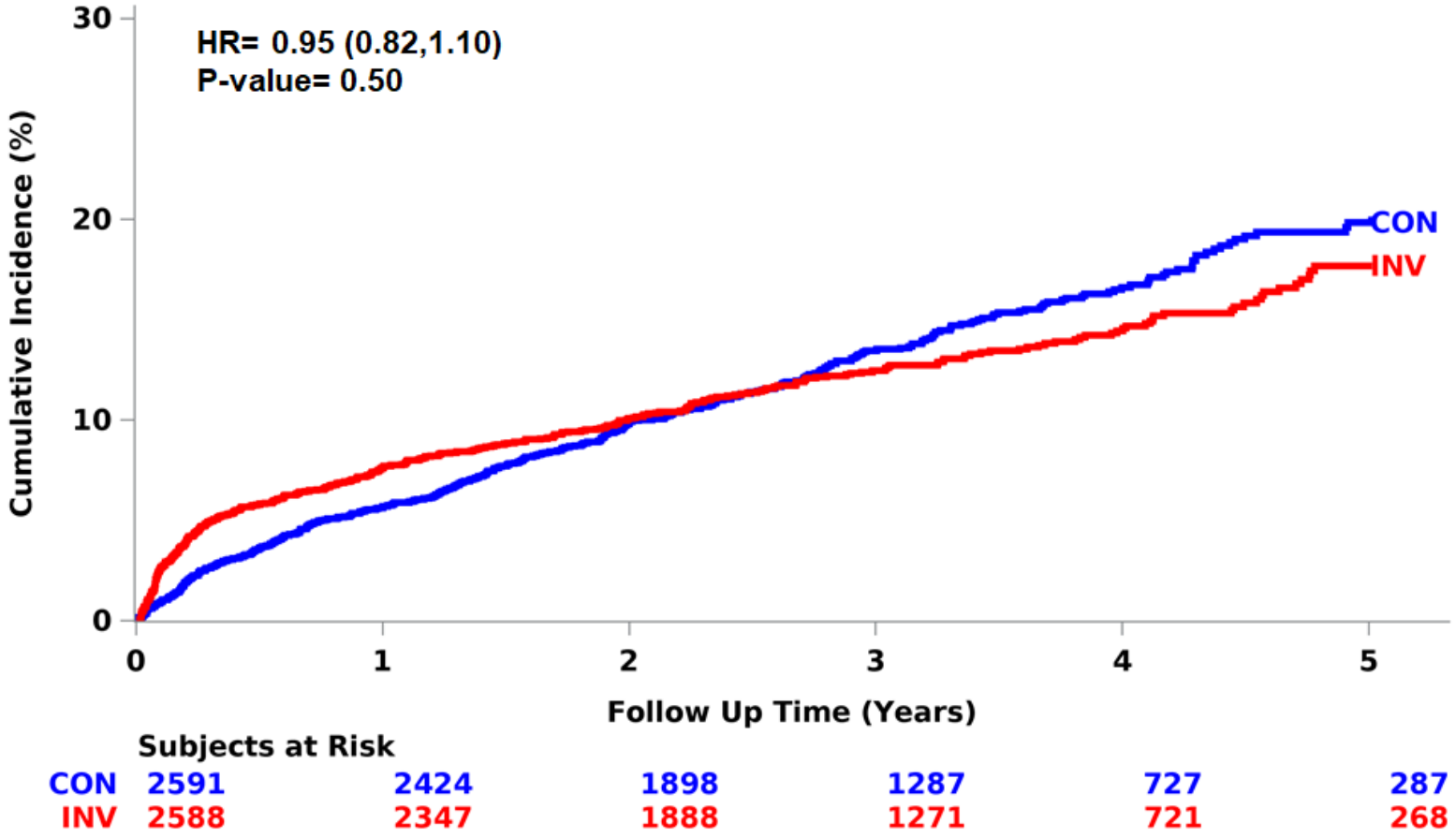
All cause mortality



Net clinical benefit:

CV death, MI, UA, HF, Stroke



Conclusions

- ISCHEMIA is the largest trial of an invasive vs conservative strategy for patients with stable CAD

- Overall, an initial INV strategy vs an initial CON strategy did *not* demonstrate a reduced risk over the 3-4 year FU:

    - Primary endpoint - CV death, MI, hospitalisation for UA, HF, RCA

    - Major Secondary endpoint - CV death or MI

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Patient Mr X – symptoms suggestive of angina
What would you do?

1. Reassure and advise smoking cessation?

2. Organise tests?

3. Prescribe medication and re-review?

4. Refer to General Cardiology clinic?

5. Refer to RACPC? (**Does he meet referral criteria?)

6. Prescribe medication and refer?

The RACPC

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Stepping Hill Hospital

Cardiology Department – Telephone number 0161 419 5077

Rapid Access Chest Pain Clinic Referral Form

Exclusion Criteria – *the following patients are not appropriate for this clinic but please consider either A&E or OP consultant cardiology referral instead*

- Suspected or known significant aortic stenosis
- Exercise induced syncope or palpitations
- Known anaemia (Hb <100g/l)
- Uncontrolled BP (persistently >200/100mmg Hg)
- NYHA Grade 3 or 4 heart failure
- Patients assessed in our RACPC within the last 24 months and had a negative test
- Patient has dizziness, breathlessness or palpitations
- If the patient is currently under follow-up with a cardiologist for another heart problem and develops chest pain

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The RACPC

Please ensure the following have been completed – incomplete referrals may cause delay

Reason for referral:

Medication:

Recent ECG: (within last 2 weeks)

Recent BP:

Interpreter required:

Recent bloods: (within 2 weeks, only attach if not analysed at SHH, to include U&E's, LFT, lipids, FBC, TFT's)

The RACPC

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Offer people optimal drug treatment for the initial management of stable angina. Optimal drug treatment consists of one or two anti-anginal drugs as necessary plus drugs for secondary prevention of cardiovascular disease.

Recommend aspirin 75 mg OD and atorvastatin 40mg OD if not already on these.

Also recommend antianginals

Choice	drug	dose
1st	Bisoprolol	1.25 to 5 mg OD
2nd	Amlodipine (or other calcium channel antagonist)	5 mg OD
3rd	Isosorbide mononitrate Ranolazine	20 mg bd (am and lunchtime) 375mg BD (to 500mg bd after 2 weeks if well tolerated)

Nice Guidance: Stable angina: management

Clinical guideline [CG126] Published: 23 July 2011 Last updated: 25 August 2016

Guidance | Stable angina: management | Guidance | NICE

Conclusion – *emphasis on 'OMT'*

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In patients with suspected angina:

- The most important intervention, in the first instance, is '*medical optimisation*' – ***OMT:***
    - prompt initiation on anti-ischaemic medical therapy (symptomatic & prognostic benefit)
    - risk factor and comorbidity management

- Initial assessment, incl tests to exclude other conditions:
    - AF
    - Valve disease (severe aortic stenosis)
    - Anaemia
    - Hyperthyroidism

- Onward referral (RACPC) for ischaemic testing, risk stratification & further treatment