

2017 ACC/AHA GUIDELINES FOR THE EVALUATION AND MANAGEMENT OF PATIENTS WITH SYNCOPE.

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DEFINITION

A SYMPTOM THAT PRESENTS WITH AN ABRUPT, TRANSIENT, COMPLETE LOSS OF CONSCIOUSNESS , ASSOCIATED WITH INABILITY TO MAINTAIN POSTURAL TONE, WITH RAPID AND SPONTANEOUS RECOVERY .

SYNCOPE

- Self-limited loss of consciousness and postural tone.
- Relatively rapid onset.
- Variable warning symptoms.
- Spontaneous, complete, and usually prompt recovery without medical or surgical intervention.

INCIDENCE

- 40% will experience syncope at least once in a lifetime

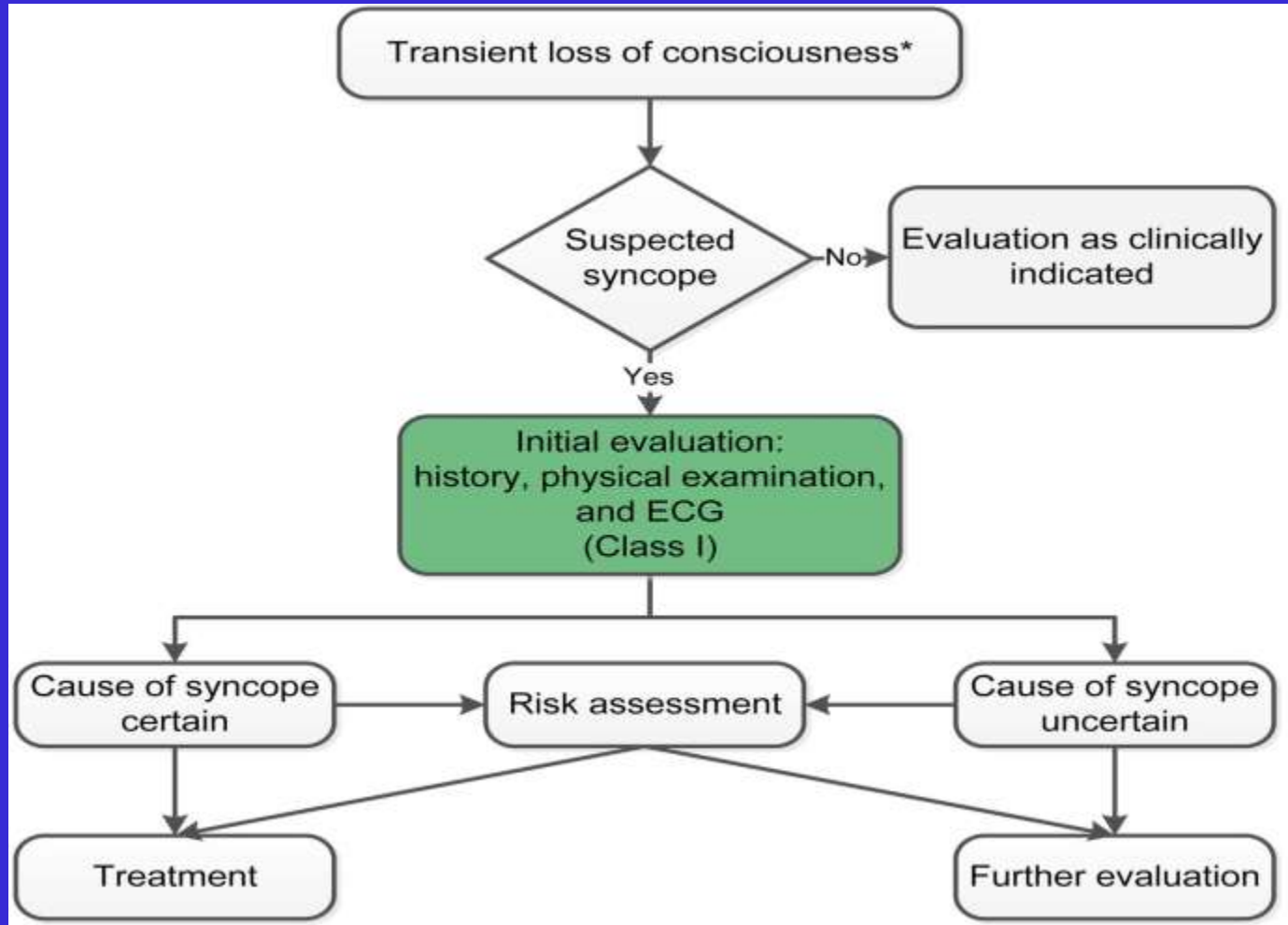
common medical problem
≈ 3% of ER visits
≈ 1-6 % of hospital admissions

- Major morbidity reported in 6%
(e g: fractures, motor vehicle accidents)
- Minor injury in 29%
(e g: lacerations, bruises)

TYPES OF SYNCOPES

- ORTHOSTATIC HYPOTENSION.
- CARDIAC SYNCOPES.
- NON CARDIAC SYNCOPES.
- REFLEX SYNCOPES.
- POSTURAL ORTHOSTATIC TACHYCARDIA SYNDROME.
- PSYCHOGENIC PSEUDOSYNCOPE

APPROACH TO PATIENT



CARDIAC SYNCOPES.

- ⦿ OLDER AGE >65YRS.
- ⦿ MALE PATIENTS.
- ⦿ PRESENCE OF IHD,SHD,LOWEF.
- ⦿ PREVIOUS ARRHYTHMIAS.
- ⦿ SYNCOPES DURING EXERTION.
- ⦿ PRESENCE OF CHD.
- ⦿ ABNORMAL CARDIAC EXAMINATION.

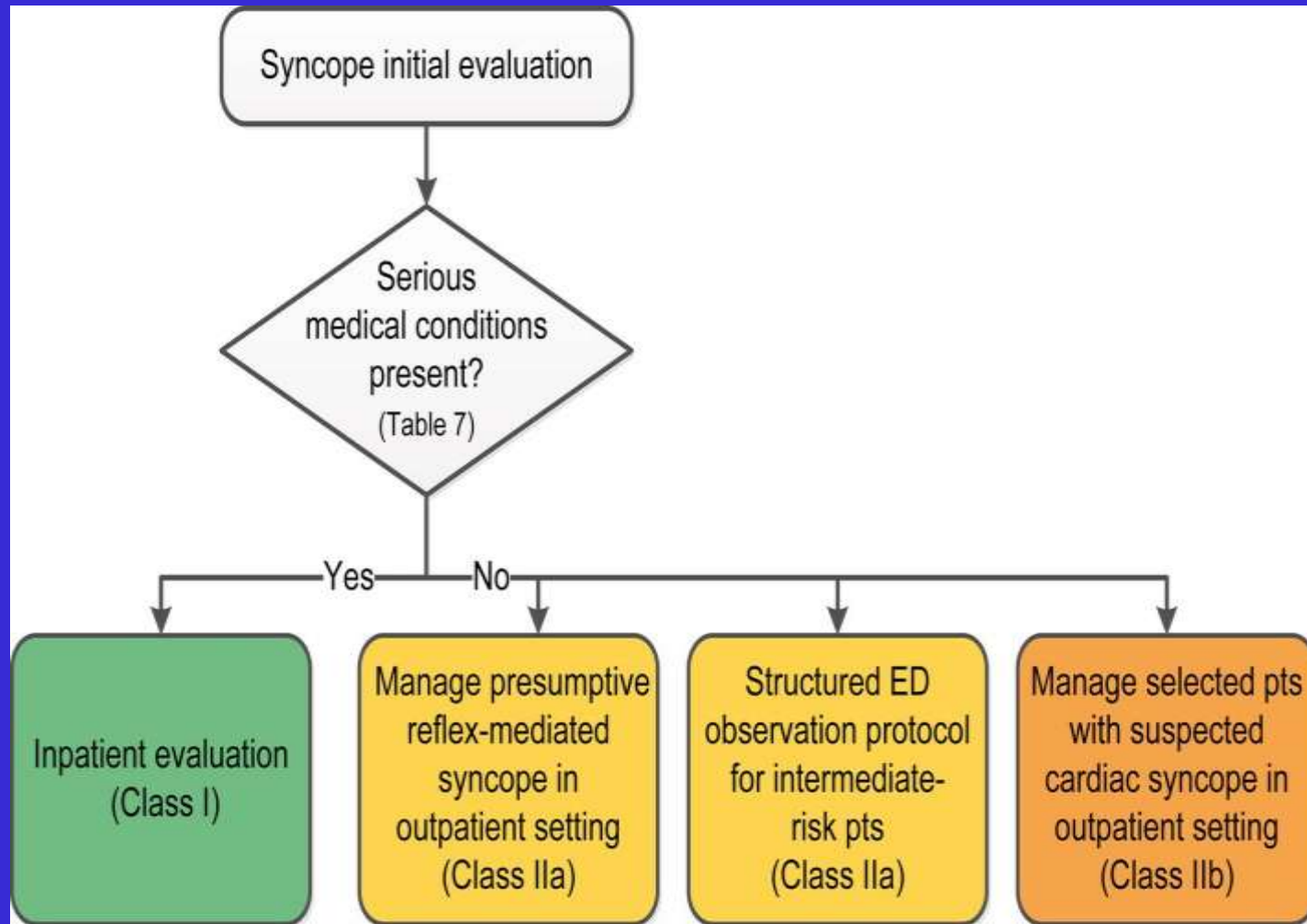
NON CARDIAC- SYNCOPE

- ① YOUNGER AGE.
- ① PRESENCE OF PRODROME LIKE NAUSEA,VOMITING.
- ① PRESENCE OF SPECIFIC TRIGGERS LIKE PAIN,DEHYDRATION.
- ① SITUTIONAL TRIGGERS LIKE COUGH, MICTURITION.
- ① POSITIONAL CHANGES FROM SUPINE TO STANDING .

RISK FACTORS FOR SYNCOPE

- ⦿ MALE.
- ⦿ AGE.
- ⦿ HEART FAILURE.
- ⦿ STRUCTURAL HEART DISEASES.
- ⦿ ARRHYTHMIAS.
- ⦿ DIABETES.
- ⦿ FAMILY HISTORY OF SCD.
- ⦿ CANCER.
- ⦿ CKD.

INITIAL EVALUATION OF SYNCOPES



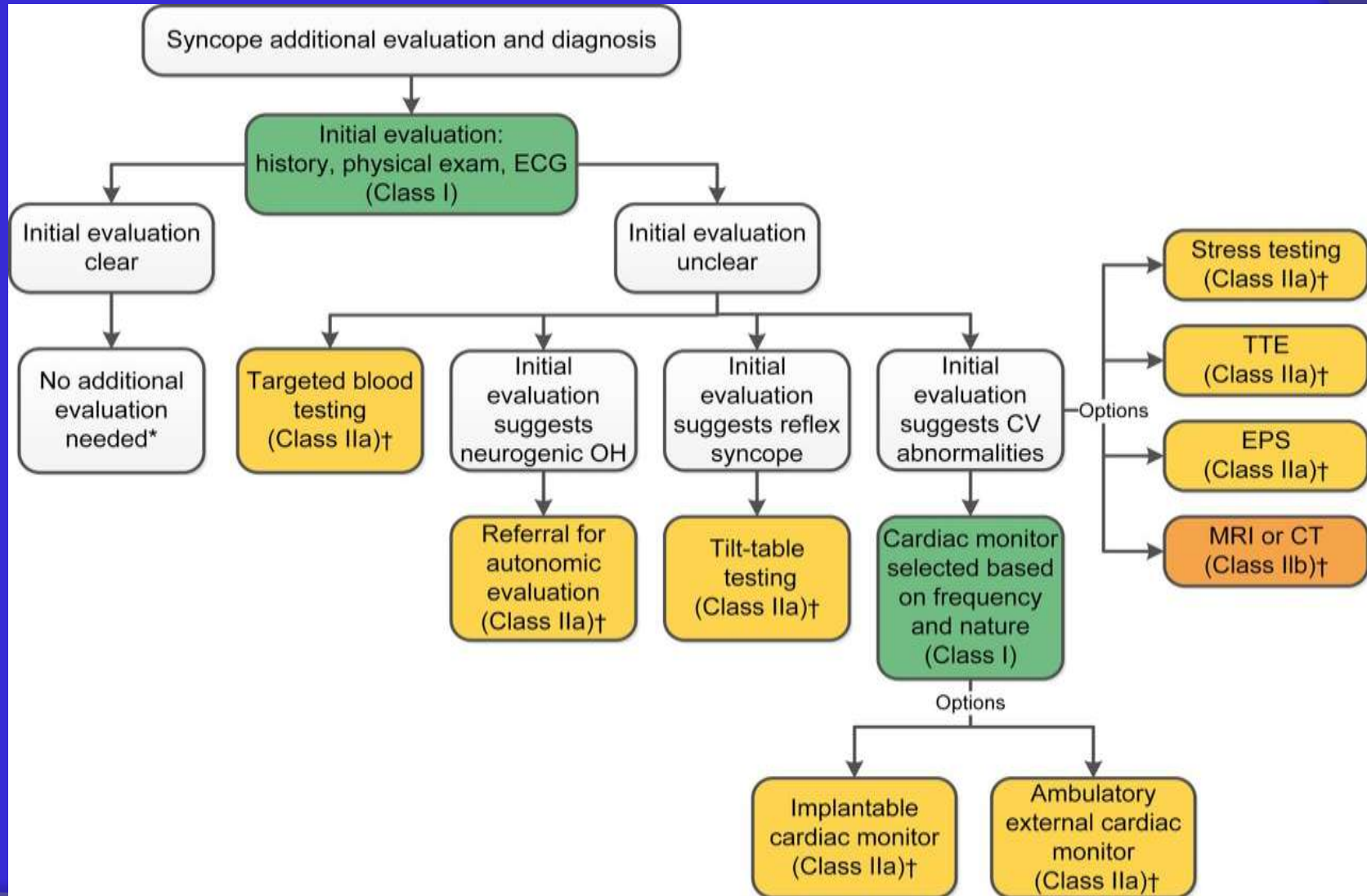
SERIOUS CARDIAC CONDITIONS

- ⦿ SYMPTOMATIC VT .
- ⦿ CARDIAC ISCHEMIA.
- ⦿ SEVERE AORTIC STENOSIS.
- ⦿ CARDIAC TAMPONADE.
- ⦿ HCM.
- ⦿ AORTIC DISSECTION.
- ⦿ ACUTE HF.
- ⦿ SEVERE PROSTHETIC VALVE DYSFUNCTION.

SERIOUS NON CARDIAC CONDITIONS

- ① SEVERE ANAEMIA.
- ① SEVERE GI BLEEDING.
- ① MAJOR TRAUMATIC INJURY.
- ① PERSISTENT VITAL SIGN
ABNORMALITIES.

EVALUATION AND DIAGNOSIS



CARDIAC MONITORING

- ① HOLTER MONITOR.
- ① TRANSTELEPHONIC MONITOR
- ① EXTERNAL LOOP RECORDER.
- ① PATCH RECORDER.
- ① MOBILE CARDIAC OUTPATIENT
TELEMETRY.
- ① IMPLANTABLE CARDIAC MONITOR.

EP STUDY

- ① INDUCIBLE VT .
- ① BRADYARRHYTHMIAS AND TACHYARRHYTHMIAS .
- ① SINUS NODE DYSFUNCTION.
- ① AV NODAL DISEASES .

TILT-TABLE TESTING

ORTHOSTATIC STRESS TEST .

TILT TABLE ANGLE IS 70 DEGREES
FOR 30 – 40 MINS.

RESPONSE CAN BE
CARDIOINHIBITORY, VASO
DEPRESSOR OR MIXED RESPONSE.

AUTONOMIC EVALUATION

- ⦿ NEUROGENIC ORTHOSTATIC HYPOTENSION.
- ⦿ NEURODEGENERATIVE DISEASES.
- ⦿ CENTRAL OR PERIPHERAL AUTONOMIC DEGENERATION.
- ⦿ CENTRAL LIKE PARKINSON DISEASE, MULTIPLE SYSTEM ATROPHY AND LEWY BODY DEMENTIA.
- ⦿ PERIPHERAL LIKE DIABETES, IMMUNE MEDIATED , INFLAMMATORY.

CARDIOVASCULAR CONDITIONS

- ARRHYTHMIC CONDITIONS
(CLASS-I RECOMMENDATIONS)

BRADYCARDIA – PACEMAKER

SVT – EPS +RFA

AF- MEDICINES/EPS .

VA- ICD.

STRUCTURAL HEART DISEASES

- ISCHEMIC OR NON ISCHEMIC
CARDIOMYOPATHY .

UNEXPLAINED SYNCOPES.

INDUCIBLE VA DURING EPS

CLASS I INDICATION – ICD .

VALVULAR HEART DISEASES

- AORTIC STENOSIS- UNABLE TO AUGMENT AND SUSTAIN CARDIAC OUTPUT .
- AVR SURGERY – CLASS I RECOMMENDATION.

HYPERTROPHIC CARDIOMYOPATHY

- HCM – DOCUMENTED VA.
ICD THERAPY – CLASS I INDICATION .

ARRHYTHMOGENIC RIGHT VENTRICULAR CARDIOMYOPATHY

- DOCUMENTED VA – ICD(CLASS-I)
- SUSPECTED VA – ICD(CLASS IIa)

CARDIAC SARCOIDOSIS

- ⦿ DOCUMENTED VA.
- ⦿ CONDUCTION ABNORMALITIES.
- ⦿ LOW EF .
- ⦿ EP STUDY.

BRUGADA SYNDROME

- ⦿ GENETIC DISEASE.
- ⦿ INCREASED RISK OF SCD.
- ⦿ ST ELEVATION IN V1 AND V2.
- ⦿ ICD IMPLANTATION-IIA,
- ⦿ INVASIVE EP STUDY-IIB.

SHORT QT SYNDROME

- ⦿ QTc interval <340msec.
- ⦿ GENETIC DISEASE.
- ⦿ RARE CONDITION.
- ⦿ ICD IMPLANTATION-IIA.

LONG QT SYNDROME

- ⦿ QTc > 500msec.
- ⦿ CARDIAC ARREST/SCD.
- ⦿ BETA BLOCKER THERAPY -I.
- ⦿ ICD IMPLANTATION-IIA.
- ⦿ LCSD-IIA.

CPVT

- ⦿ BIDIRECTIONAL/POLYMORPHIC VT .
- ⦿ GENE MUTATION RYANODINE RECEPTOR.
- ⦿ EXERCISE RESTRICTION –I,
- ⦿ BETA BLOCKERS –I,
- ⦿ FLECAINIDE –IIA,
- ⦿ ICD – IIA,

EARLY REPOLARISATION PATTERN

- J POINT ST ELEVATION IN LATERAL AND INFEROLATERAL LEADS.
- 15% VF,
- ICD – IIA,

VASOVAGAL SYNCOPE

- ⦿ BRADYCARDIA AND HYPOTENSION.
- ⦿ PATIENT EDUCATION – I,
- ⦿ PHYSICAL COUNTER PRESSURE MANEUVERS-IIA,
- ⦿ MIDODRINE-IIA,
- ⦿ STEROIDS-IIB,
- ⦿ SALT AND FLUID INTAKE –IIB,
- ⦿ PACEMAKER –IIB,

CAROTID SINUS SYNDROME

- ⦿ CAROTID SINUS MANIPULATION,
- ⦿ ASYSTOLE >3SECONDS,
- ⦿ >50MMHG DROP IN SYSTOLIC BP,
- ⦿ CARDIOINHIBITORY
VASODEPRESSOR RESPONSE.
- ⦿ PPM – IIA,

NEUROGENIC ORTHOSTATIC HYPOTENSION

- POOLING OF BLOOD VOLUME IN LEGS.
- ANS PROVIDES CHANGE IN VASCULAR TONE, HEART RATE AND CONTRACTILITY.
- CLASSIC OR DELAYED.
- WATER INGESTION-I,
- COMPRESSION GARMENTS-IIA,
- MIDODRINE,DROXIDOPA,STEROIDS IIA,

DRUGS AND DEHYDRATION

- ⦿ CESSATION OF MEDICINES.
- ⦿ ACUTE WATER INGESTION .
- ⦿ INCREASE SALT AND FLUID INTAKE.

ORTHOSTATIC INTOLERANCE

- FREQUENT , RECURRENT OR PERSISTENT SYMPTOMS THAT DEVELOP ON STANDING AND RELIEVED BY SITTING.
- SYMPTOMS INCLUDE PALPITATIONS,LIGHTHEADEDNESS, BLURRED VISION.

PSEUDOSYNCOPE

- ① LOC IN THE ABSENCE OF IMPAIRED CEREBRAL PERFUSION OR FUNCTION.
- ① PSYCHOGENIC,
- ① YOUNG FEMALES.
- ① COGNITIVE BEHAVIORAL THERAPY

UNCOMMON CONDITIONS ASSOCIATED WITH SYNCOPE

- ① CARDIAC TAMPONADE.
- ① CONSTRICTIVE PERICARDITIS.
- ① PULMONARY EMBOLISM.
- ① LV NONCOMPACTION.
- ① MYOCARDITIS.
- ① MYOTONIC DYSTROPHY.
- ① COARCTATION OF AORTA.
- ① ANOMALOUS CORONARY ARTERY.

PEDIATRIC SYNCOPE

- NEURALLY MEDIATED SYNCOPE ARE COMMON >75%.
- CARDIAC SYNCOPE DUE TO OBSTRUCTION TO BLOOD FLOW.
- VVS EVALUATION.
- NON INVASIVE DIAGNOSTIC TESTING .

GERIATRIC PATIENTS

- INCIDENCE IS HIGH.
- POLY DRUGS.

DRIVING AND SYNCOPE

- ① MEDICAL FITNESS.
- ① DRIVING LAWS.
- ① RESTRICTIONS.

ATHLETES AND SYNCOPE

- ① DETAIL HISTORY .
- ① CARDIOVASCULAR ASSESEMENT .
- ① MONITORING .

IMPACT ON QUALITY OF LIFE

- ⦿ ANXIETY.
- ⦿ DEPRESSION.
- ⦿ DAILY LIVING .
- ⦿ DRIVING.
- ⦿ SCHOOL.
- ⦿ WORKING.

CONCLUSION

- ① TECHNOLOGY.
- ① EVIDENCE GAPS.
- ① FUTURE DIRECTIONS.
- ① RISK SCORES.
- ① CLINICAL OUTCOMES.
- ① STUDIES

THANK YOU