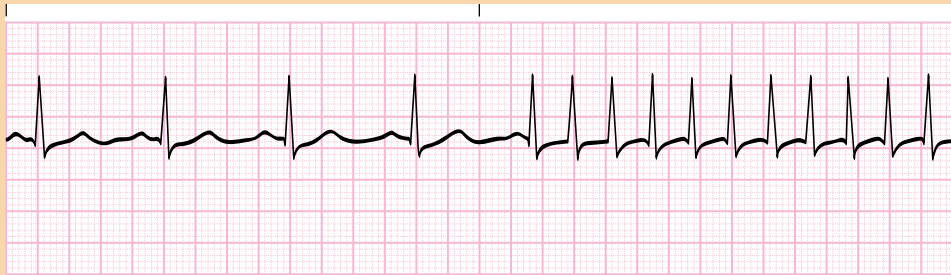
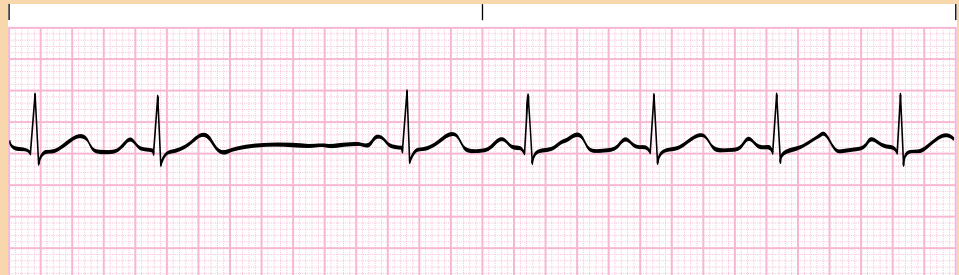




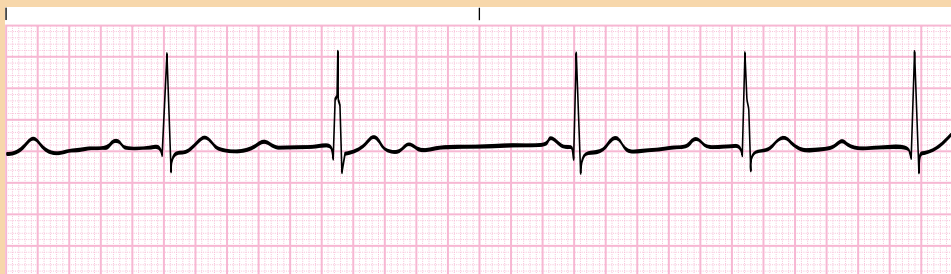
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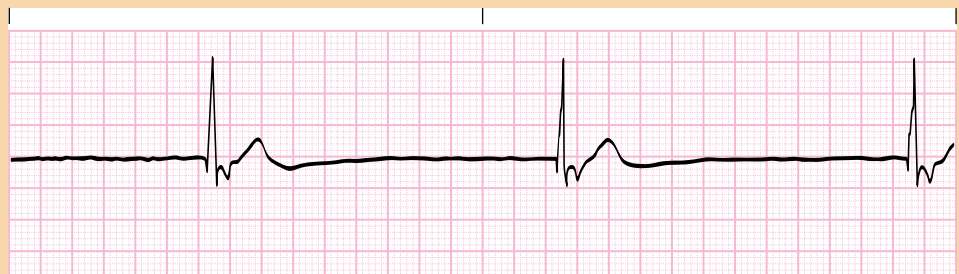
**The Monitor Shows:**



**The Monitor Shows:**



**The Monitor Shows:**





## Rhythm Identification

### Sinus Exit Block in a Sinus Rhythm

Pause equal to exactly two or more complete cardiac cycles of the underlying rhythm

Heart rate: 70 beats/min

## Rhythm Identification

### Paroxysmal Atrial Tachycardia (PAT) or Paroxysmal Supraventricular Tachycardia (PSVT)

Beginning of the PAT/PSVT **must** be seen;

Heart rate **must** be greater than 150 beats/min

Normal sinus → PAT/PSVT

Heart rate: 80 beats/min → heart rate: 220 beats/min



## Rhythm Identification

### Junctional Bradycardia

A junctional rhythm with a heart rate less than 40

Retrograde P waves

Heart rate: 30 beats/min

## Rhythm Identification

### Second-Degree Heart Block, Type I (Mobitz I, Wenckebach, Classic)

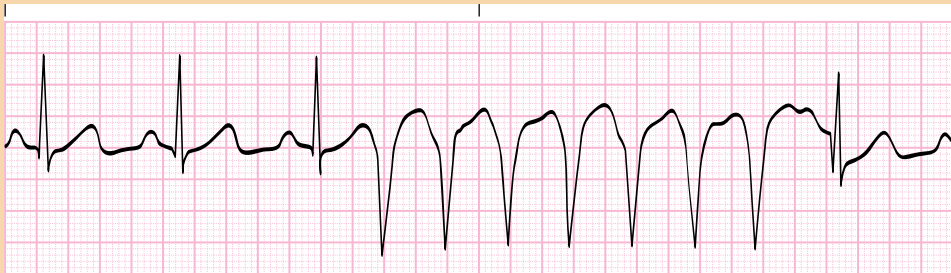
Progressively longer PR intervals, followed by a dropped QRS; pattern is then repeated

Ventricular rate: 50 beats/min

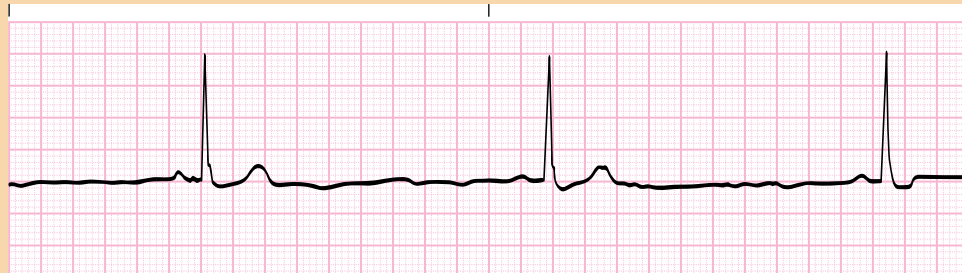
Atrial rate: 60 beats/min



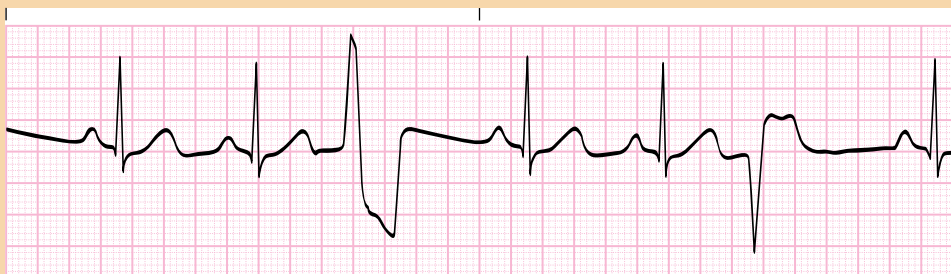
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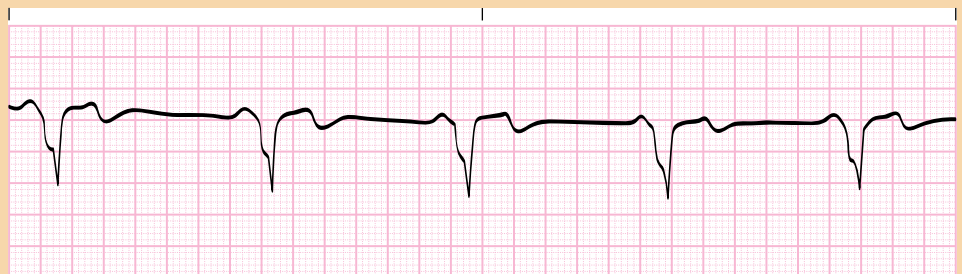
**The Monitor Shows:**



**The Monitor Shows:**



**The Monitor Shows:**







## Rhythm Identification

### Sinus Bradycardia

A sinus rhythm with a heart rate less than 60 beats/min

Heart rate: 30 beats/min

## Rhythm Identification

### Sinus Rhythm with a Run of Ventricular Tachycardia

Peaked P waves; R on T phenomenon;

more than three PVCs in a row;

duration less than 30 seconds

Overall heart rate: 110 beats/min (VT rate is approximately 150 beats/min)



## Rhythm Identification

### Sinus Bradycardia with WPW Syndrome

Shortened PRI; slurred QRS; diphasic T waves;

Delta wave present

Heart rate: 50 beats/min

## Rhythm Identification

### Sinus Rhythm with Multifocal PVCs

Complex occurs earlier than expected;

originates from below the bundle of His;

PVCs look different (QRS greater than 0.12 second)

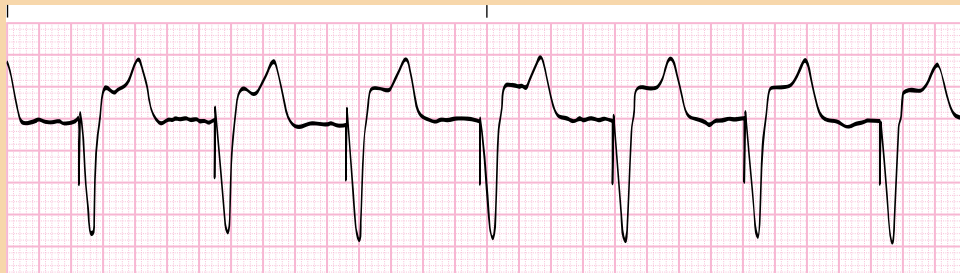
Heart rate: 70 beats/min (includes both PVCs)



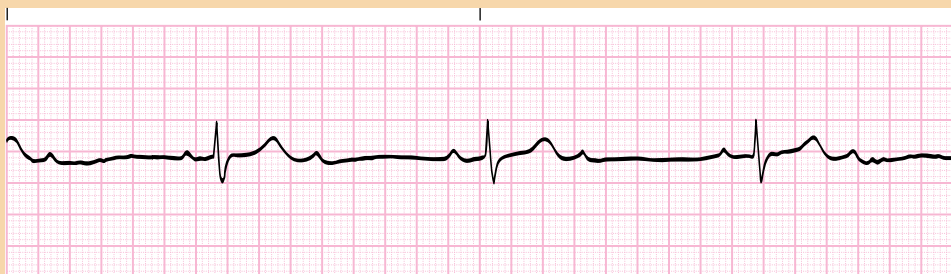
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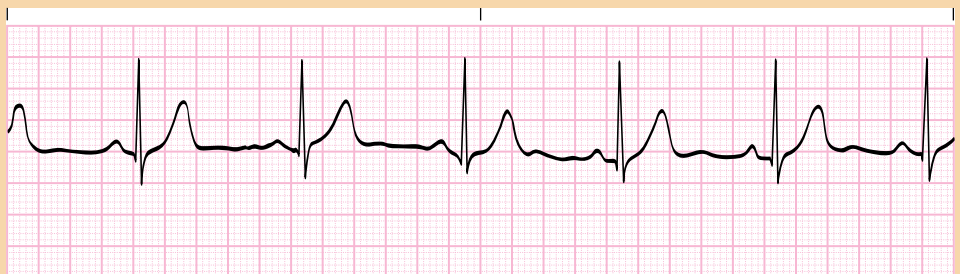
**The Monitor Shows:**



**The Monitor Shows:**



**The Monitor Shows:**





## Rhythm Identification

### Pacemaker Rhythm

100% paced;  
100% capture  
Heart rate: 70 per minute

## Rhythm Identification

### Asystole

No electrical activity seen;  
**must** be confirmed in two different Leads  
Ventricular rate: 0 beats/min  
Atrial rate: 0 beats/min



## Rhythm Identification

### Normal Sinus Rhythm

P, PRI, QRS, rate, rhythm are all within normal limits  
Heart rate: 60 beats/min

## Rhythm Identification

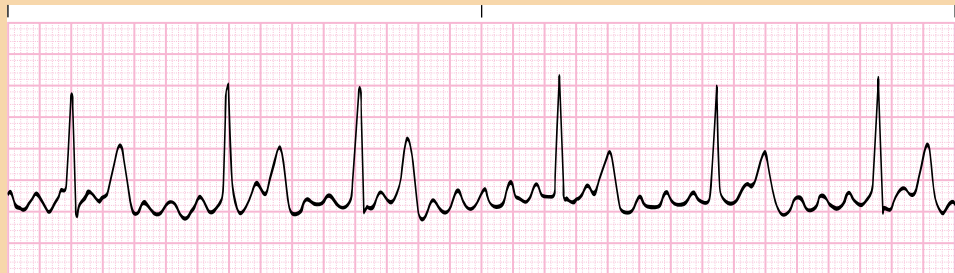
### Second-Degree Heart Block, Type II (Mobitz II)

Bradycardic rate;  
two P waves for each QRS, 2:1 block/ratio;  
PR intervals do not become progressively longer  
Ventricular rate: 30 beats/min  
Atrial rate: 70 beats/min

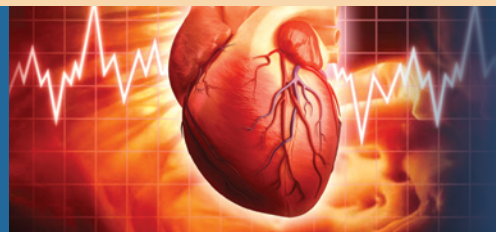
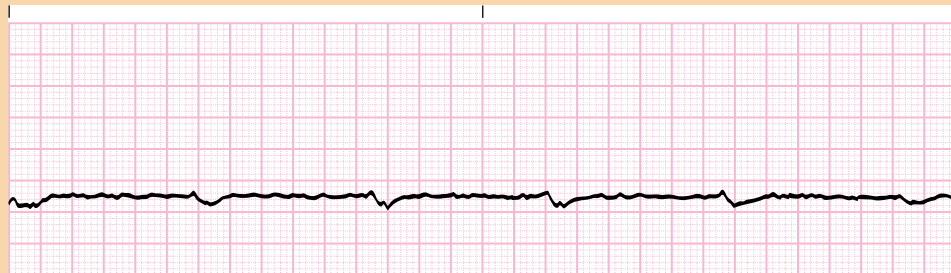




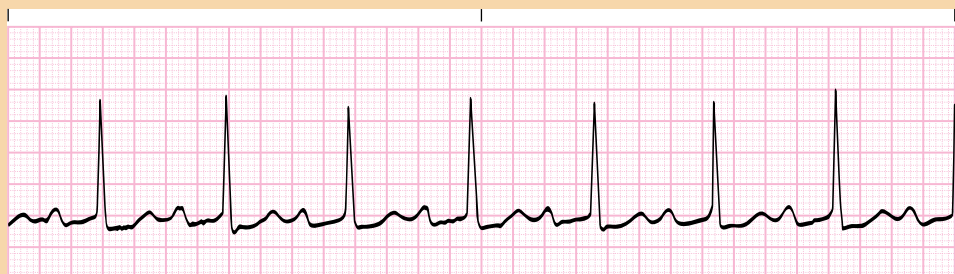
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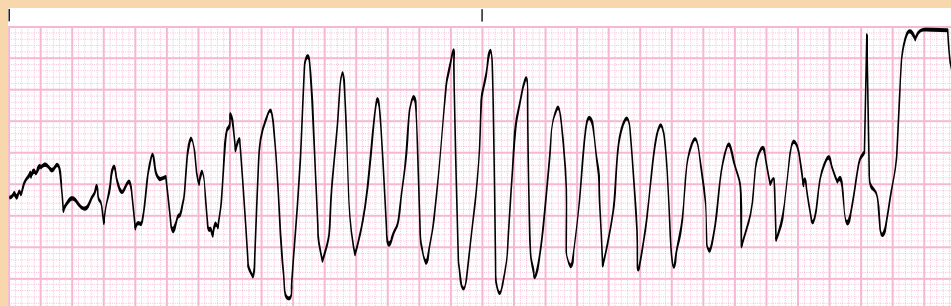
**The Monitor Shows:**



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## Rhythm Identification

### Ventricular Standstill

No QRS after P wave

Ventricular rate: 0 beats/min

Atrial rate: 60 beats/min

## Rhythm Identification

### Atrial Flutter with Variable Ventricular Response

Sawtooth F waves

Ventricular rate: 60 beats/min

Atrial rate: 250–350 beats/min



## Rhythm Identification

### Torsades de Pointes

QRS increases and decreases in amplitude;  
usually occurs in rhythms with prolonged QT intervals

Ventricular rate: 240–250 beats/min

Atrial rate: 0 beats/min

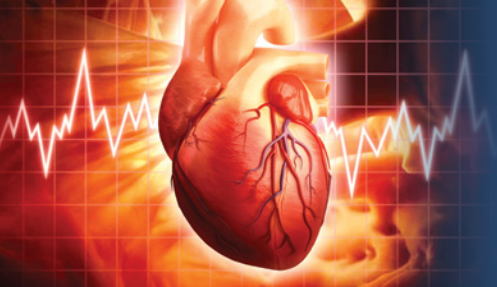
## Rhythm Identification

### Sinus Rhythm with a First-Degree Heart Block

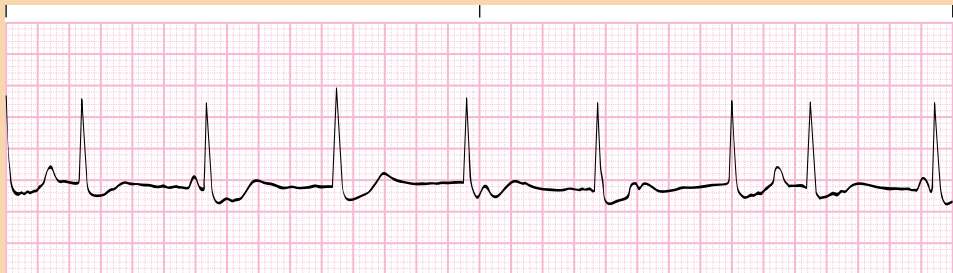
Prolonged PR interval (greater than 0.20 second); depressed  
ST segments

Heart rate: 70–80 beats/min

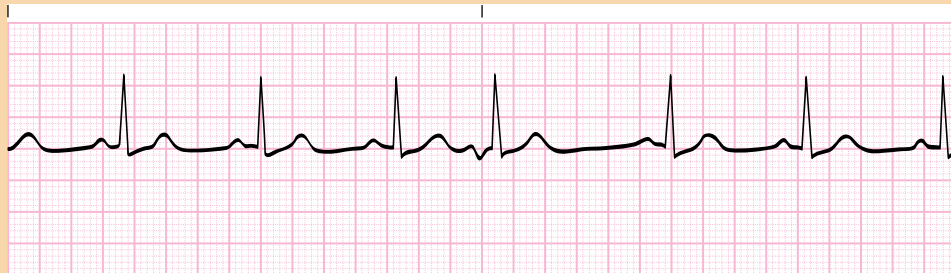




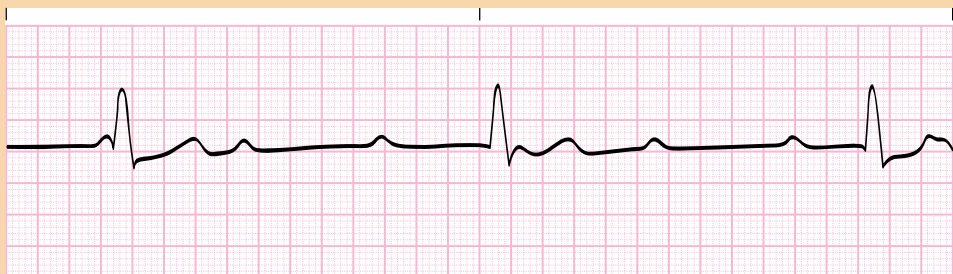
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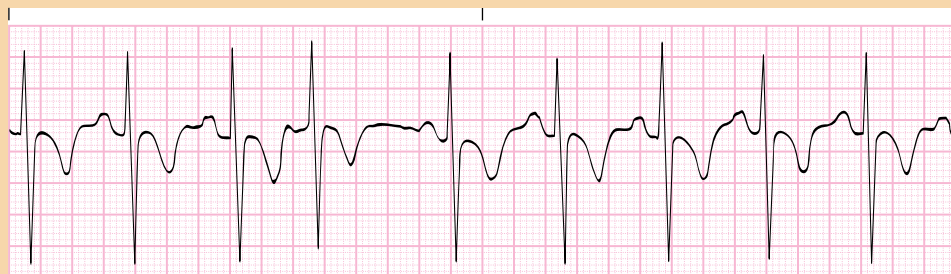
**The Monitor Shows:**



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## Rhythm Identification

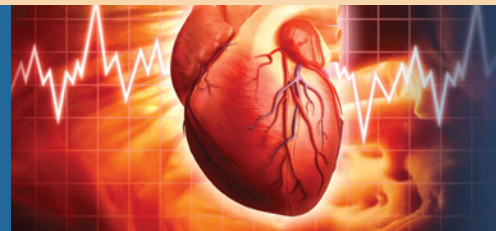
### Sinus Rhythm with a Premature Junctional Complex (PJC)

Occurs earlier than expected;  
originates from junction;  
inverted P wave;  
narrow QRS in premature complexes  
Heart rate: 70 beats/min (includes one PJC)

## Rhythm Identification

### Wandering Atrial Pacemaker

Complexes originate from at least three sites in SA node, atria, and/or AV junctional area; depressed ST segments  
Heart rate: 80–90 beats/min



## Rhythm Identification

### Sinus Rhythm with a Premature Atrial Complex (PAC)

Occurs earlier than expected;  
originates from atria; inverted T waves  
Heart rate: 90 beats/min (includes one PAC)

## Rhythm Identification

### Third-Degree Heart Block

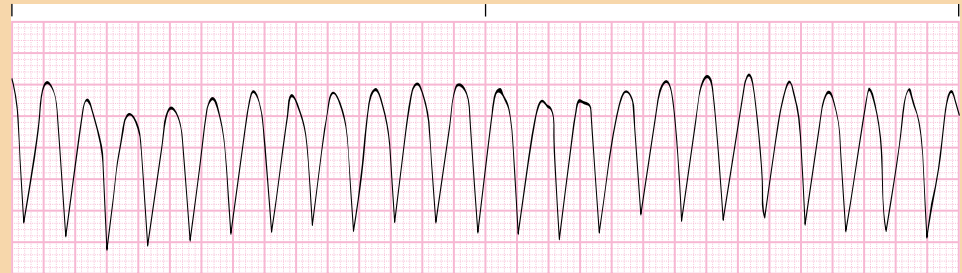
Atria and ventricles function independently;  
no relationship between P waves and QRS complexes;  
depressed ST segments;  
apparently irregular PR intervals (no true PR intervals exist)  
Ventricular rate: 30 beats/min  
Atrial rate: 70 beats/min



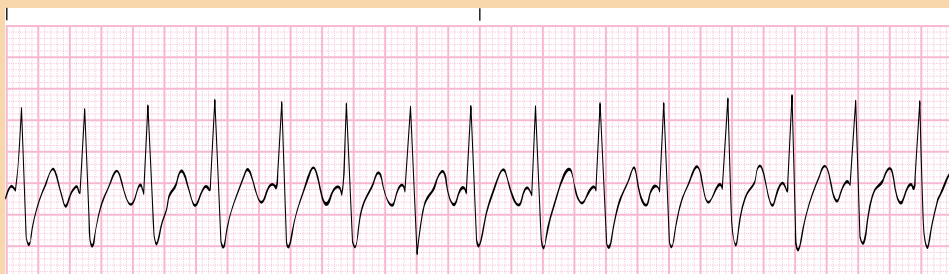
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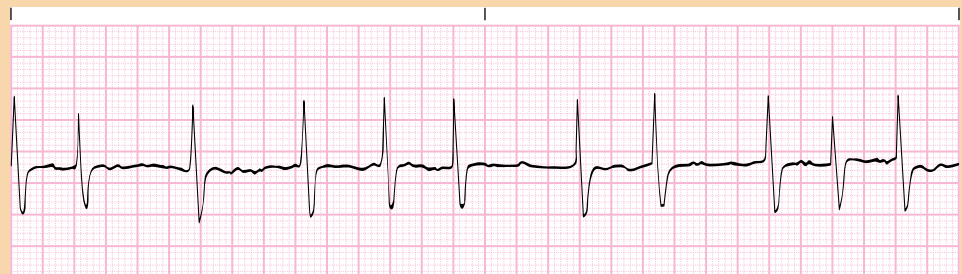
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## Rhythm Identification

### Ventricular Tachycardia

QRS greater than 0.12 second;  
no visible P waves  
Ventricular rate: 230–240 beats/min  
Atrial rate: 0 beats/min

## Rhythm Identification

### Sinus Rhythm with Possible Bundle Branch Block

Notched QRS (greater than 0.12 second)  
Heart rate: 80 beats/min



## Rhythm Identification

### Atrial Fibrillation with Rapid Ventricular Response

Irregular rhythm;  
no recognizable P wave  
Ventricular rate: 110 beats/min  
Atrial rate: 350–500 beats/min

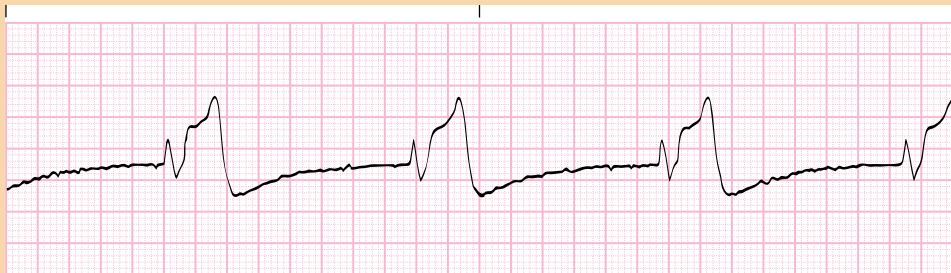
## Rhythm Identification

### Sinus Tachycardia

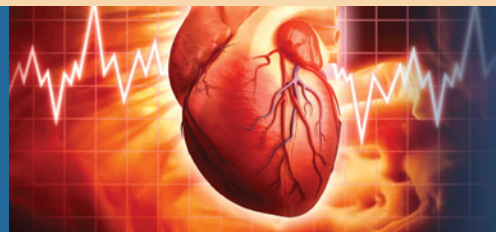
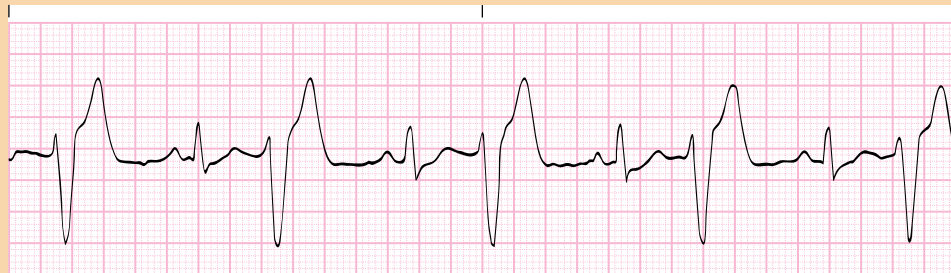
Sinus rhythm with heart rate between 101 and 150  
Heart rate: 150 beats/min



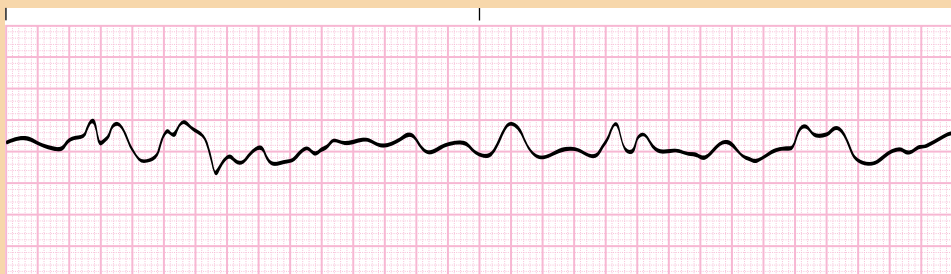
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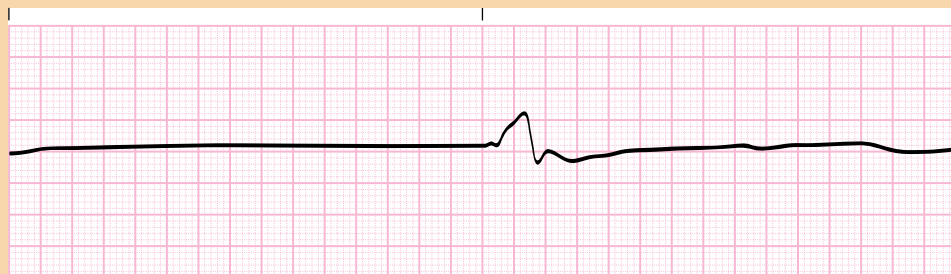
**The Monitor Shows:**



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**The Monitor Shows:**





## Rhythm Identification

### Sinus Rhythm with Unifocal PVCs in a Pattern of Bigeminy

PVC occurs earlier than expected;  
originates from below the bundle of His;  
PVCs look alike;  
every other complex is a PVC; depressed ST segments in underlying rhythm  
Heart rate: 90 beats/min (includes all PVCs)

## Rhythm Identification

### Idioventricular Rhythm

No P waves;  
QRS wide and bizarre, greater than 0.12 second;  
ventricular rate between 20 and 40 beats/min  
Ventricular rate: 40 beats/min  
Atrial rate: 0 beats/min



## Rhythm Identification

### Agonal Rhythm (Dying Heart)

No P waves;  
QRS wide and bizarre, greater than 0.12 second;  
heart rate less than 20 beats/min  
usually no pulse  
Ventricular rate: 10 beats/min  
Atrial rate: 0 beats/min

## Rhythm Identification

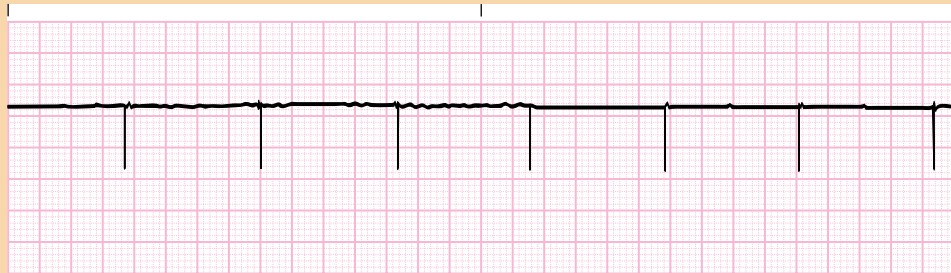
### Ventricular Fibrillation (Coarse)

No P waves;  
no QRS complexes  
Ventricular rate: 0 beats/min  
Atrial rate: 0 beats/min

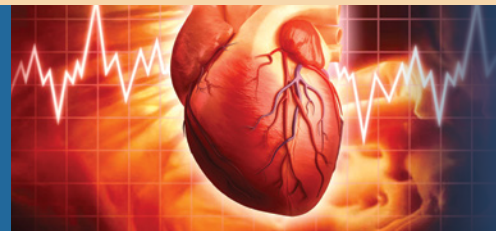




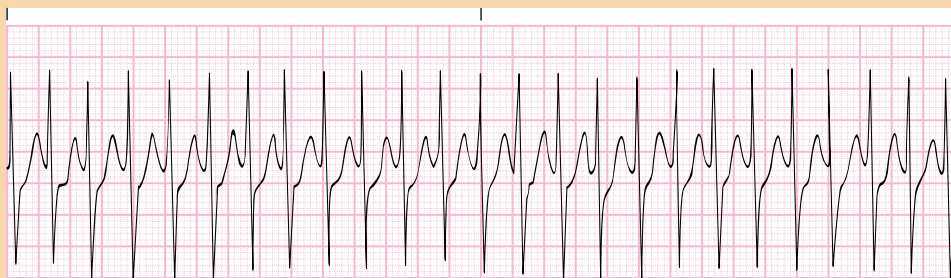
**The Monitor Shows:**



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**The Monitor Shows:**





## Rhythm Identification

### Accelerated Junctional Rhythm

Rate between 61 and 100 beats/min

hidden P waves

Heart rate: 70 beats/min

## Rhythm Identification

### Pacemaker Rhythm with Loss of Capture

100% paced;

0% capture;

no pulse;

no cardiac electrical activity

Pacer rate: 70 per minute

Heart rate: 0 per minute



## Rhythm Identification

### Supraventricular Tachycardia (SVT)

Beginning or end of dysrhythmia is not seen;

narrow QRS complexes; depressed ST segments;

rate greater than 150 beats/min

Heart rate: 250 beats/min