

# EKG-Seminar

## ANIFS 24.1.2020

Extrasystolen/Tachykardien

### Extrasystole:

- Vorzeitiger Einfall der QRS-Komplexes

### Ersatzsystole:

- Verzögerter Einfall des QRS-Komplexes

### SVES:

- vorangehende Vorhoferregung
- keine vollkompensatorische Pause
- blockiert, aberrant, normal geleitet

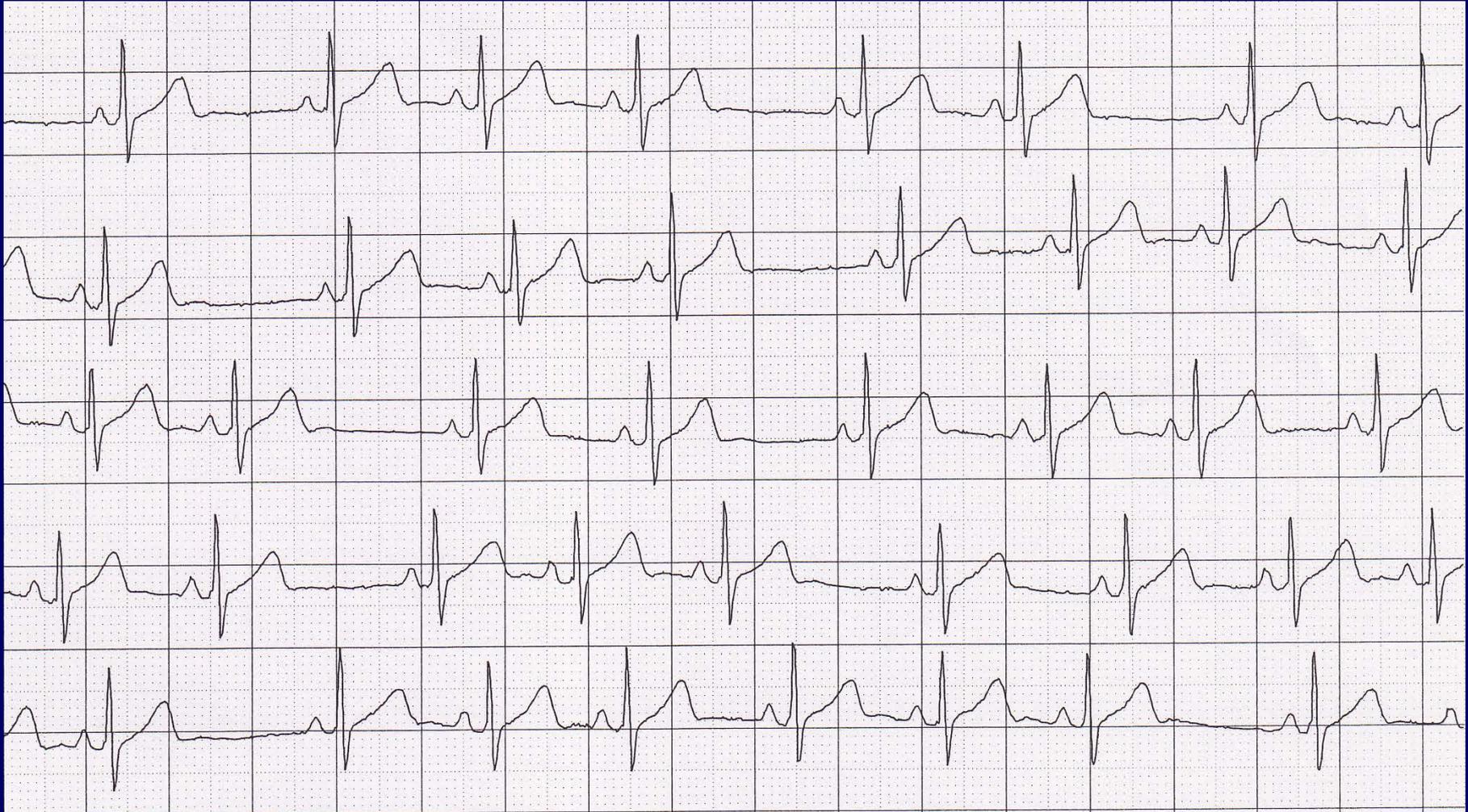
### VES:

- keine vorangehende Vorhoferregung
- vollkompensatorische Pause
- meist aberrant (Ausnahme: Hisbündel –ES)

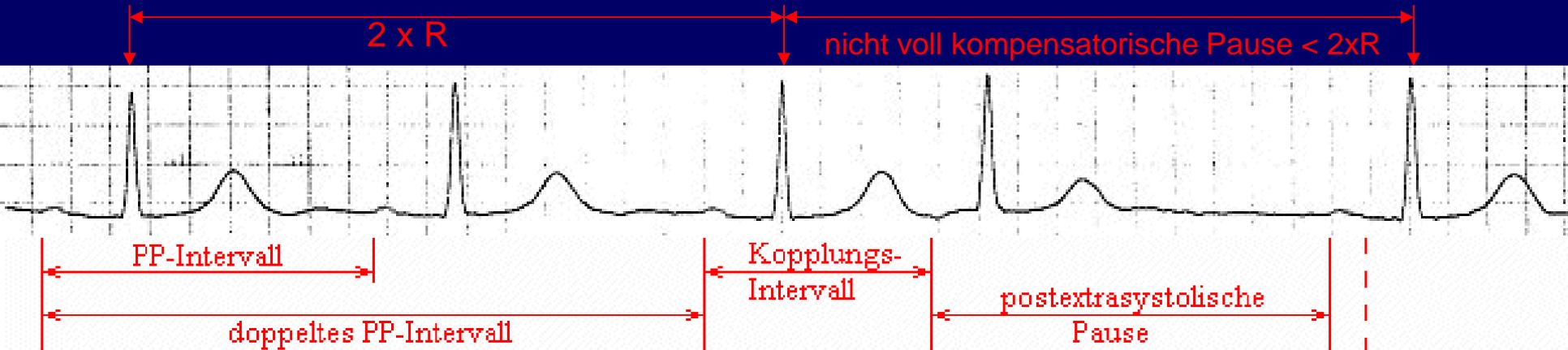
### Sinusarrhythmie (meist respiratorisch):

- normale P-Wellen und QRS-Kompl.,
- Frequenzzunahme bei Inspiration, Frequenzabnahme bei Expiration

# Sinusarrhythmie, respiratorisch bedingt

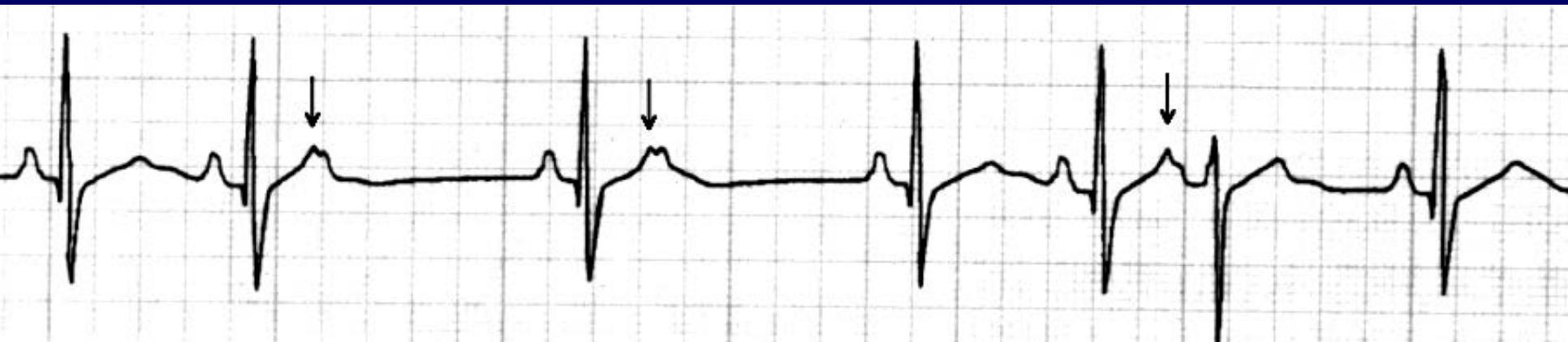


# SVES



blockierte SVES

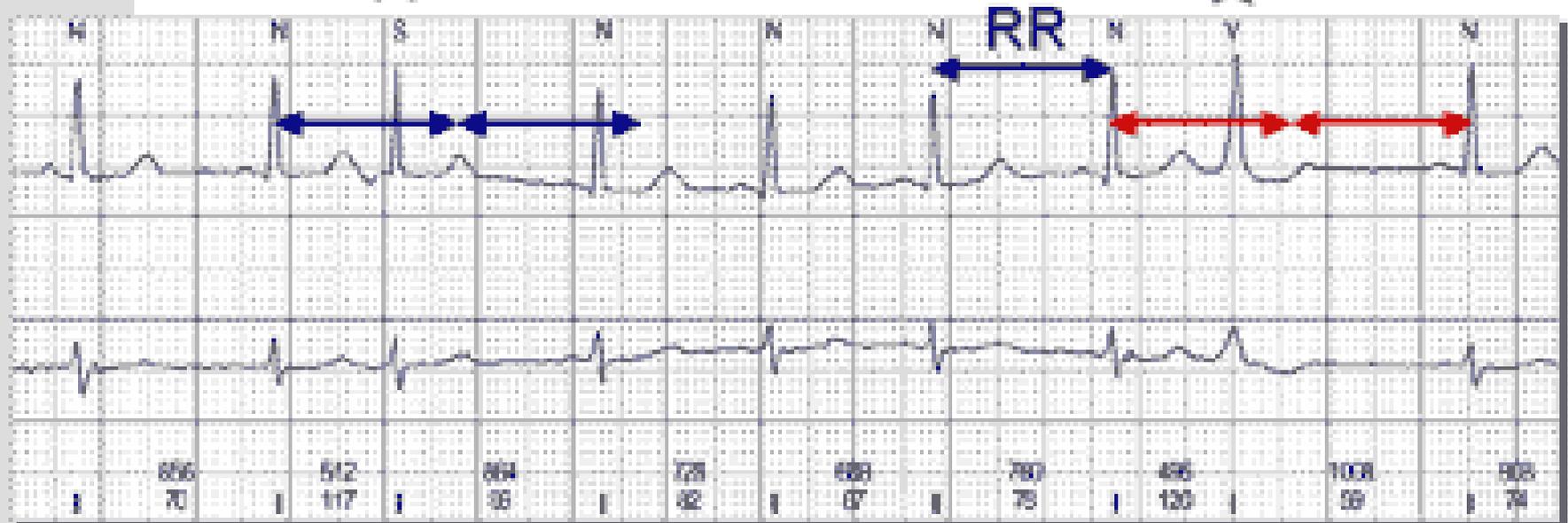
aberrant geleitete SVES



SVES



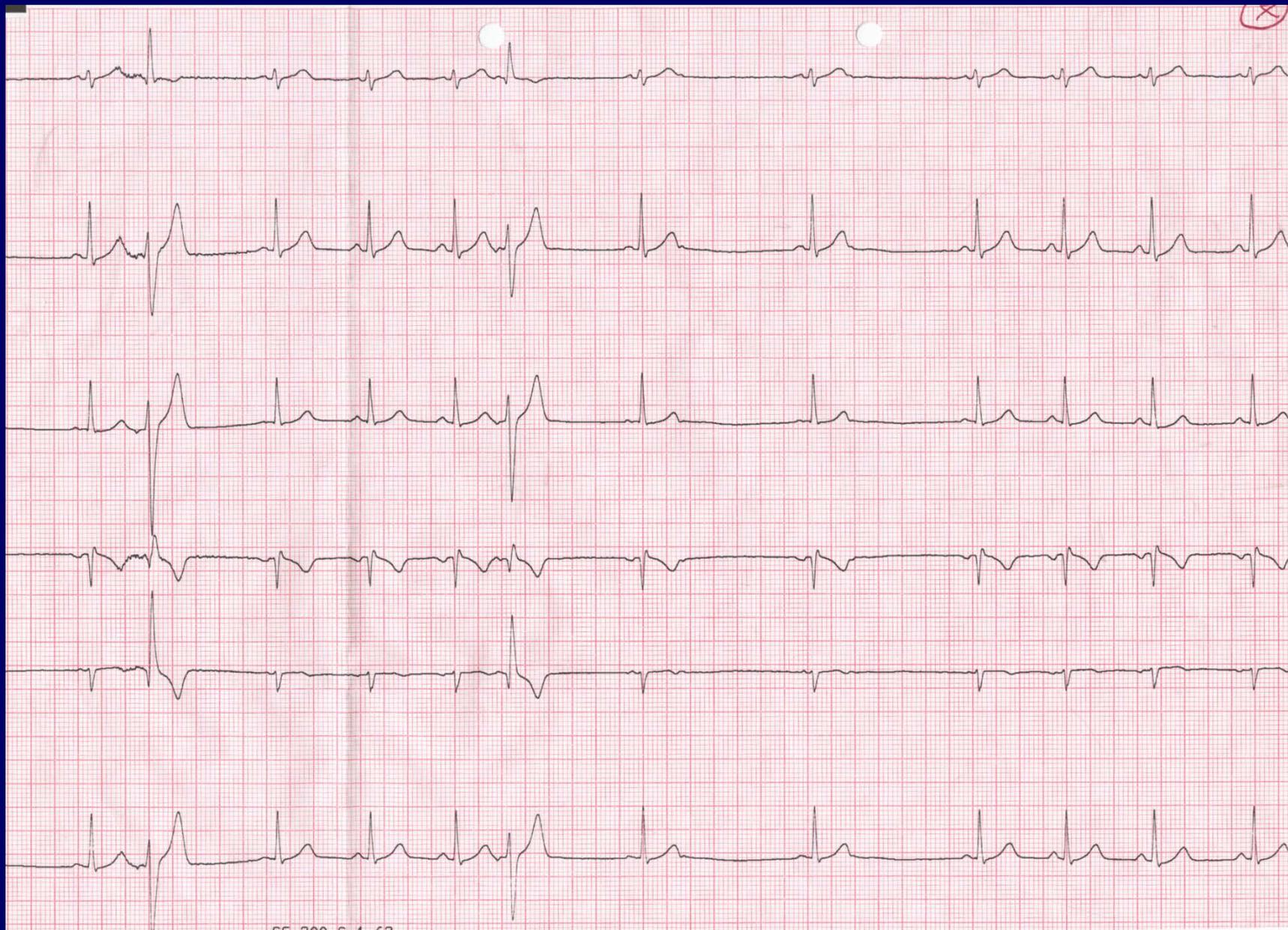
VES

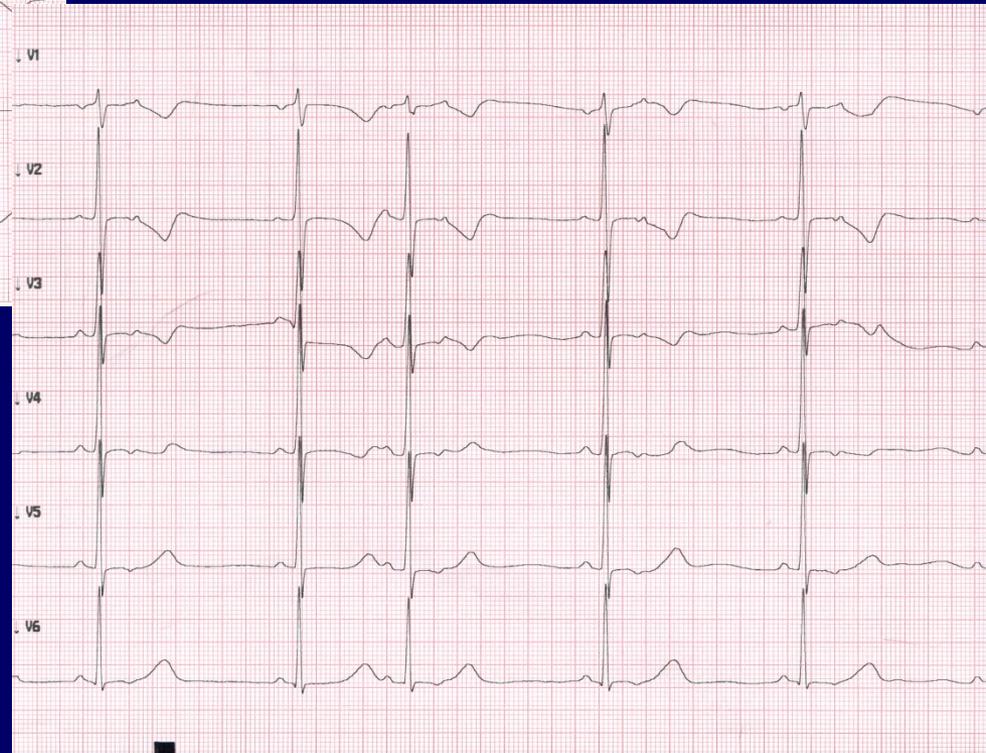
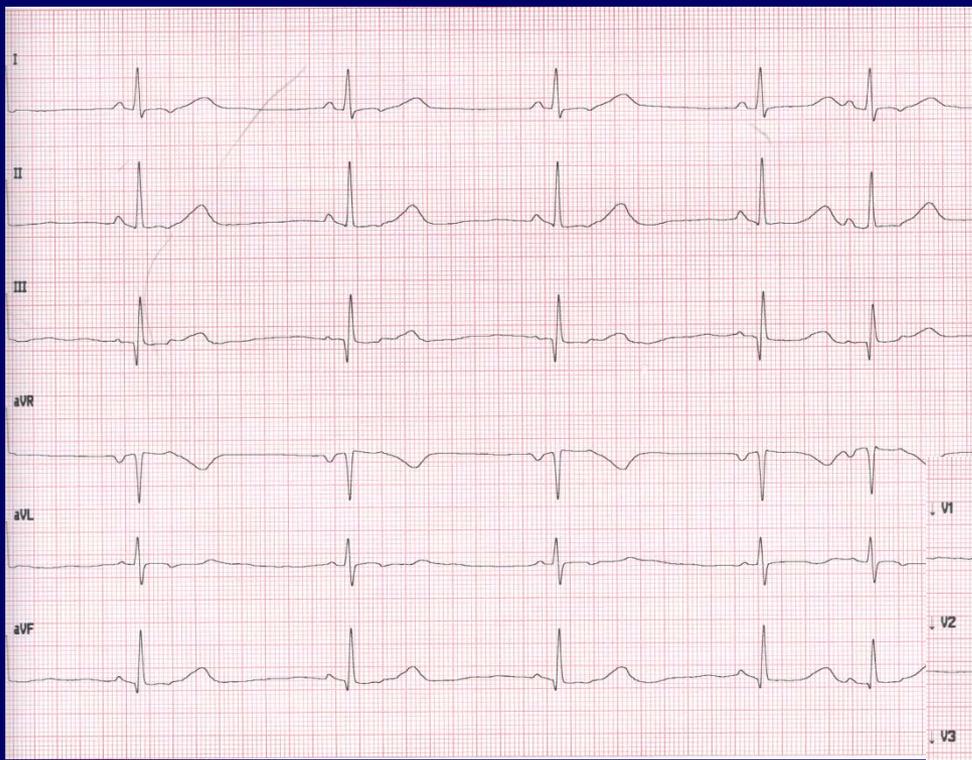


**Nicht-kompensatorische Pause**  
(Sinus-Sinus-Intervall < 2RR)

**Voll-kompensatorische Pause**  
(Sinus-Sinus-Intervall = 2RR)

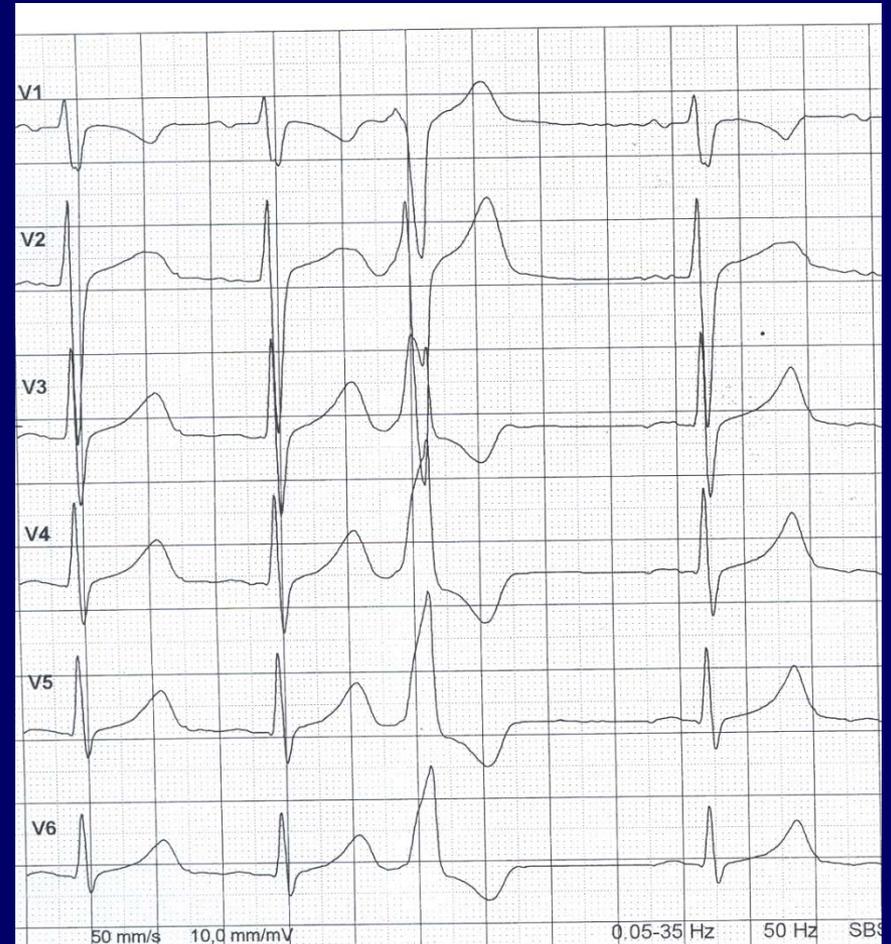
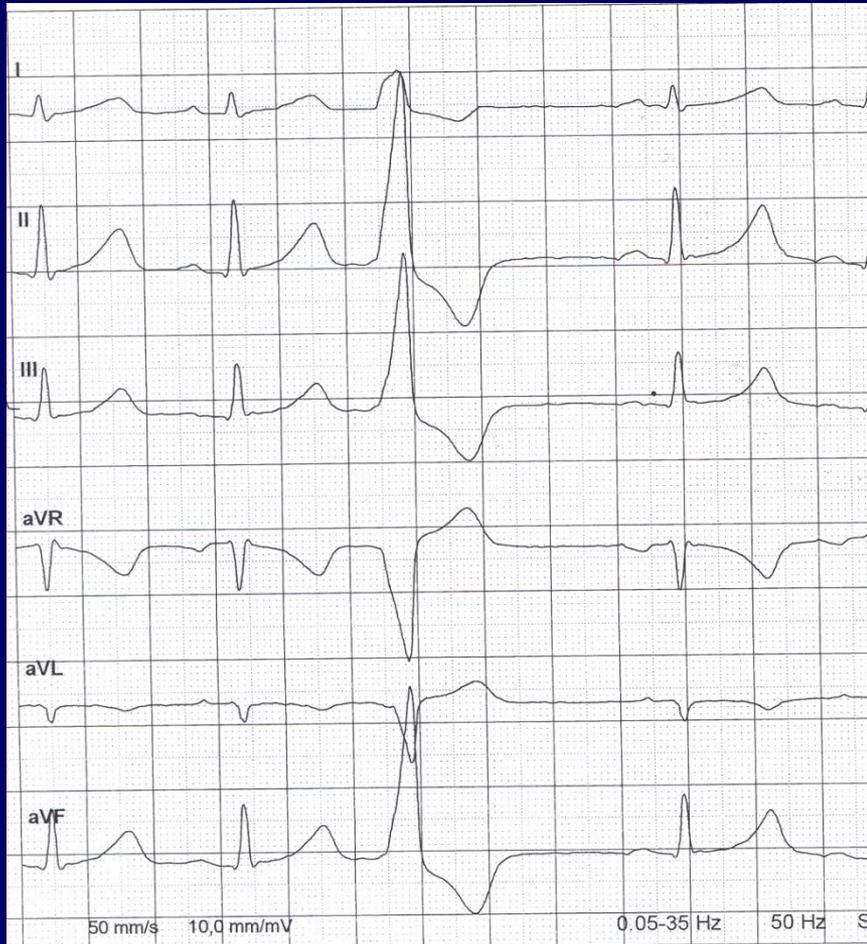
# SVES



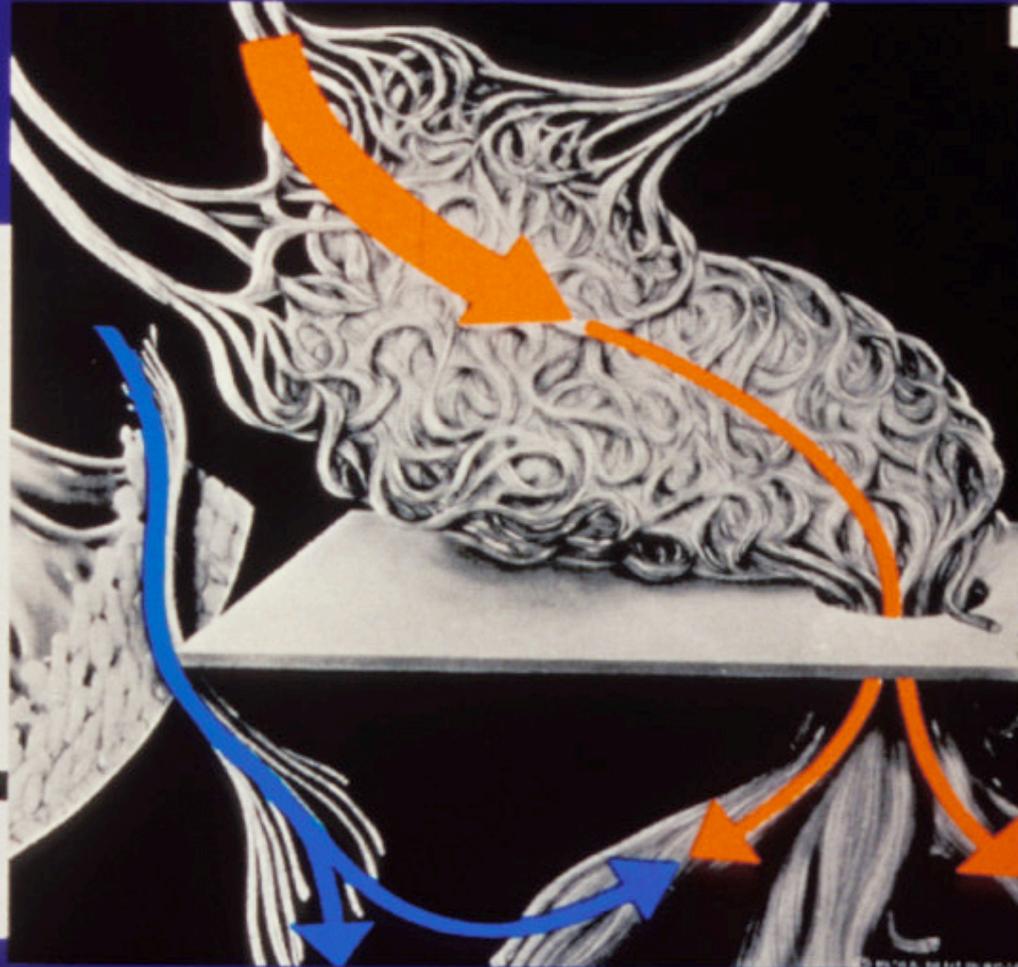
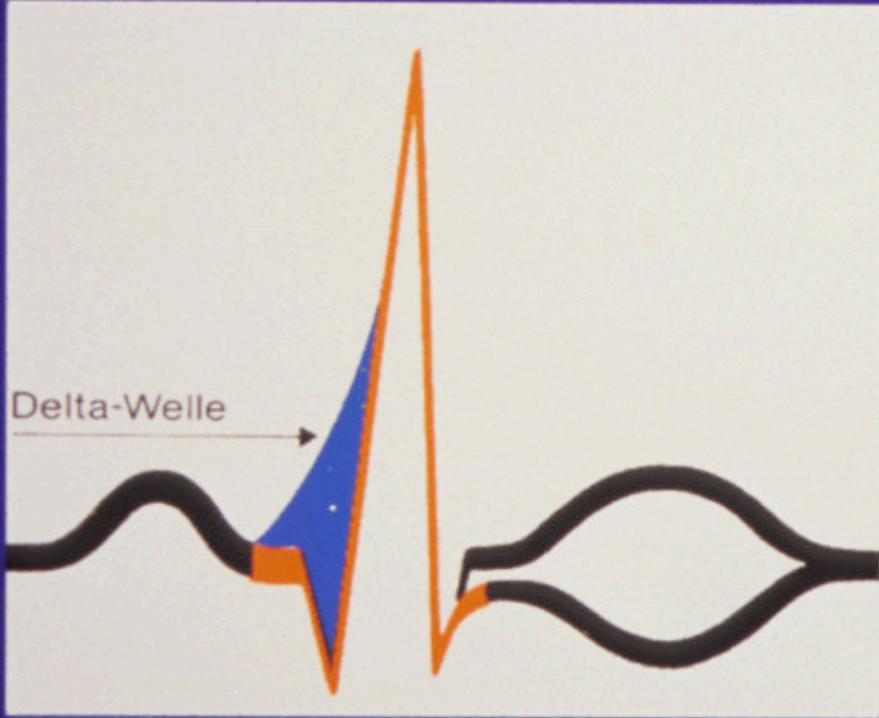


7 Wochen alter Sgl, HF ca. 70/min, blockierte SVES in Form eines Bigeminus, regulärer SR wäre 125/min (Propranolol und Digoxin)

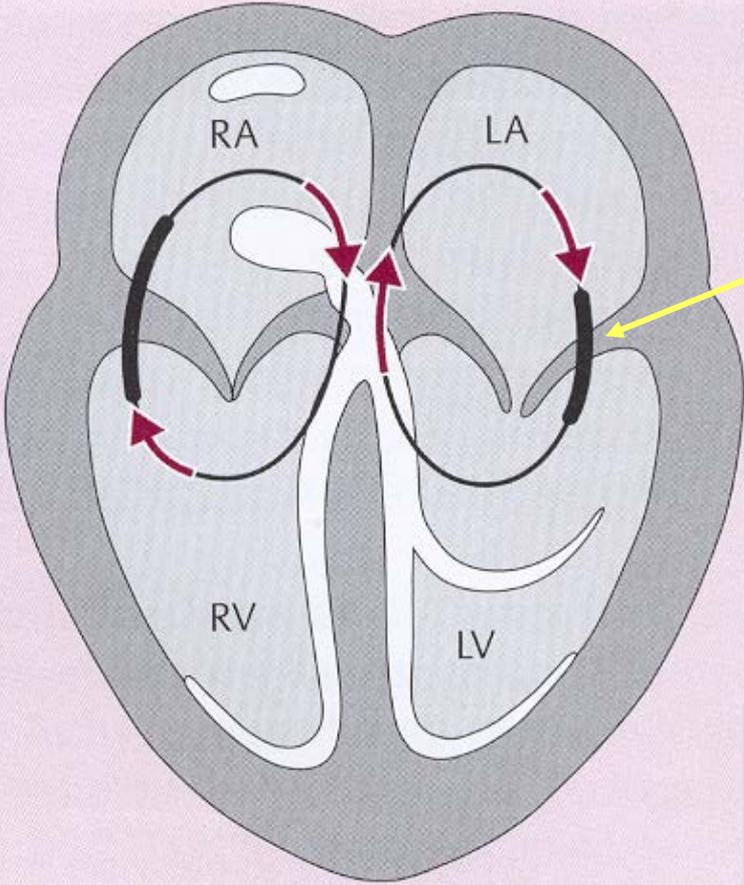
# VES, 9 Jahre



# Praexzitation

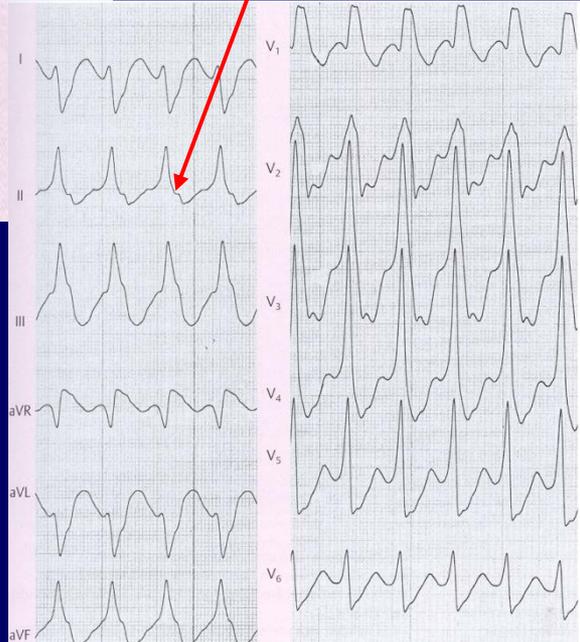
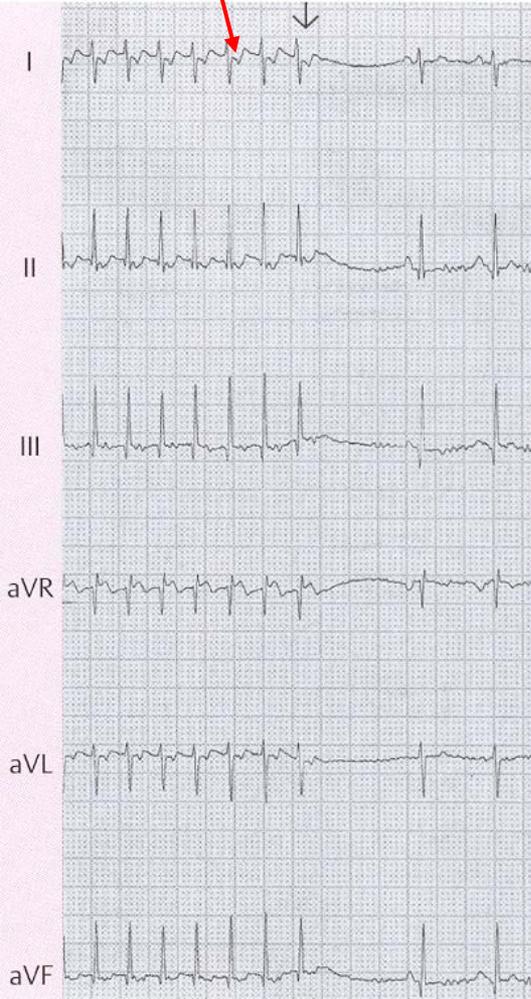


orthodrome SVT  
ca. 90%  
neg. p hinter QRS

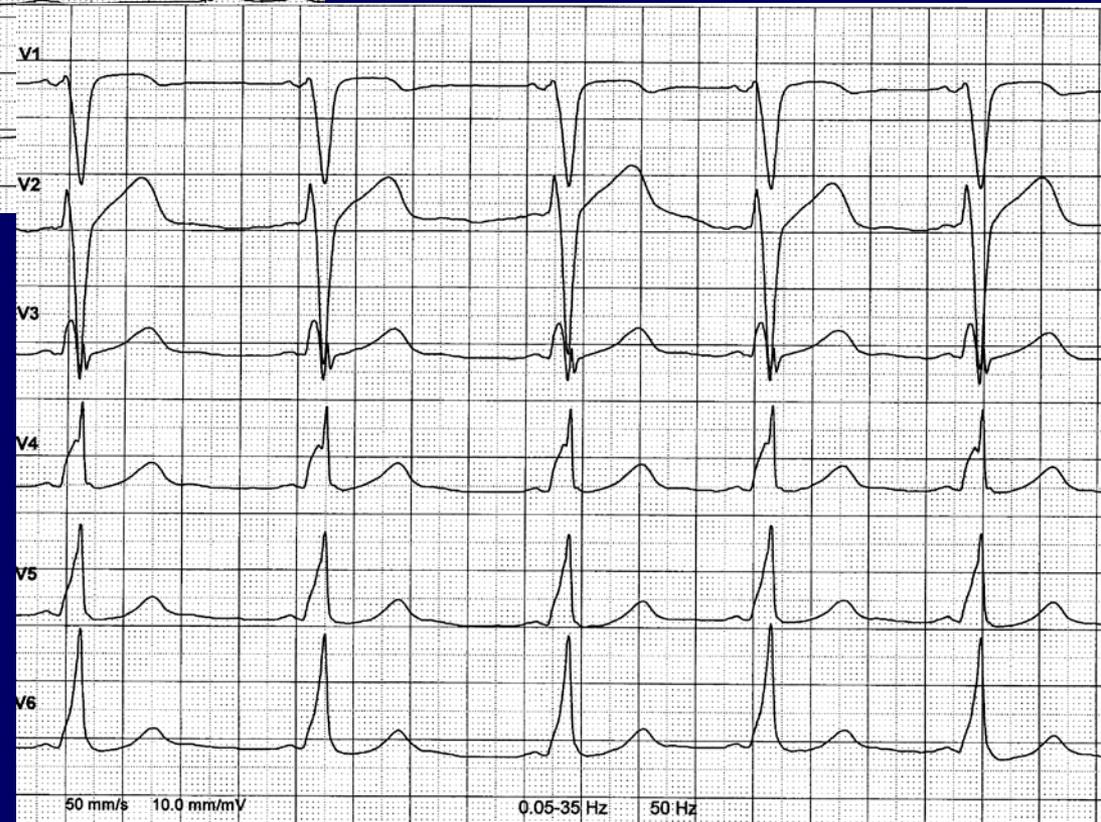
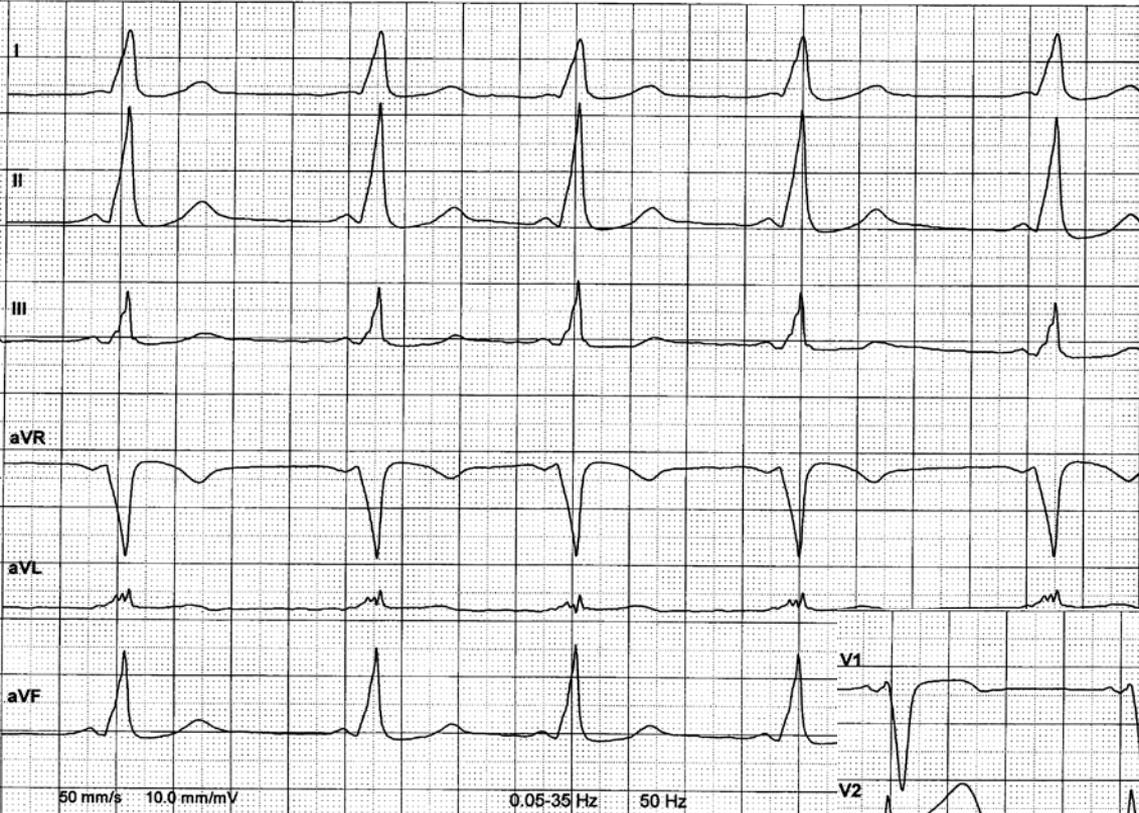


Kent-Bündel

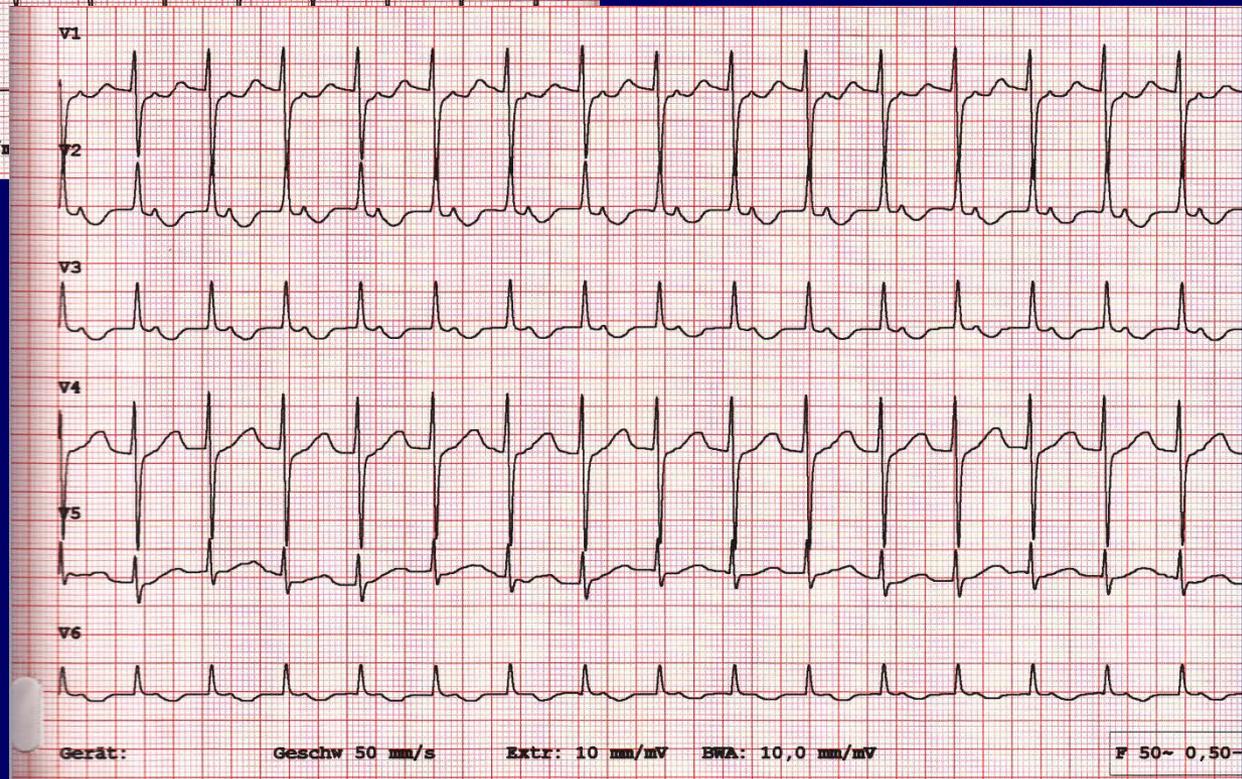
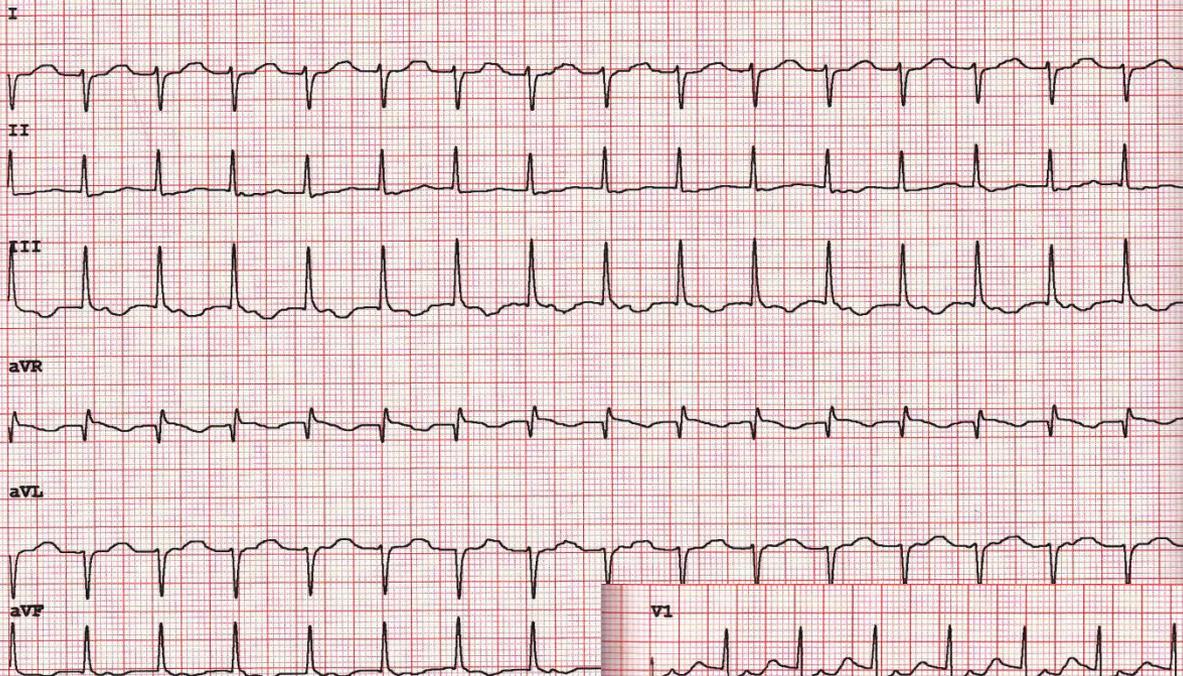
antidrome SVT  
ca. 10%  
neg. p hinter QRS



# WPW-Syndrom



12 jähriges Mädchen,  
klagt über gelegentliches  
Herzrasen



NG  
SVT, 233/min

P-Welle 60 ms nach Beginn des QRS-Kompl.

# Tachyarrhythmien: EKG-Veränderungen und notfallmäßige Behandlung

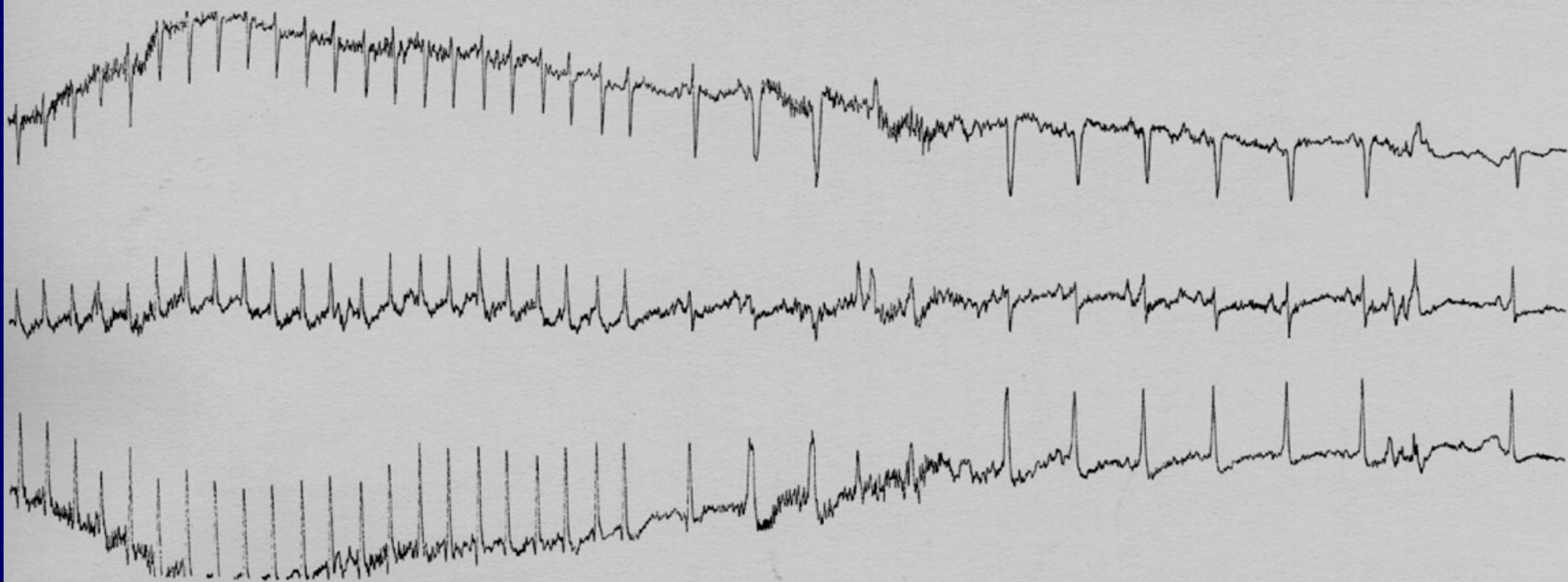
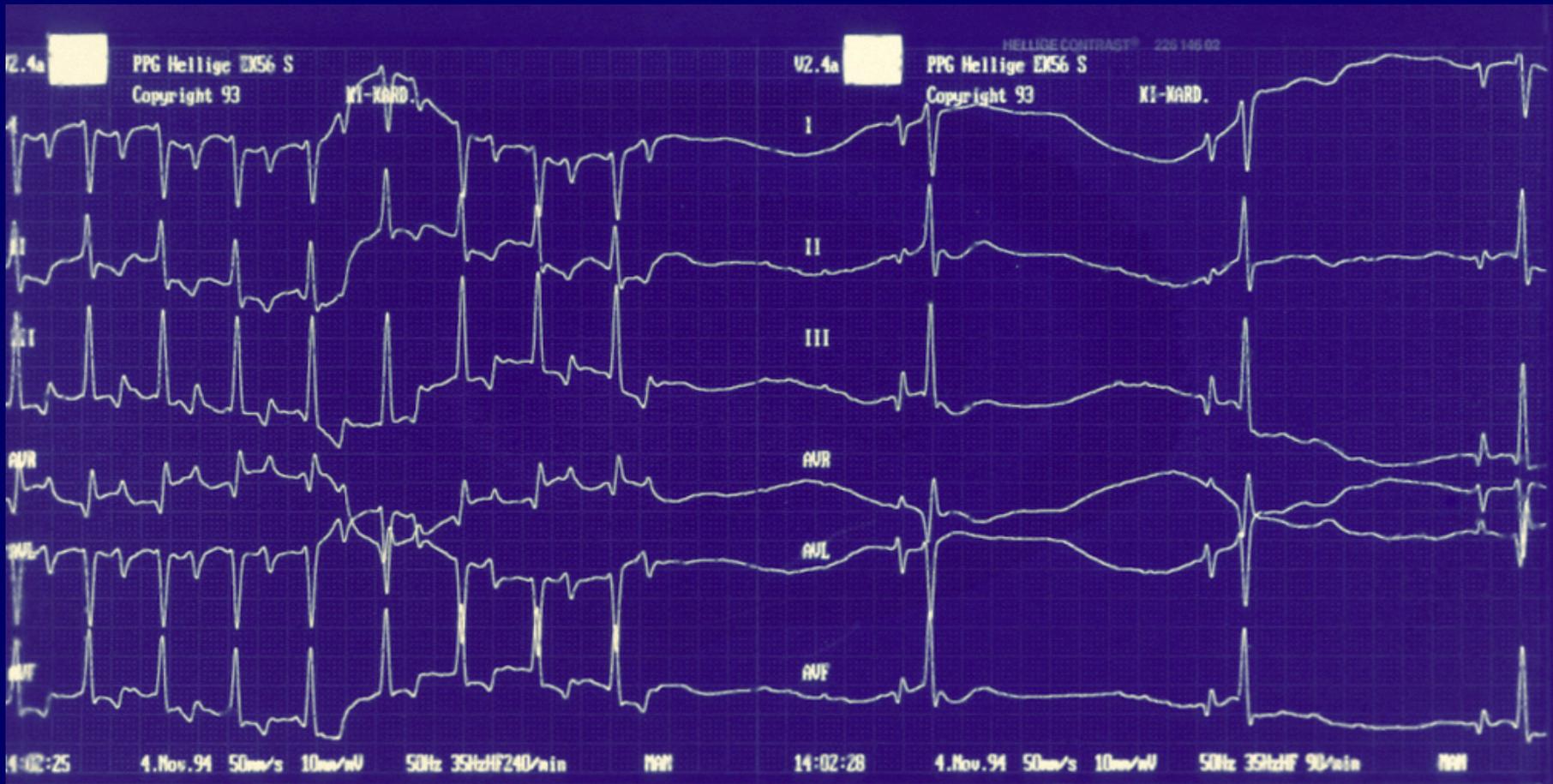


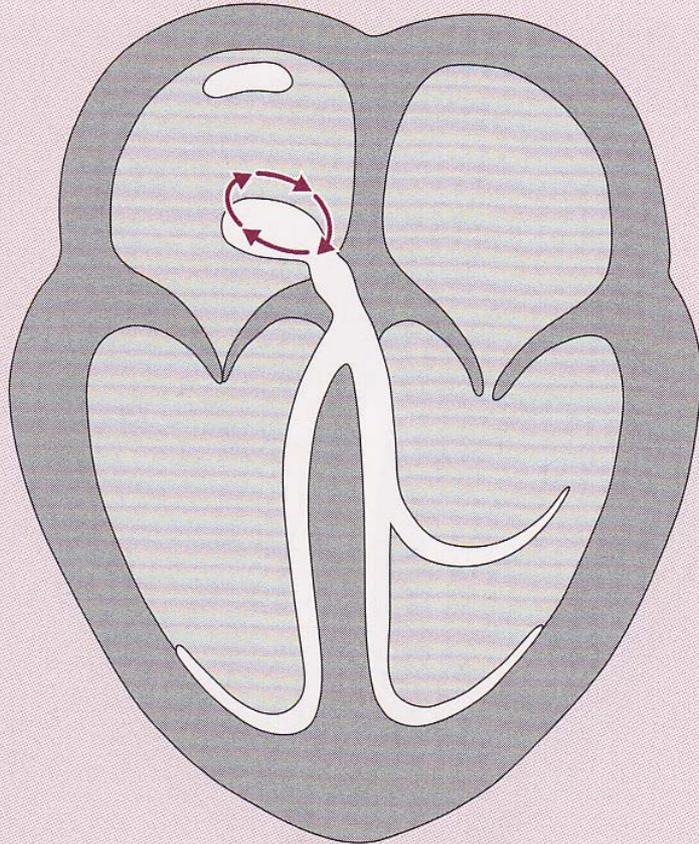
Fig. 5.1 A reciprocating tachycardia (rate 300 beats per minute) in a neonate is terminated by the increased vagal tone produced by facial immersion (diving reflex).

# Adenosin

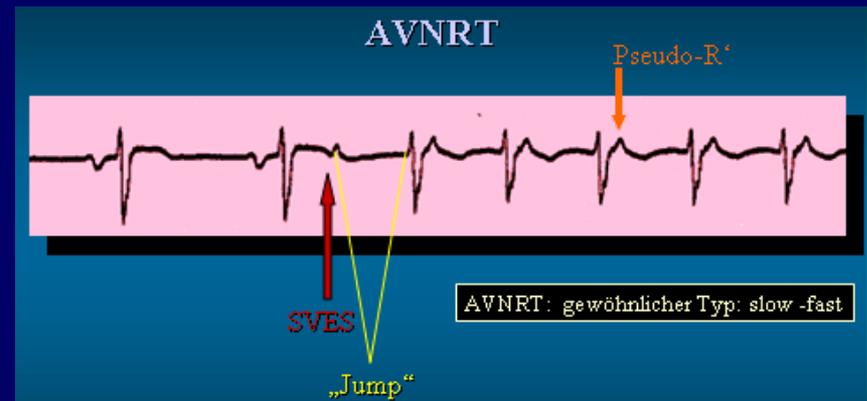


Transösophageales EKG

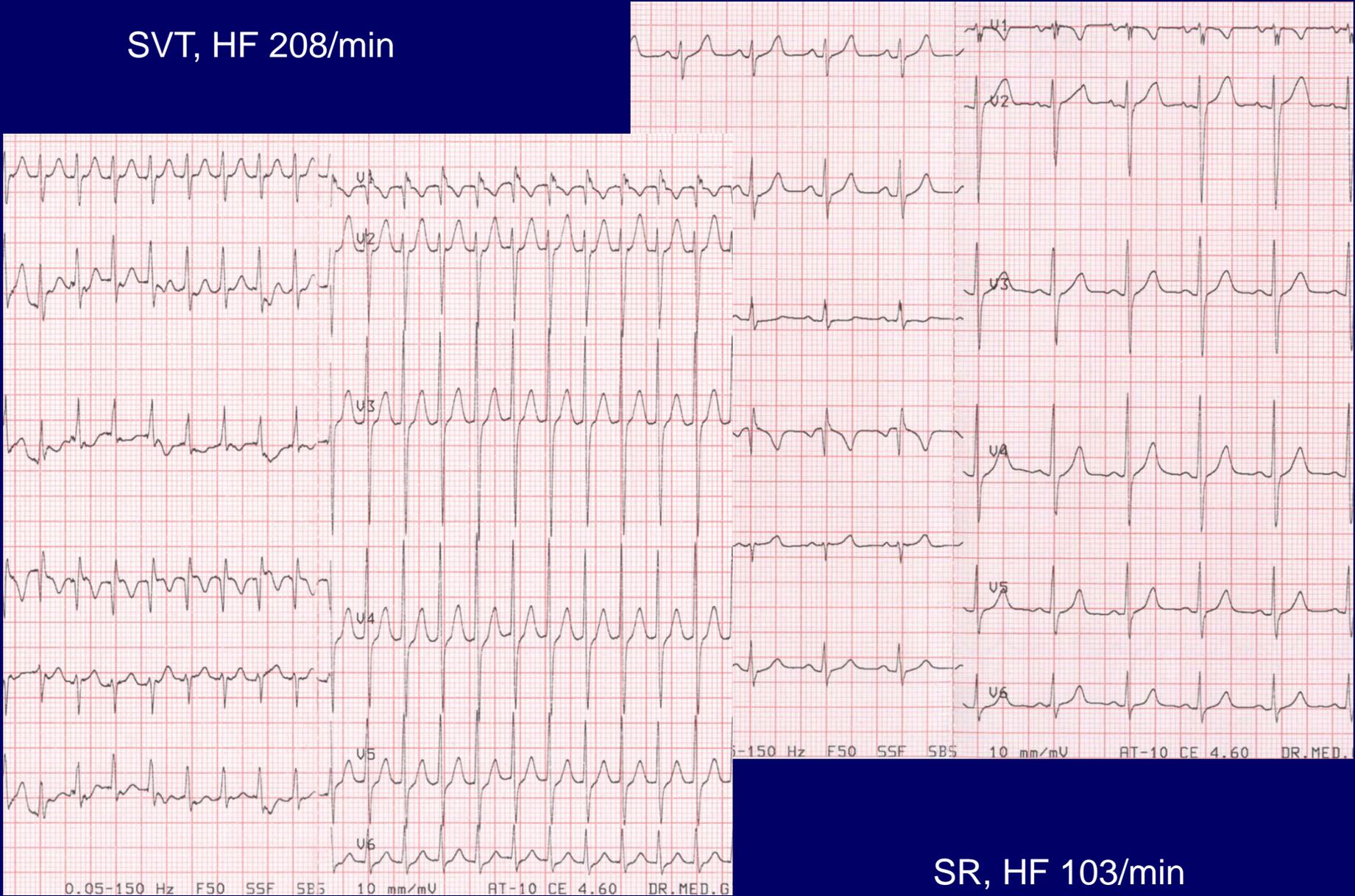
# AVNRT (AV-Nodal Reentry Tachycardia)



- Reentrykreislauf im AV-Knoten
- Antegrade Leitung über langsame, retrograde über schnelle Bahn (slow-fast-Tachykardie)
- P-Welle neg. in II, III und aVF, meist im QRS-Kompl. verborgen oder Pseudo-S od.-R am Ende d. QRS-Kompl.
- Initiierung meist durch SVES mit Leitung über langsame Bahn (Jump)



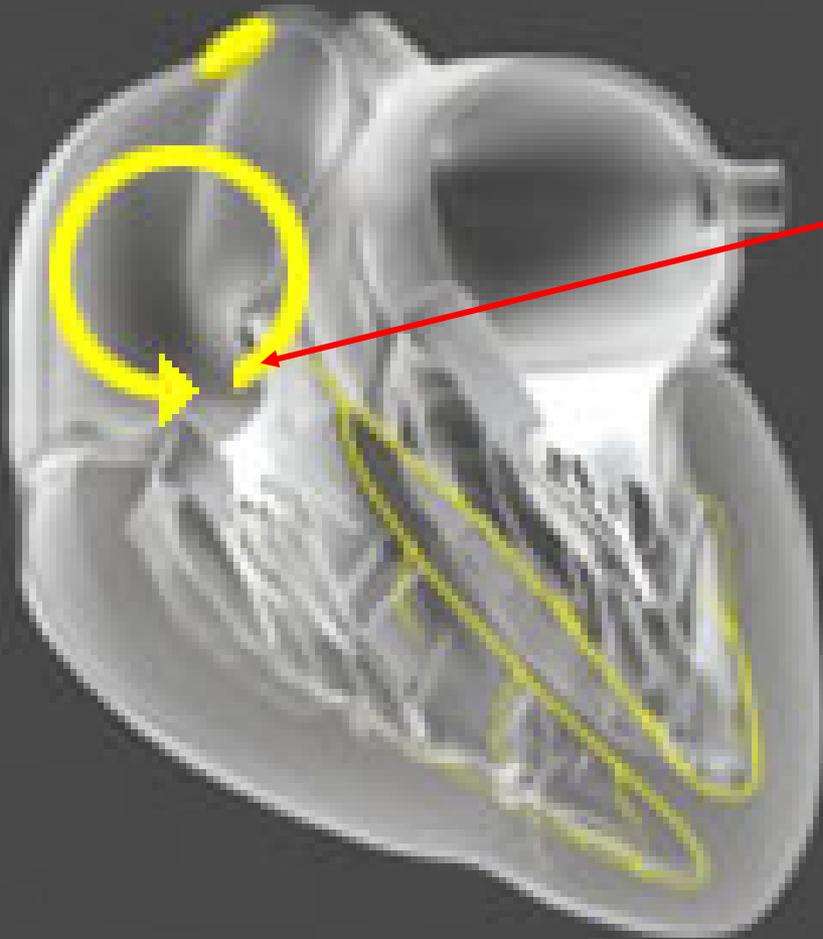
SVT, HF 208/min



SR, HF 103/min

K.F. \*20.1.97 (12 jähriges Mädchen)

# Vorhofflattern

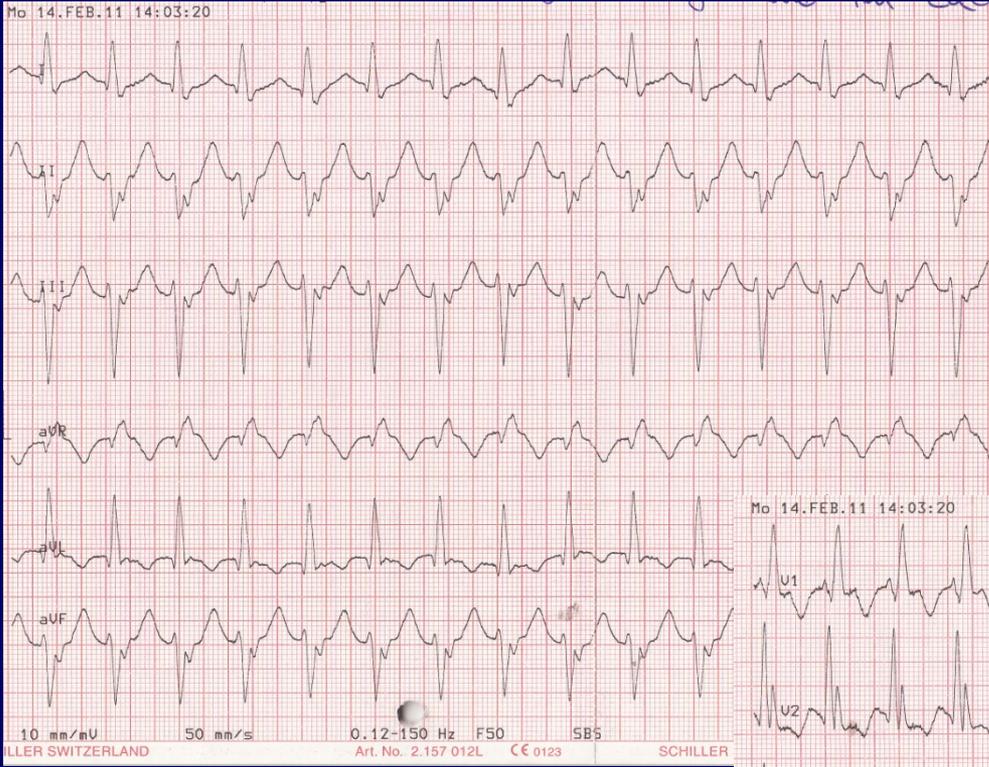


Isthmus:  
Zwischen der Mündung  
der IVC und dem TKL-Ring

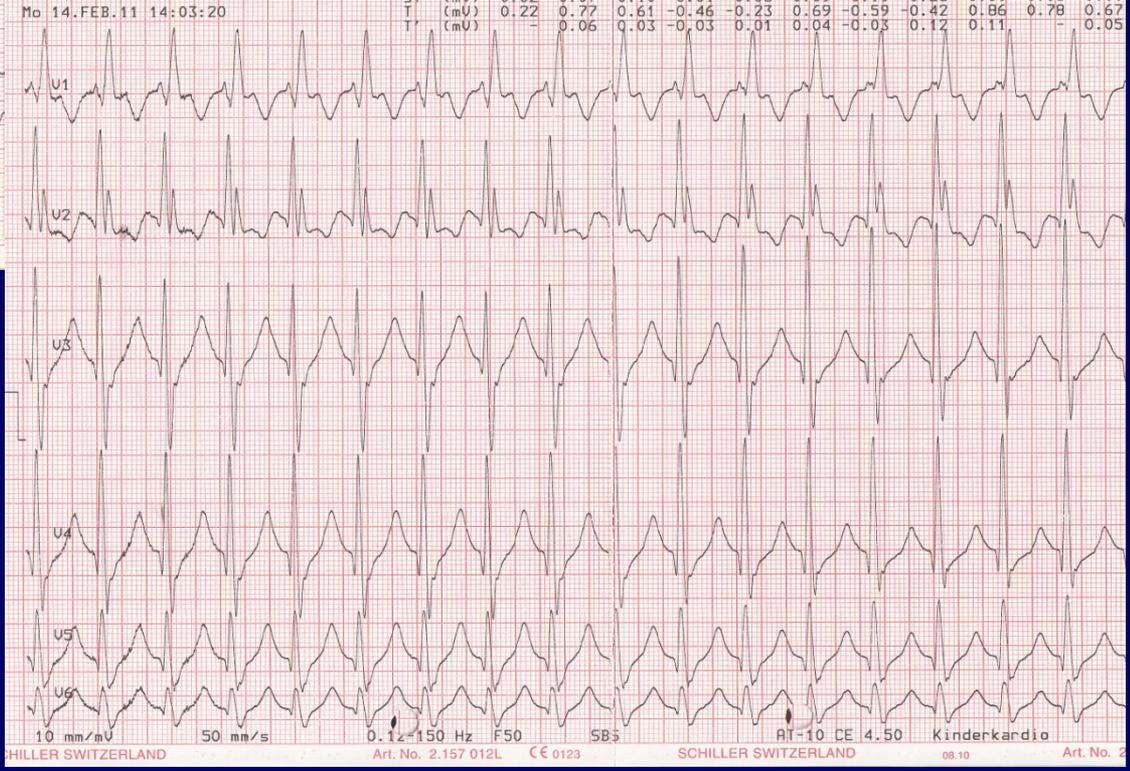
# Adenosin bei AF



# Ventrikuläre Tachykardien

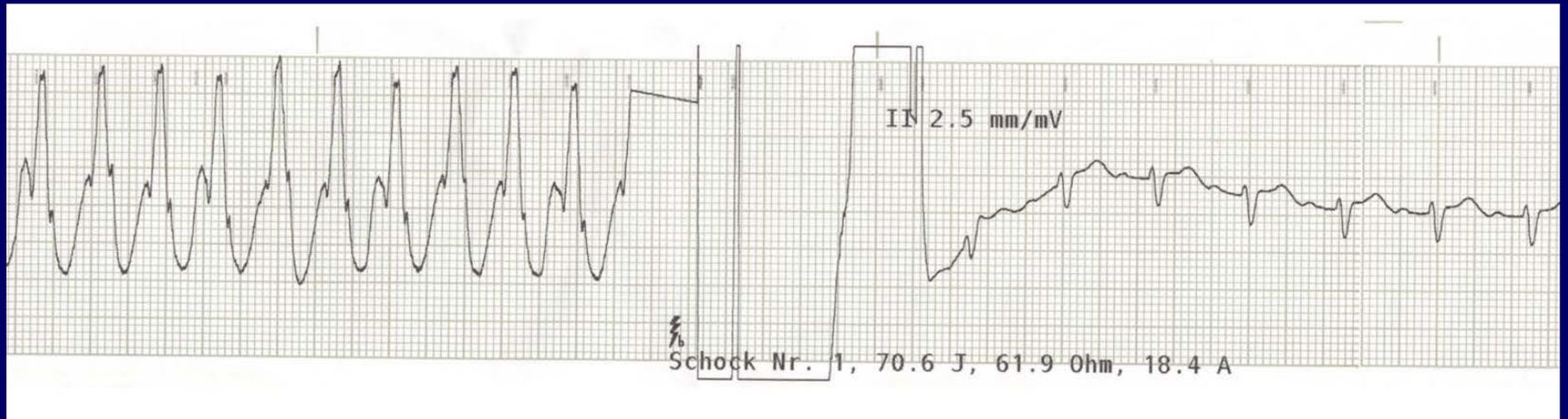


10 jähriges Mädchen, 2. Mal Herzrasen:  
keine Reaktion auf Adenosin  
Konversion zu SR nach Esmolol  
und Kardioversion mit 30 J

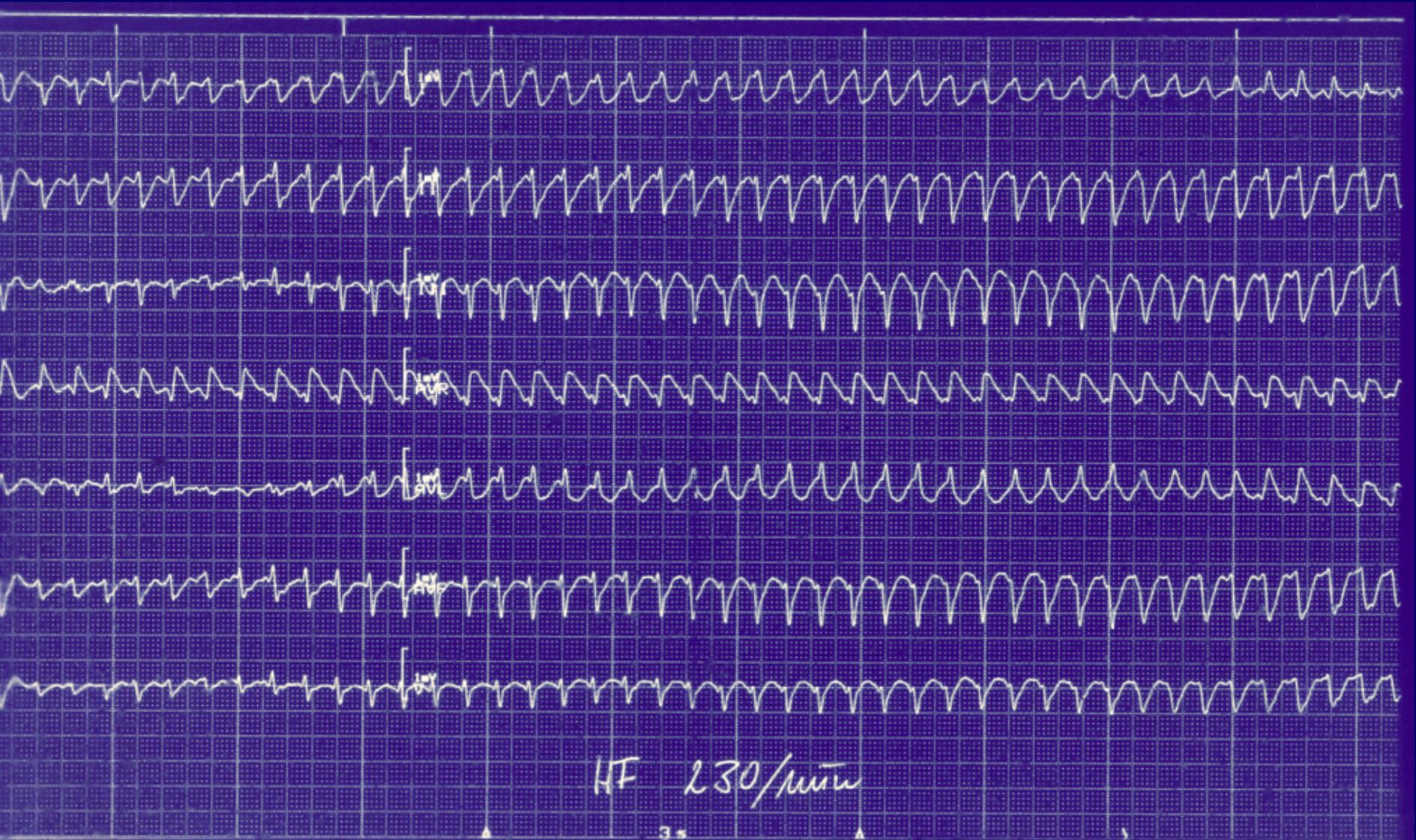


faszikuläre Tachykardie (linkventrikuläre septale Tachykardie): Überdrehter Linkstyp, RSB

# VT, 189/min, Kardioversion



# Kammerflattern



# LQTS

Normalwerte:

für Jungen 0,44 sec

für Mädchen 0,46 sec

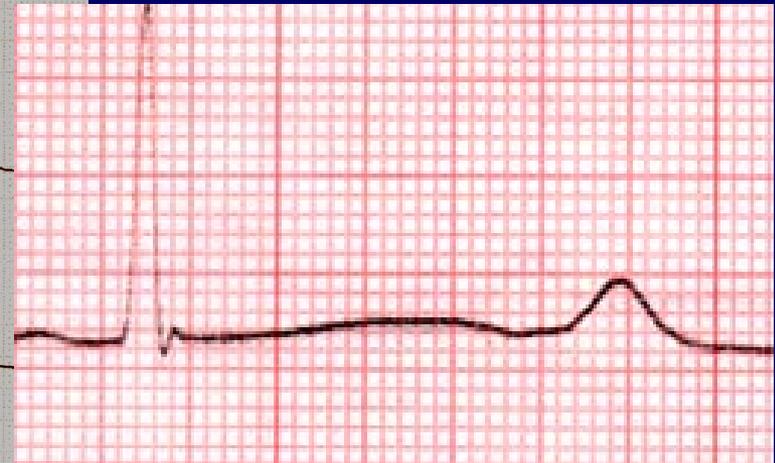
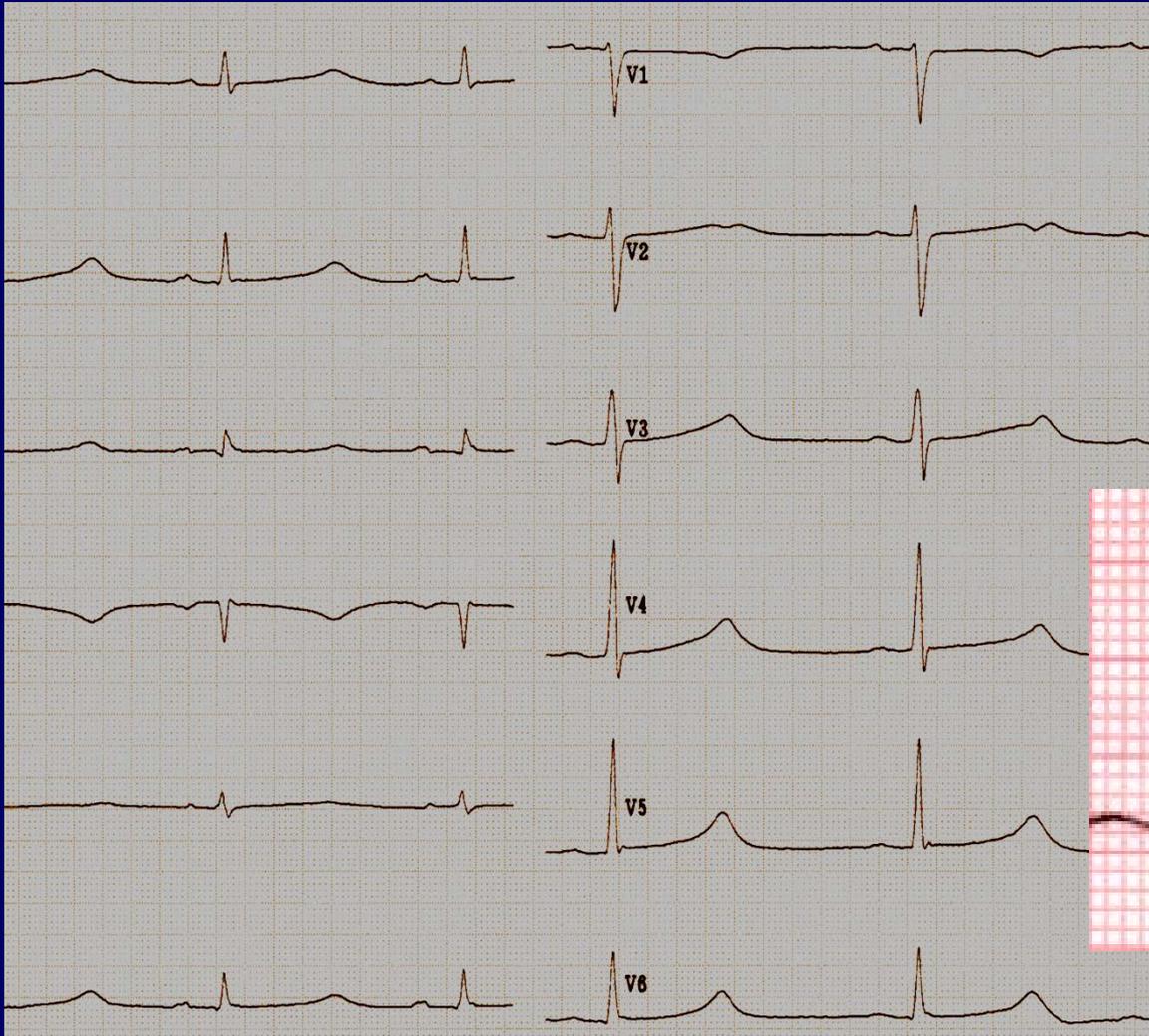
Bazett:

$$QTc = \frac{QT\text{-Zeit}}{\sqrt{RR}}$$

QT = 0,661 s

Herzfrequenz= 66/min

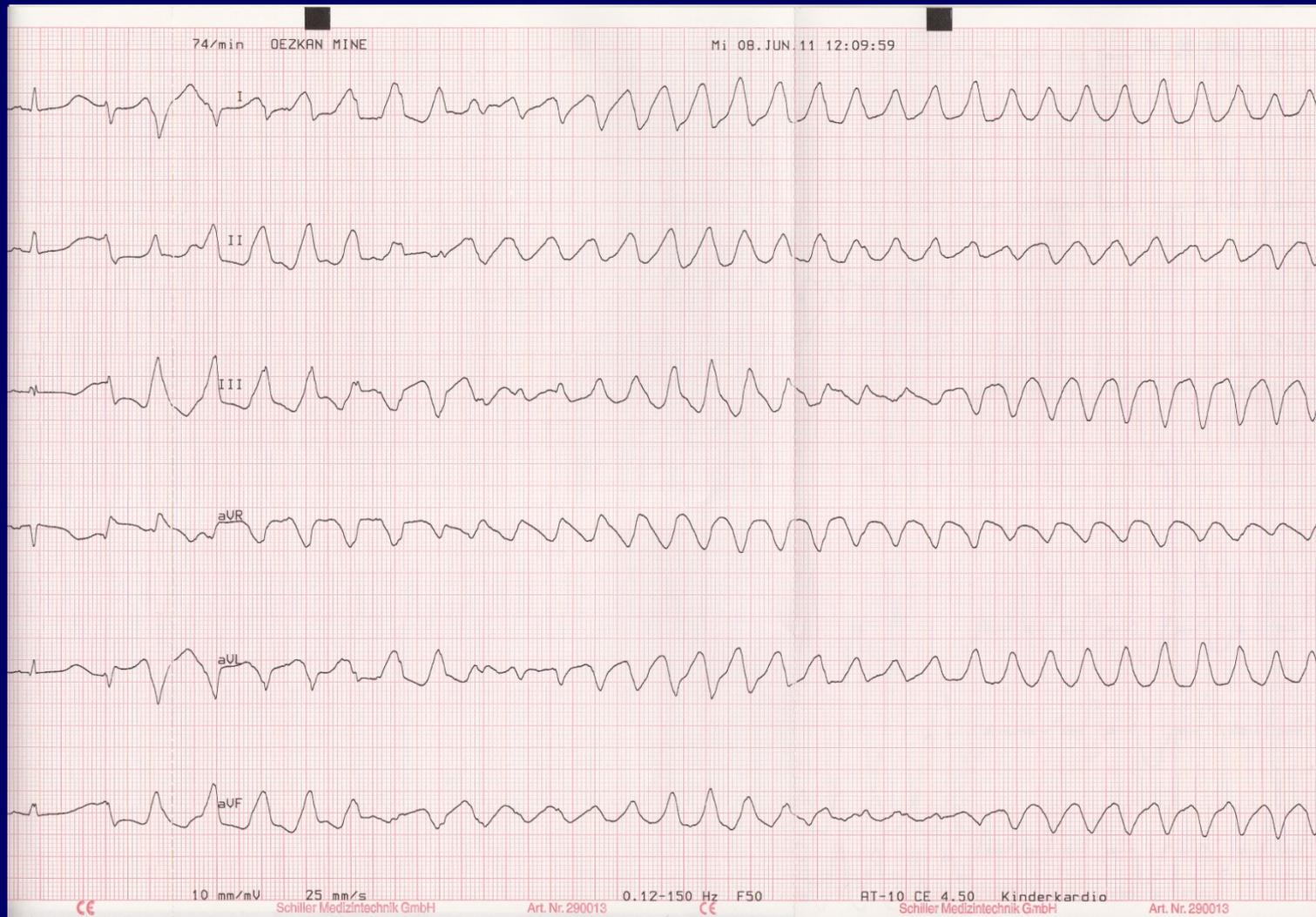
QTc=0,63 s



ReiDo\* 031293EKG

060601

EKGK 2004 Tach



Torsade de pointes, Beginn mit VES

Vielen Dank