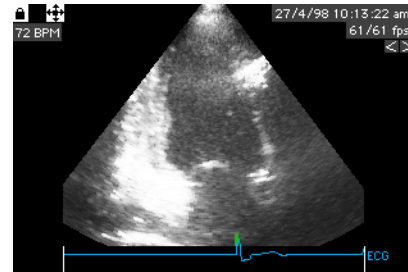


Regional venstre ventrikkelfunksjon

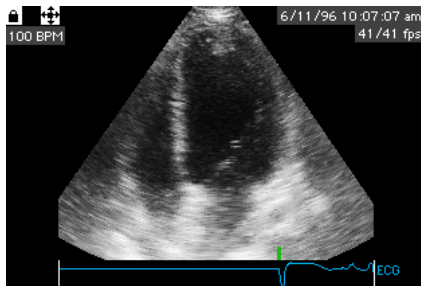
Asbjørn Støylen

<http://folk.ntnu.no/stoylen/lectures/#student>
<http://www.asecho.org/Guidelines.php>

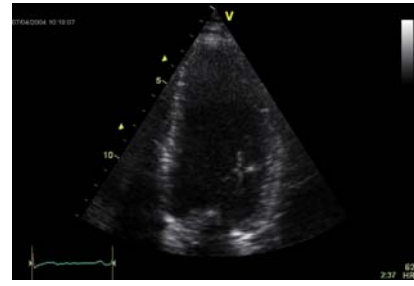
Regional funksjon – hvorfor?



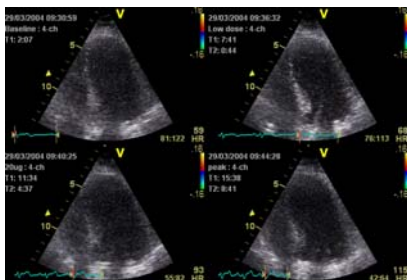
Regional funksjon – hvorfor?



Regional funksjon – hvorfor?



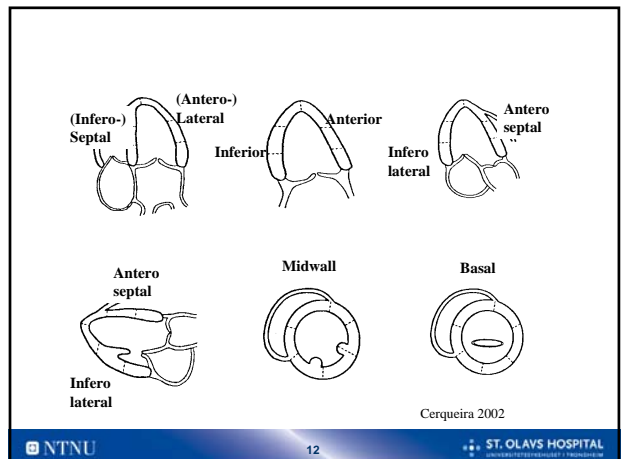
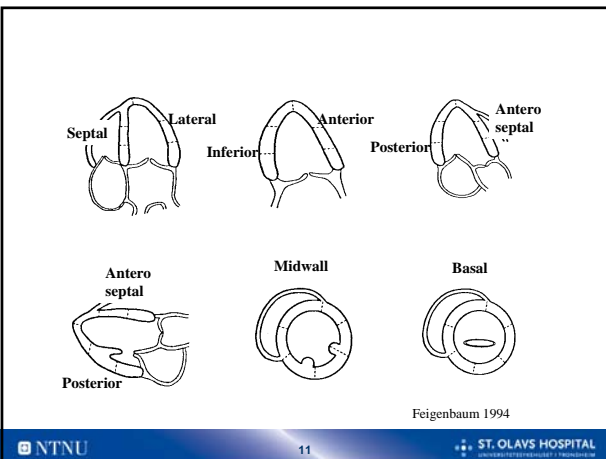
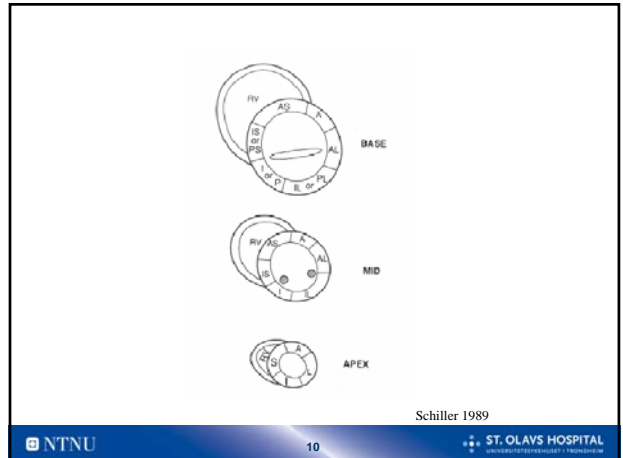
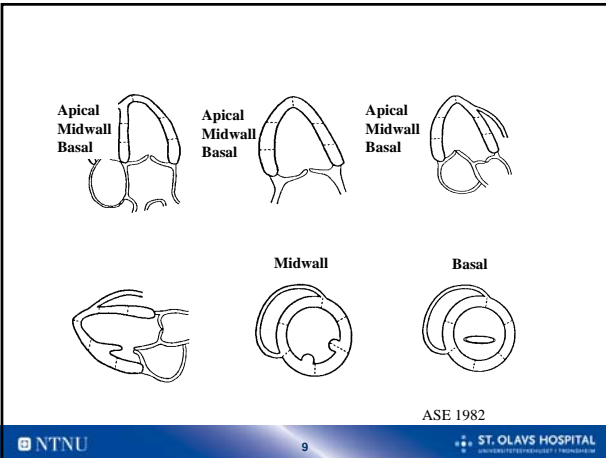
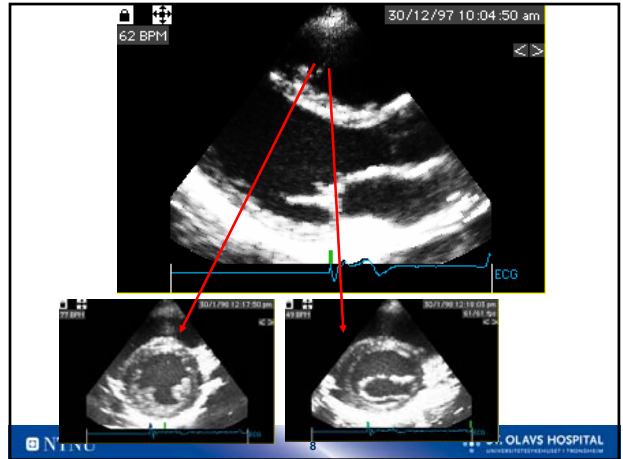
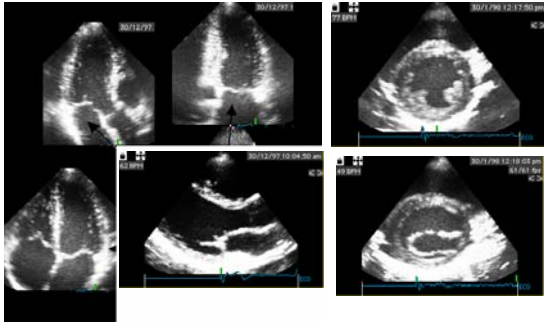
Regional funksjon – hvorfor?

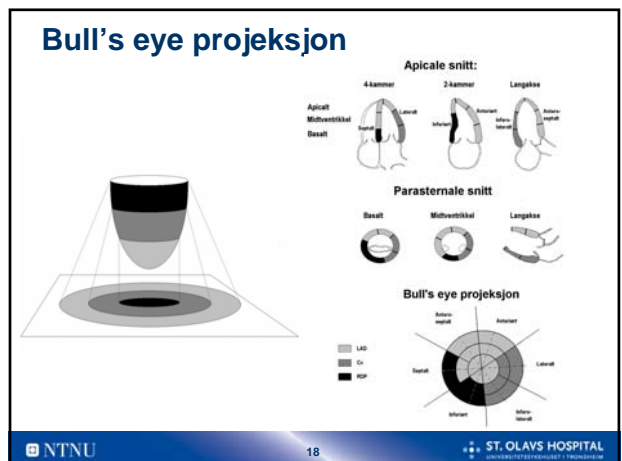
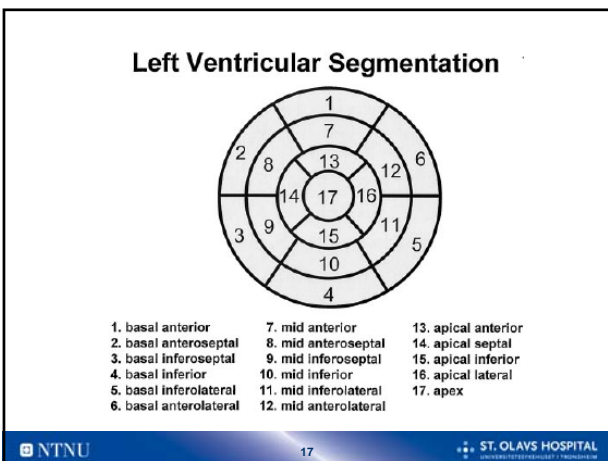
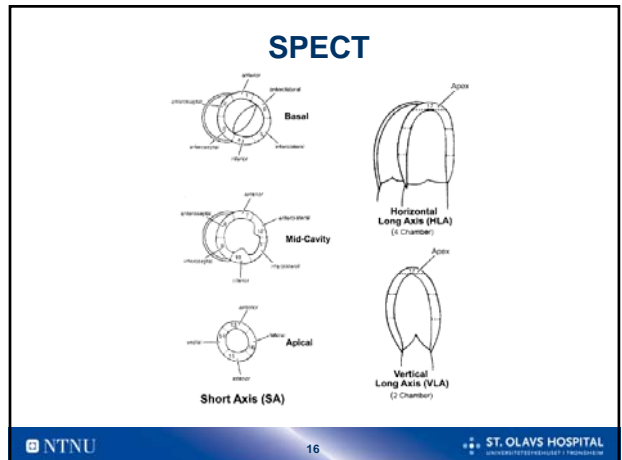
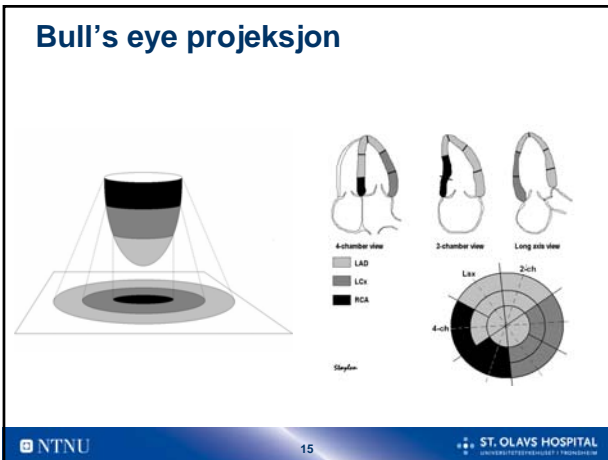
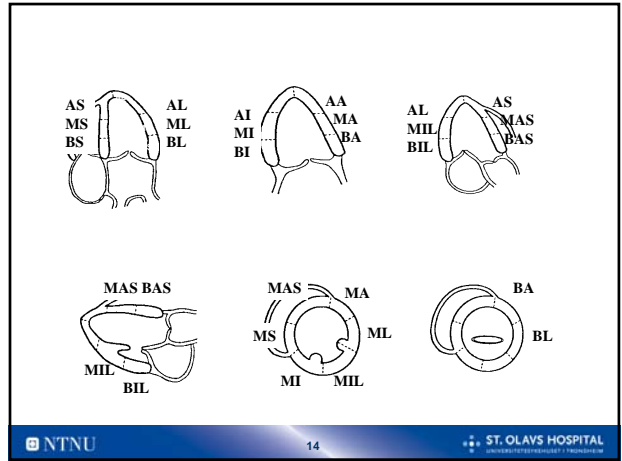
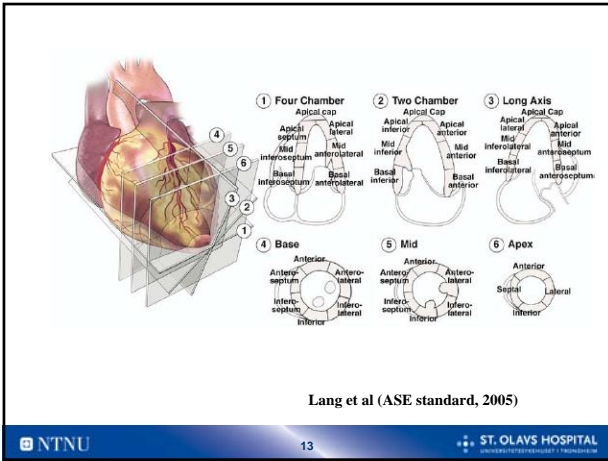


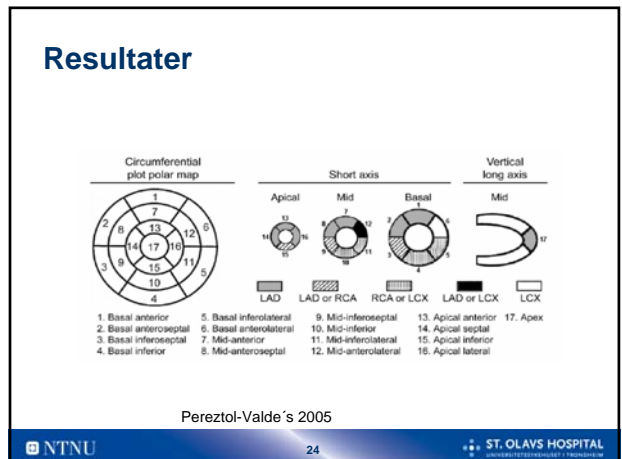
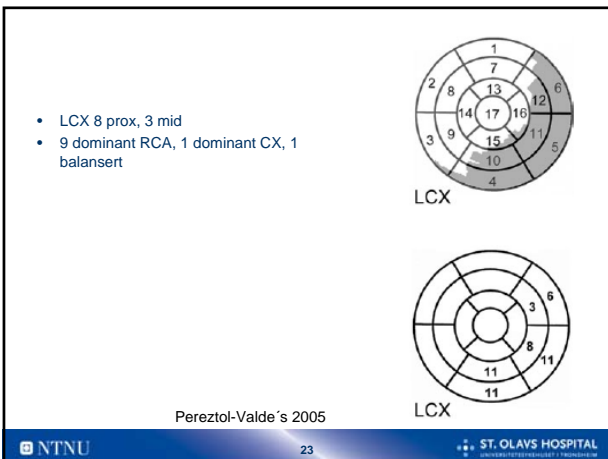
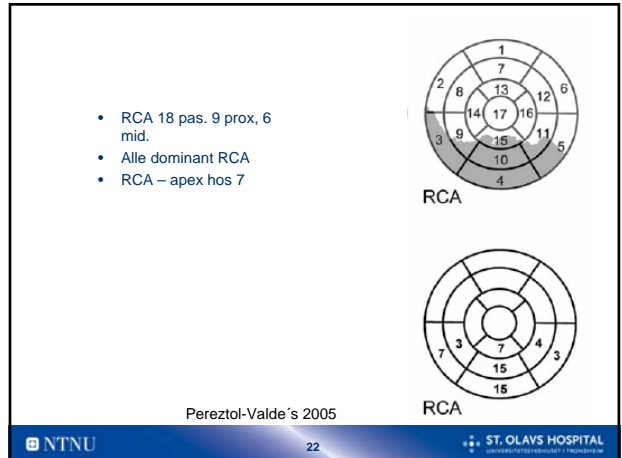
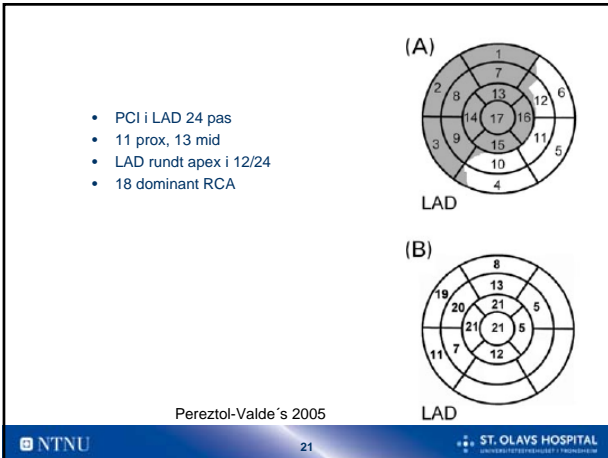
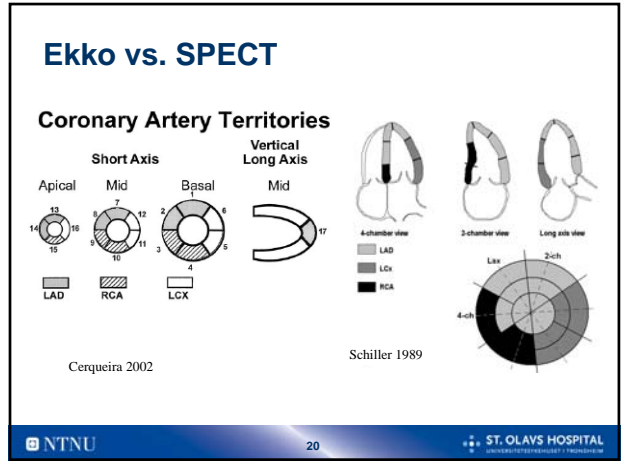
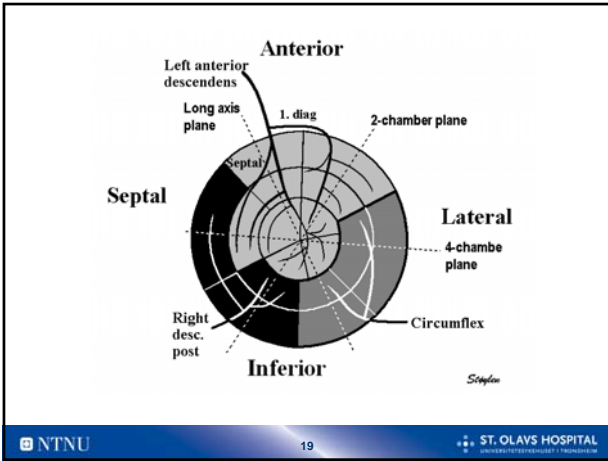
Regional dysfunksjon:

- Hvor?
- Hvor utbredt?
- Hvor uttalt?

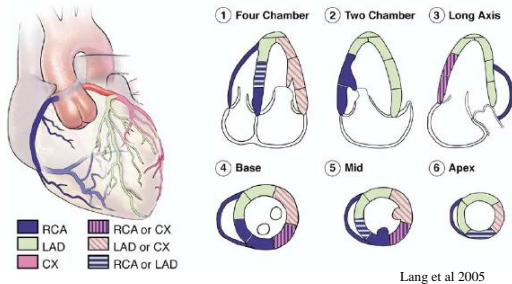
Snittplan / projeksjoner







Kartterritorier:



<http://www.asecho.org/freepdf/ChamberQuantification.pdf>

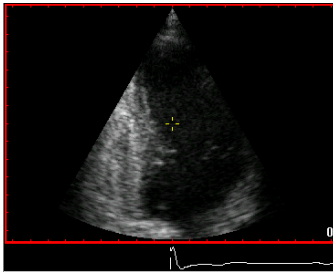
Kvantitering av regional funksjon:

- 1: Normal kontraksjon
- 2: Hypokinesi
- 3: Akinesi
- 4: Dyskinesi
- (5: Arr – veggtykkelse)
- (6: Aneurysme)
- X: ikke evaluerbart

$$WMSI = \sum WMS / N$$

Veggfortykning:

- Endokardekursjon
 - Viser bevegelse av vegg
 - Akinetiske segmenter kan ha bevegelse ved at de trekkes av andre segmenter tethering
- Veggfortykning
 - Kun kontraherende segmenter fortykkes

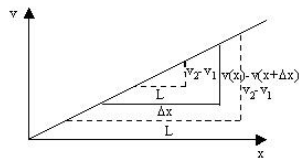
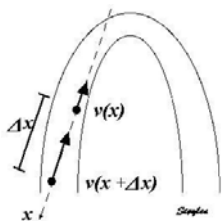


Korrelasjon WMSI og EF 0.85 - 0.90

Hvis det er regional dysfunksjon, ellers er metoden ubrukelig

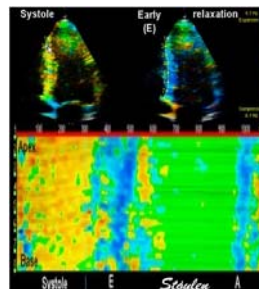
Støylen et al 1999

Strain rate:

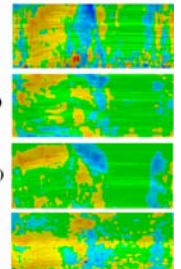


$$SR = \frac{v(x) - v(x + \Delta x)}{\Delta x} = \frac{\Delta v}{\Delta x} = \frac{v1 - v2}{r} = VG$$

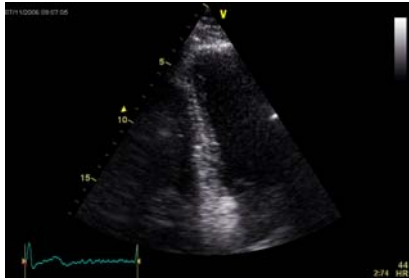
Strain rate:



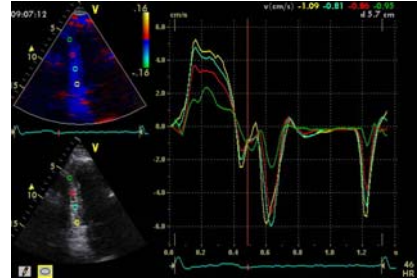
- 1: Normal:
- 2: Hypokinetic: (two basal segs.)
- 3: Akinetic: (two basal segs.)
- 4: Dyskinetic: (apical segm.)



Example: inferior infarct:

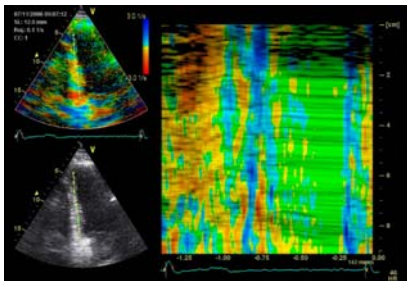


1: Assess velocity curves



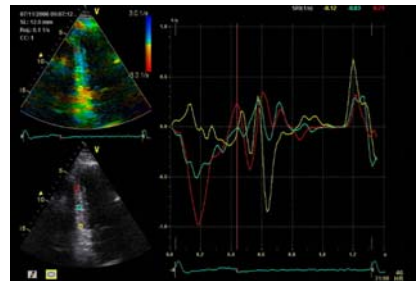
Normal distribution?

2: Assess Curved M-mode

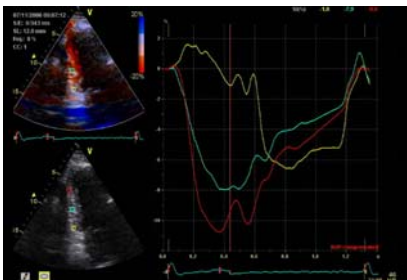


Extent of pathology

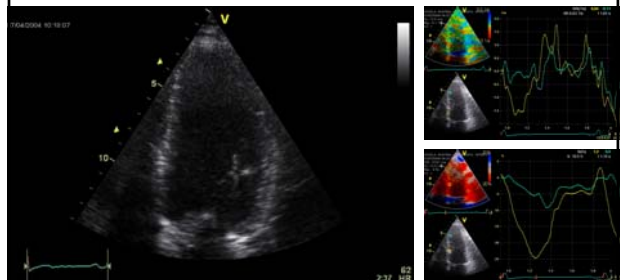
3: Assess both strain rate



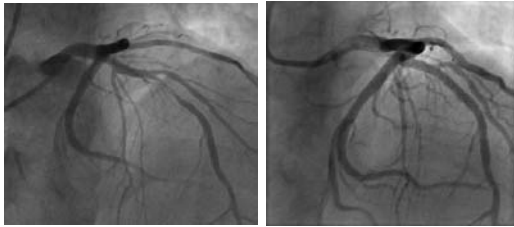
3: And strain



A case of doubt:

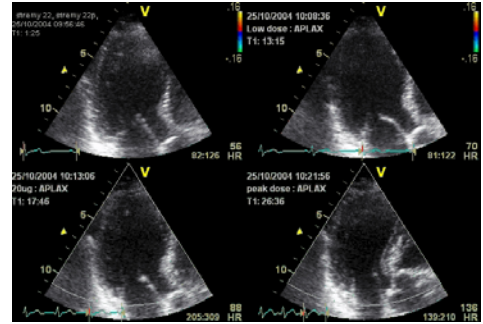


Coronary angiography:

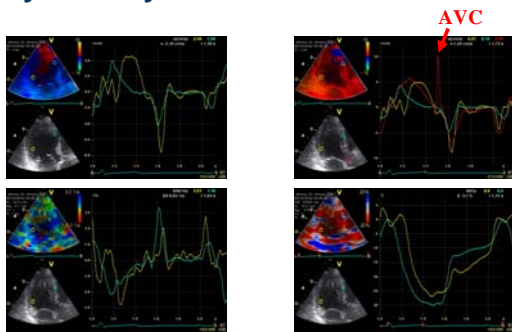


Before
PCI with stent delivery
After

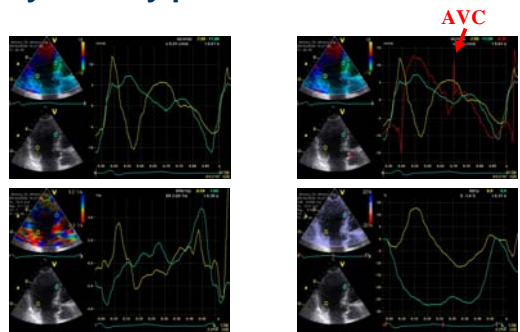
In stress echo:



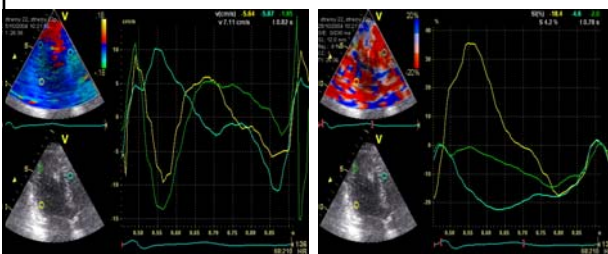
Asynchrony baseline:



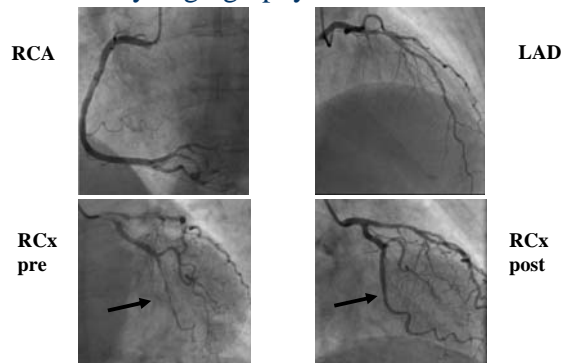
Asynchrony peak:



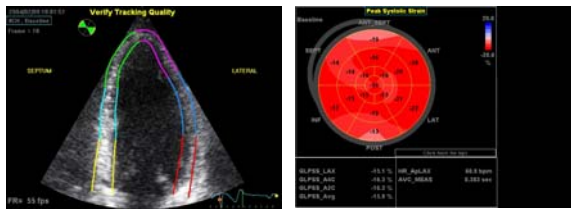
Velocity vs Strain:



Coronary angiography:

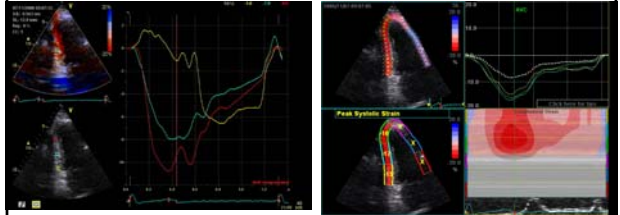


Automatiske metoder:



Som kan tracke i gråtoner Og gi segmental strain automatisk

Automatiske metoder:



Mangler ennå full klinisk dokumentasjon