Case presentation: Patients receiving cancer therapies..

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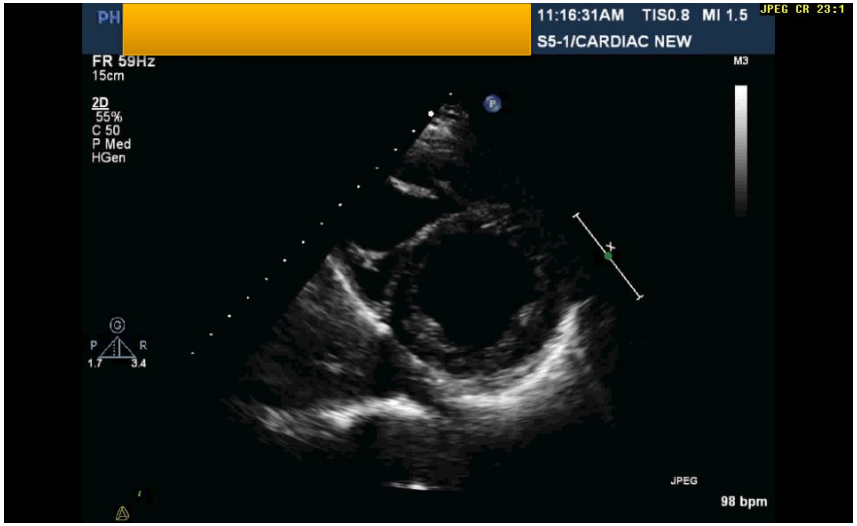
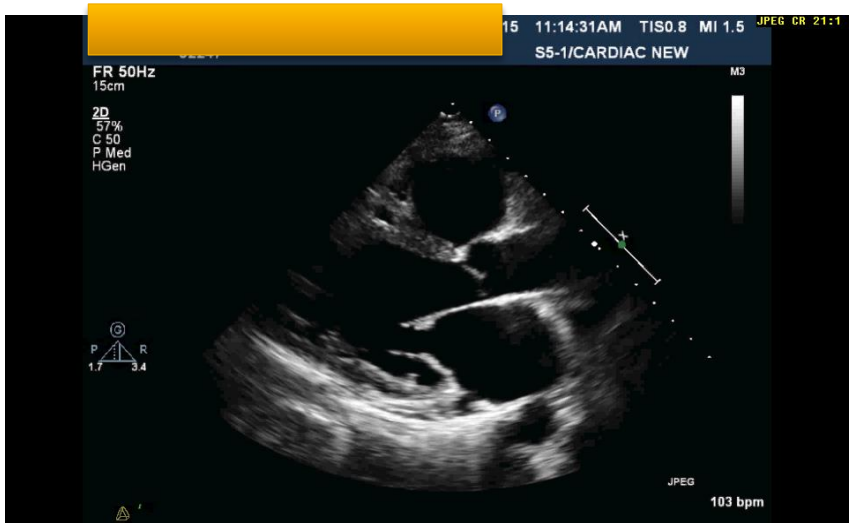
No Disclosures

Case #1: Ms. H.T.

- 45 year old lady with a history of Ca breast with mets started on chemotherapy. Anthracycline-based.
- Pre chemo echo was normal
- Developed shortness of breath after 2 cycles of chemotherapy.
- Came with acute sob, generalized body oedema, significant reduction of FC

After 2 cycles of chemo..



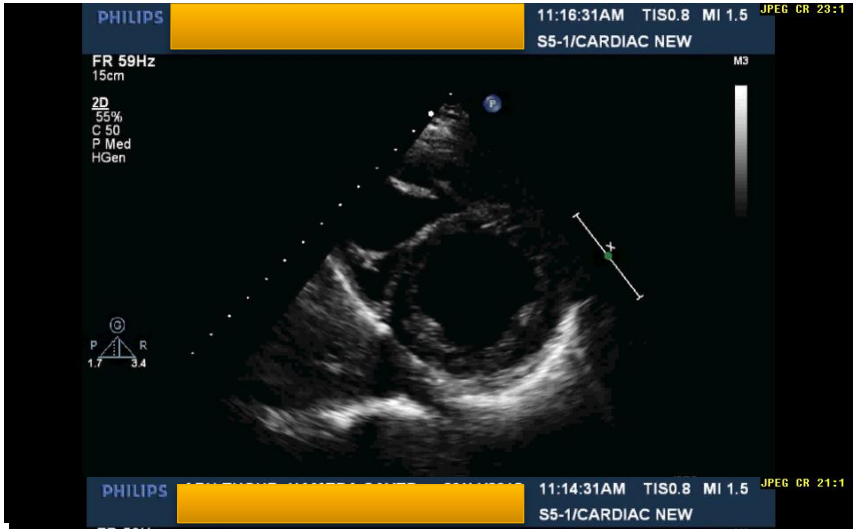


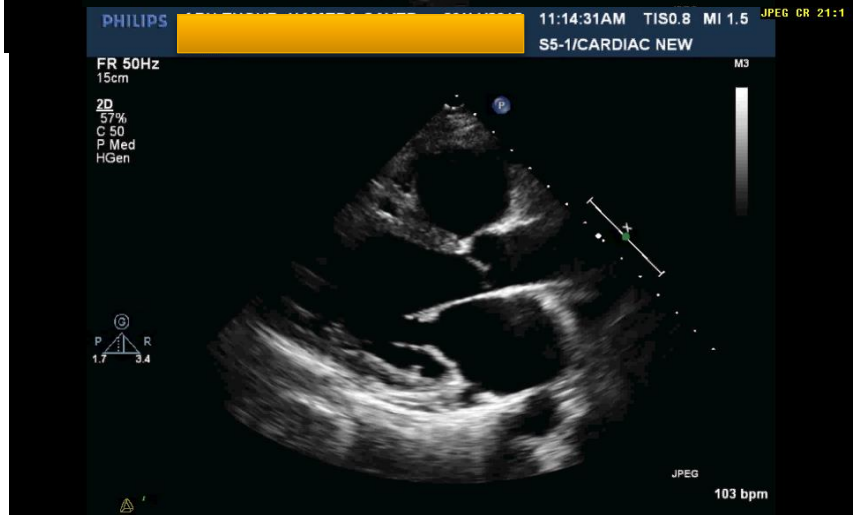
HF Clinic

- Frusemide 40mg od
- Bisoprolol 10mg od
- Valsartan 160mg bd
- Spironolactone 25mg od
- Cardiac Rehab Program
- Dietician Review
- Education

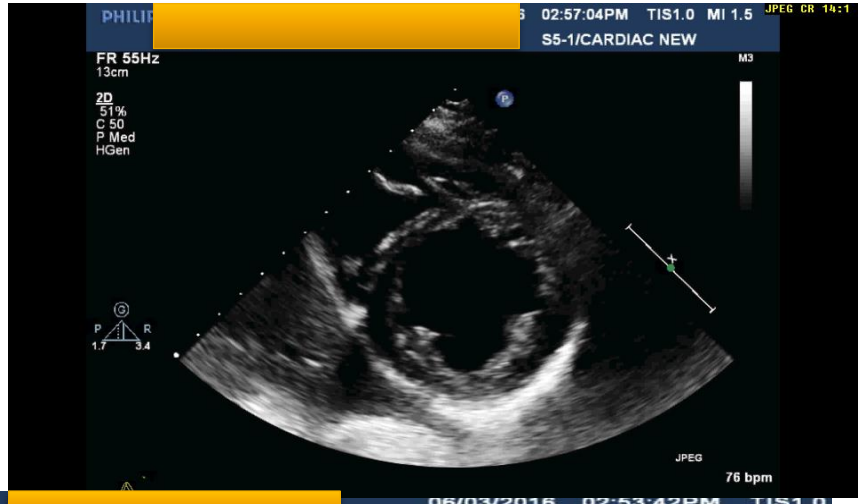
Before and After..

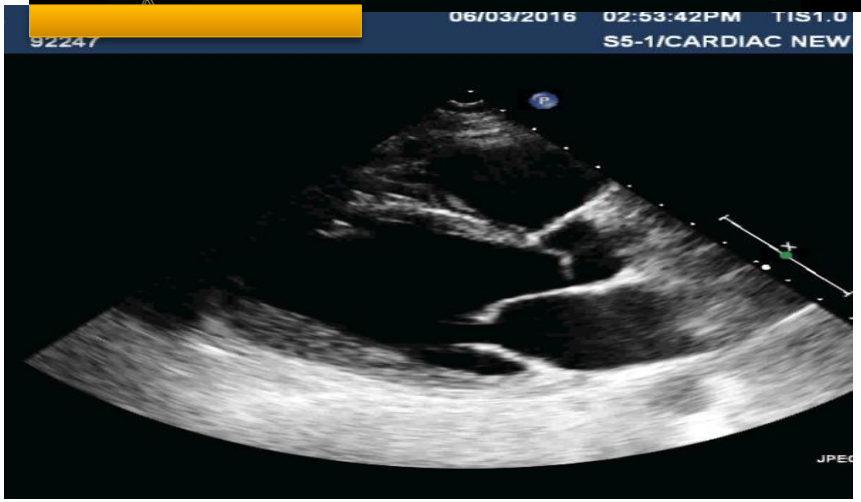
BEFORE INITIATION OF RX





AFTER 3 MONTHS OF FULLY TITRATED MEDICAL THERAPY AND REHAB..





Follow up..

- Started on carboplatin based chemotherapy
- Doing well
- EF improved to 45% but never normalized.

Case # 2: Ms. N.A.

- 60 year old lady with a background history of
- DM only on metformin
- HER-2 Positive Breast Ca
- Had surgical resection of tumor
- Combined with chemotherapy, Trastuzumab, and Radiotherapy

During her treatment, the patient developed asymptomatic LV dysfunction

- Initiated on Lisinopril and bisoprolol
- Required temporary interruption of Trastuzumab
- LV function recovered and patient resumed therapy with close follow up

- Now disease free, in remission, off therapies
- Asks about possibility of stopping the medications

Follow up..

- One year after remission
- ECG normal
- ECHO normal
- BNP and HsTNI are negative

- Down-titration of BB and discontinuation thereafter
- Continued on ACE-I
- Follow up with BNP, HsTNI, ECG, and ECHO

Case #3: Ms. B.A.

- 52 year old lady diagnosed with HER-2 positive metastatic Ca Breast
- No other medical conditions, No other symptoms of noted
- Negative family history of IHD
- No previous exposure to other chemo-therapeutics or radiation
- Tumor Board meeting decision: Trastuzumab

Follow up..

- Arrived to the non invasive lab for a baseline echo
- ECHO showed moderately severe LV dysfunction. EF~35% with global hypokinesis
- Mild MR
- Normal filling pressures
- Normal PAP

Labs and more..

- BNP 10 (negative)
- Hs TNI 1.8 (negative)
- ECG non specific ST- T changes globally
- The oncologist opted to consider second line non cardiotoxic therapies
- Patient had interval progression of disease
- Malignant pleural effusion
- Needed Home oxygen
- BNP and Trop were still negative
- Oncologist: Best option is Trastuzumab

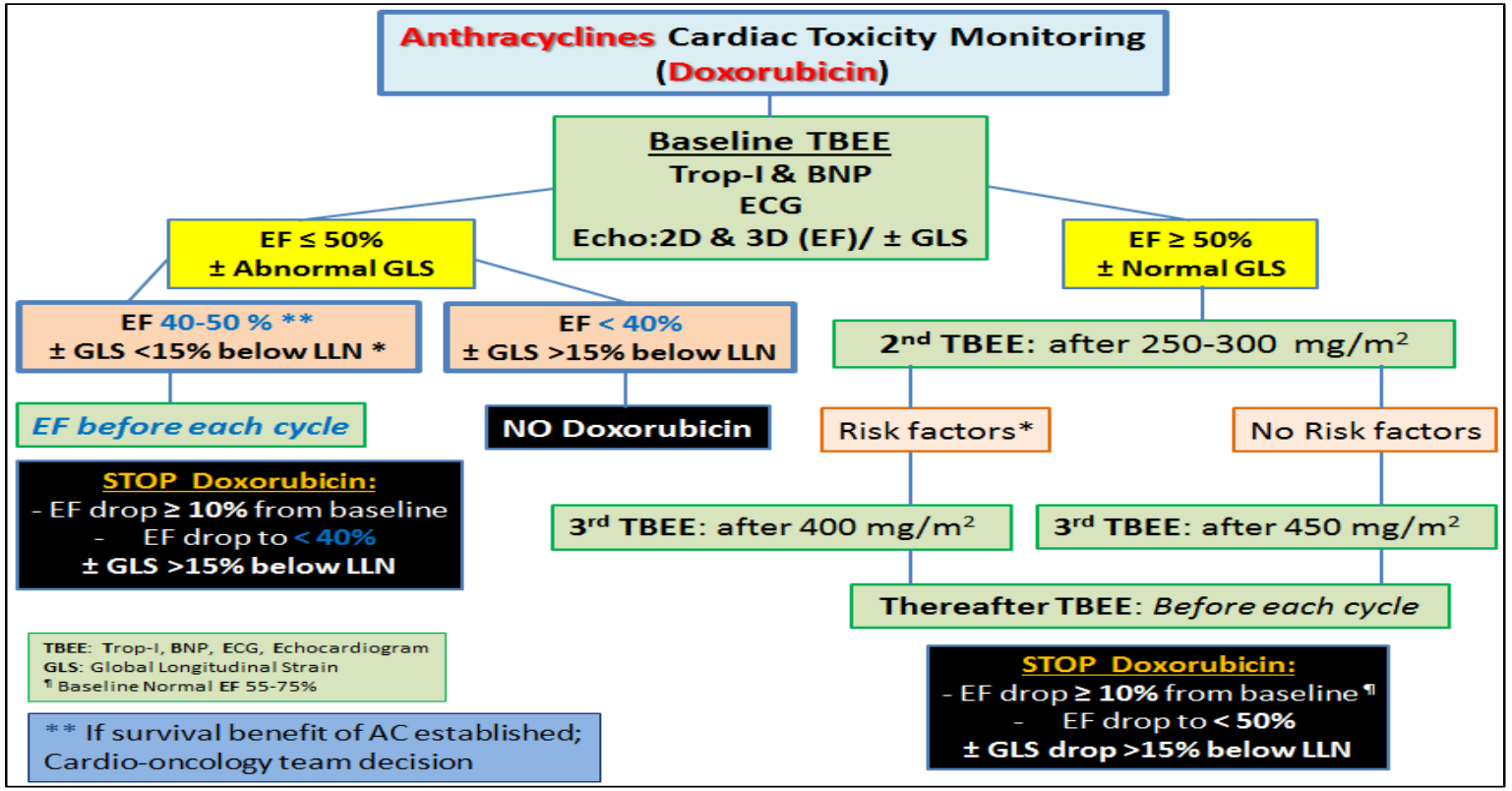
What next??

- Lengthy discussion with family
- Patient was already on valsartan and bisporolol
- Trastuzumab was started
- Pleural effusion subsided, progression free
- Patient no longer needs oxygen
- Mobilizing with no difficulty
- Follow up now for 18 months
- EF~30%

Questions??

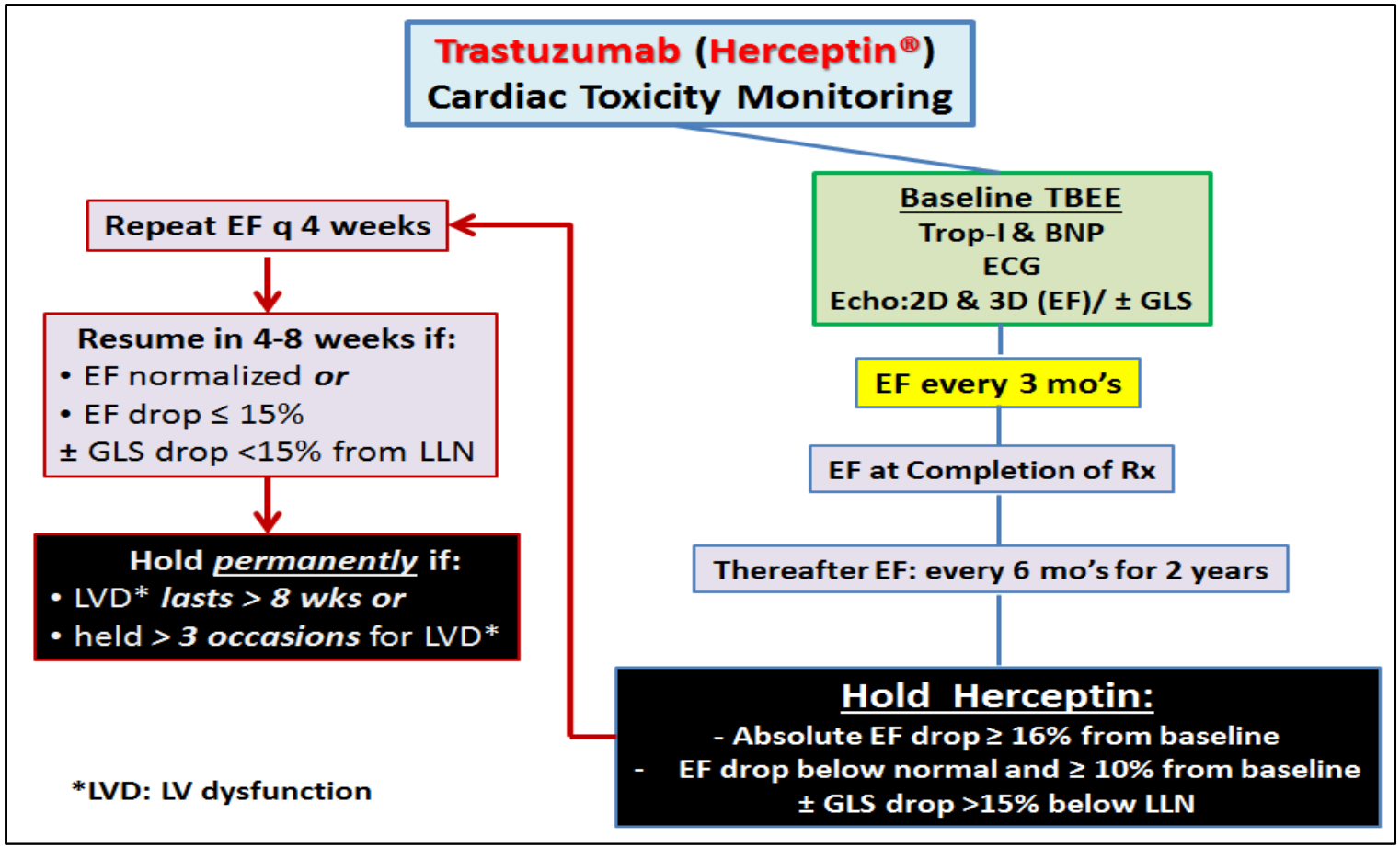
Thanks..

KFSH-D algorithm for Anthracycline cases..



Modified from ESC CPG position on Cancer treatment (2016)
Modified from EHJ- CV Imaging (2014)
Modified from Schwartz RG et al. Cardiotoxicity of Anticncer Therapy, 1992

Herceptin..



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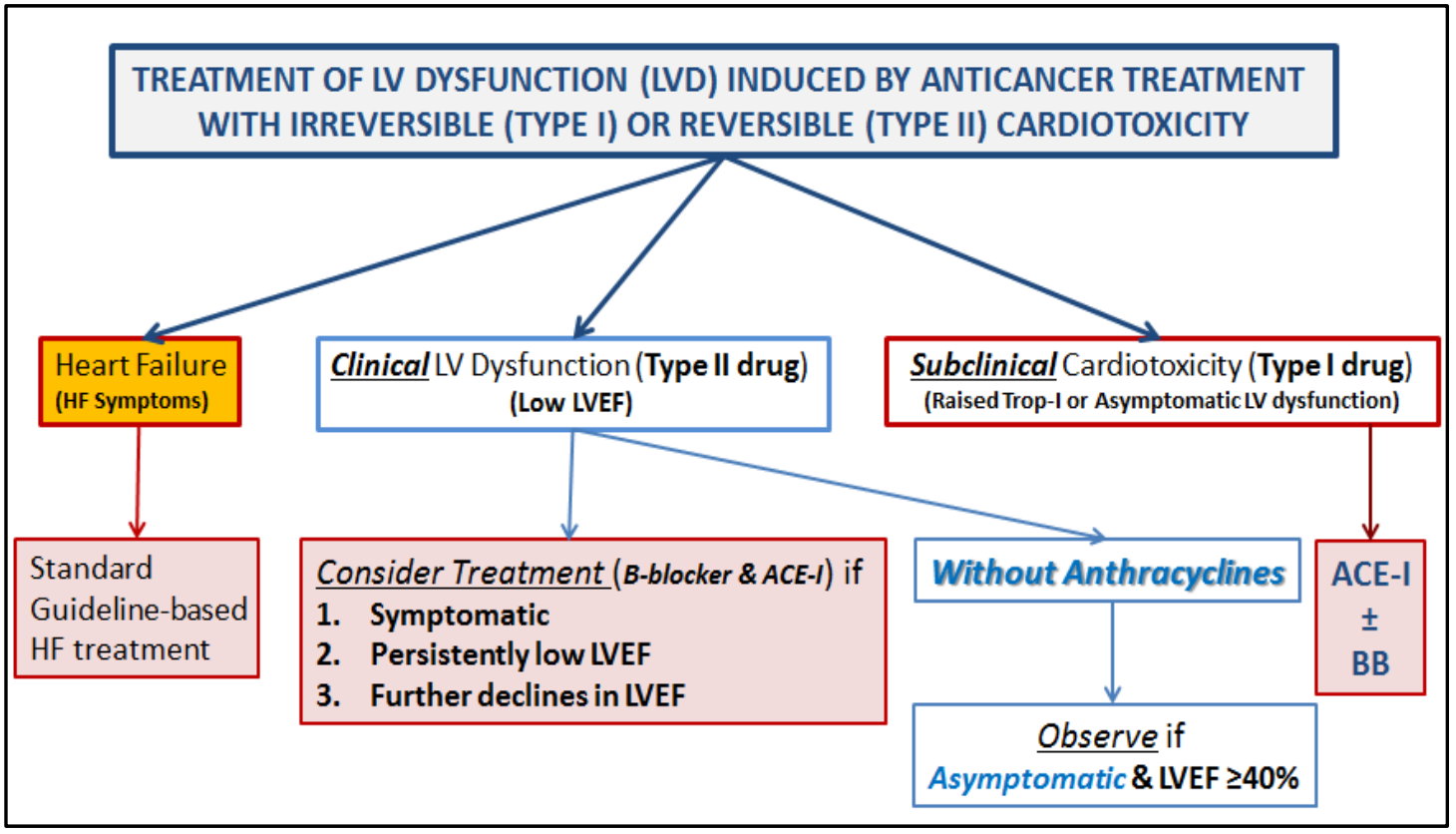
What happens next..



Curigliano G et al. Ann Oncol 2012.

Case #2

- 43 year old lady with a background history of
- Hypertension on amlodipine
- Ca Breast
- To be started on doxurubacin
- ECG normal
- ECHO normal
- Hs TNI is marginally elevated
- BNP is normal

Table 12. Potential scenarios in which evidence-based medical therapy for heart failure might be withdrawn

Clinical presentation	Conditions to justify stepwise withdrawal of GDMT after 6-12 months of full medical therapy	Comments
Tachycardia-related CM	• Normal EF and LV volumes • NYHA I • Underlying tachycardia controlled	Usually due to atrial fibrillation/flutter with increased HR, might rarely occur because of PVCs. Might need long-term BB for rate control
Alcoholic CM	• Normal EF and LV volumes • NYHA I • Abstinence ETOH	Nutritional deficiency, obesity, and obstructive sleep apnea might coexist and require therapy
Chemotherapy-related CM	• Normal EF and LV volumes • NYHA I • No further drug exposure	Certain types of chemotherapy are more likely to reverse than others (trastuzumab—high rate of LVEF improvement when it is discontinued whereas patients who received anthracyclines should continue LV enhancement therapy) Long-term surveillance strongly recommended
Peripartum CM	• Normal EF and LV volumes • NYHA I	Repeat pregnancy might be possible for some. Consultation at high-risk maternal centre should be undertaken
Valve replacement surgery	• Normal EF and LV volumes • NYHA I • Normally functioning valve	Less consensus on regurgitant lesions with ongoing dilation of LV

BB, β-blocker; CM, cardiomyopathy; EF, ejection fraction; ETOH, ethanol; GDMT, guideline-directed medical therapy; HR, heart rate; LV, left ventricle; LVEF, left ventricular ejection fraction; NYHA, New York Heart Association; PVC, premature ventricular contraction.