FAKULTNÍ NEMOCNICE BRNO

Nová guidelines ESC 2025

Gravidita a KV onemocnění

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Všeobecná interní klinika

22.1.2026

2025 ESC Guidelines for the Management of Cardiovascular Disease and Pregnancy

Event: **ESC Congress 2025**

Date: 31 August 2025

Topic: **Pregnancy and Cardiovascular Disease**

Time: 13:45 - 15:00

Session type: New ESC Guidelines

Chairpersons: **Professor J. De Backer (Gent, BE) , Professor K. Haugaa (Oslo, NO)**

ESC European Society of Cardiology
European Heart Journal (2018) **39**, 3165–3241
doi:10.1093/eurheartj/ehy340

ESC GUIDELINES

2018 ESC Guidelines for the management of cardiovascular diseases during pregnancy

The Task Force for the Management of Cardiovascular Diseases during Pregnancy of the European Society of Cardiology (ESC)

Endorsed by: the International Society of Gender Medicine (IGM), the German Institute of Gender in Medicine (DGesGM), the European Society of Anaesthesiology (ESA), and the European Society of Gynecology (ESG)

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ESC European Society of Cardiology
European Heart Journal (2025) **00**, 1–107
https://doi.org/10.1093/eurheartj/ehaf193

ESC GUIDELINES

2025 ESC Guidelines for the management of cardiovascular disease and pregnancy

Developed by the task force on the management of cardiovascular disease and pregnancy of the European Society of Cardiology (ESC)

Endorsed by the European Society of Gynecology (ESG)

Authors/Task Force Members: Julie De Backer *†, (Chairperson) (Belgium), Kristina H. Haugaa *†, (Chairperson) (Norway), Nina Eide Hasselberg ‡, (Task Force Co-ordinator) (Norway), Michèle de Hosson ‡, (Task Force Co-ordinator) (Belgium), Margarita Brida (Croatia), Silvia Castelletti (Italy), Matthew Cauldwell (United Kingdom), Elisabetta Cerbai (Italy), Lia Crotti (Italy), Natasja M.S. de Groot (Netherlands), Mette-Elise Estensen (Norway), Eva S. Goossens (Belgium), Bernhard Haring (Germany), Donata Kurpas (Poland), Carmel M. McEniery (United Kingdom), Sanne A.E. Peters (Netherlands), Amina Rakisheva (Kazakhstan), Antonia Sambola (Spain), Oliver Schlager (Austria), Florian S. Schoenhoff (Switzerland), Tommaso Simoncini [1] (Italy), Françoise Steinbach (France), Isabella Sudano (Switzerland), Lorna Swan (United Kingdom), Anne Marie Valente (United States of America), and ESC Scientific Document Group

Proč jsou doporučení týkající se KVO a těhotenství důležitá a proč potřebujeme nová doporučení.

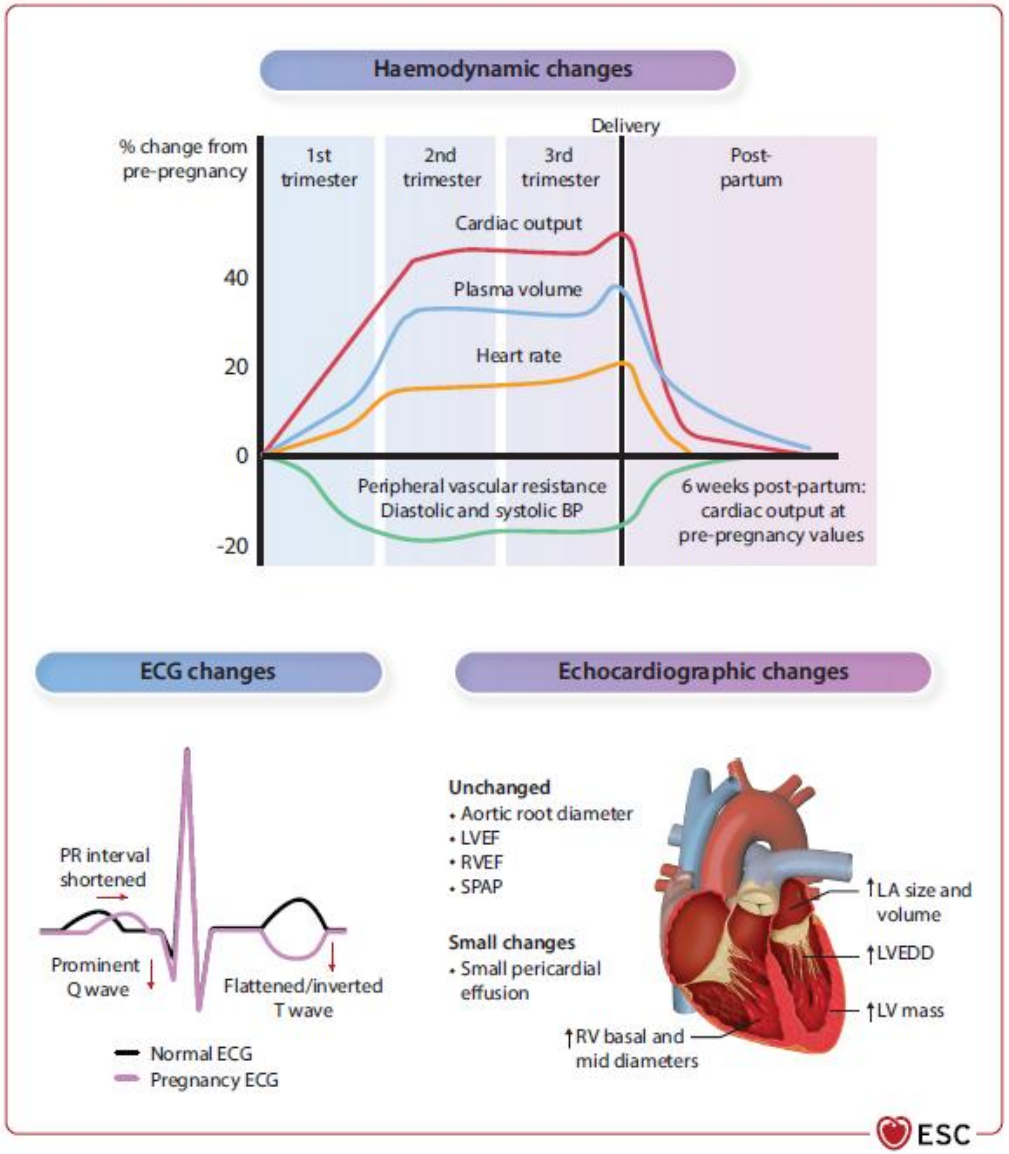
- KVO jsou hlavní neporodnickou příčinou mateřské úmrtnosti a nemocnosti.
- Snížení mateřské úmrtnosti a nemocnosti je klíčovou prioritou WHO.
- Při péči o zdraví matky a plodu je nezbytné vyvážit rizika a přínosy terapeutických potřeb obou.
- Nedostatek prospektivních nebo randomizovaných studií - často nelze z etických důvodů provádět - většina doporučení založena na důkazech úrovně C.
- Potřeba registrů - Registr těhotenství a srdečních onemocnění (ROPAC) a síť European Surveillance of Congenital Anomalies
- Potřeba prospektivních studií, které by prohloubily naše porozumění v této oblasti.

- Od zveřejnění předchozí verze (2018) - nové důkazy - **personalizované hodnocení rizika, sdílené rozhodování a autonomie žen, tým pro těhotné s KVO, farmakoterapie během těhotenství a laktace, specifické kardiovaskulární stavy a těhotenství, poporodní sledování a dlouhodobé riziko.**

Epidemiologie

- Roste počet těhotenství a porodů u žen se získaným, vrozeným nebo dědičným KVO
  - vyšší věk při prvním těhotenství, rostoucí počet žen s VSV v reprodukčním věku, zvyšující se výskyt KV komorbidit.
- 4% těhotenství komplikováno KVO (s HT až 10%).
- KVO - 33% úmrtí souvisejících s těhotenstvím.
- U žen s již existujícím KVO až 16% těhotenství komplikováno KVO.
- Až 68% úmrtí v těhotenství způsobených KVO lze předejít.
- Ženy s KVO v těhotenství vyšší riziko srdečních příhod i v pozdějším věku - sekundární prevence.
- Nepříznivé novorozenecké výsledky u cca 25% těchto těhotenství.
- Vysoká míra porodnických komplikací (17%) a mateřské úmrtnosti či nemocnosti (11%).
- Existující KVO u matky spojeno se zvýšeným rizikem KVO u dětí.

Fyziologické změny v těhotenství



+ hormonální změny, hyperkoagulace, ledviny, játra, albumin…

De Backer J et al., European Heart Journal (2025) 00, 1–107

Aktualizace doporučení pro rok 2025

Topic	New information	Rationale
Pregnancy Heart Team	Broader acceptance, dedicated section	Ensure comprehensive care throughout reproductive stages
Risk stratification	**mWHO 2.0 classification**, refined and expanded clinical categories	More data have emerged, necessitating more nuanced risk assessment for patient counselling
Revision of contraindications (COR III) for pregnancy in women classified as mWHO class IV	Emphasis on the critical role of comprehensive counselling by the Pregnancy Heart Team (COR I)	Recognition of a **woman's autonomy** in making reproductive choices promoting a detailed and transparent dialogue about the heightened risks and encouraging **shared decision-making**
Adverse pregnancy outcomes (APO)	Increased focus on long-term outcomes	Evidence supports the need for **thorough discussion and management of APOs**
Clinical data and research	**ROPAC** registry	New or updated clinical management

new

revised

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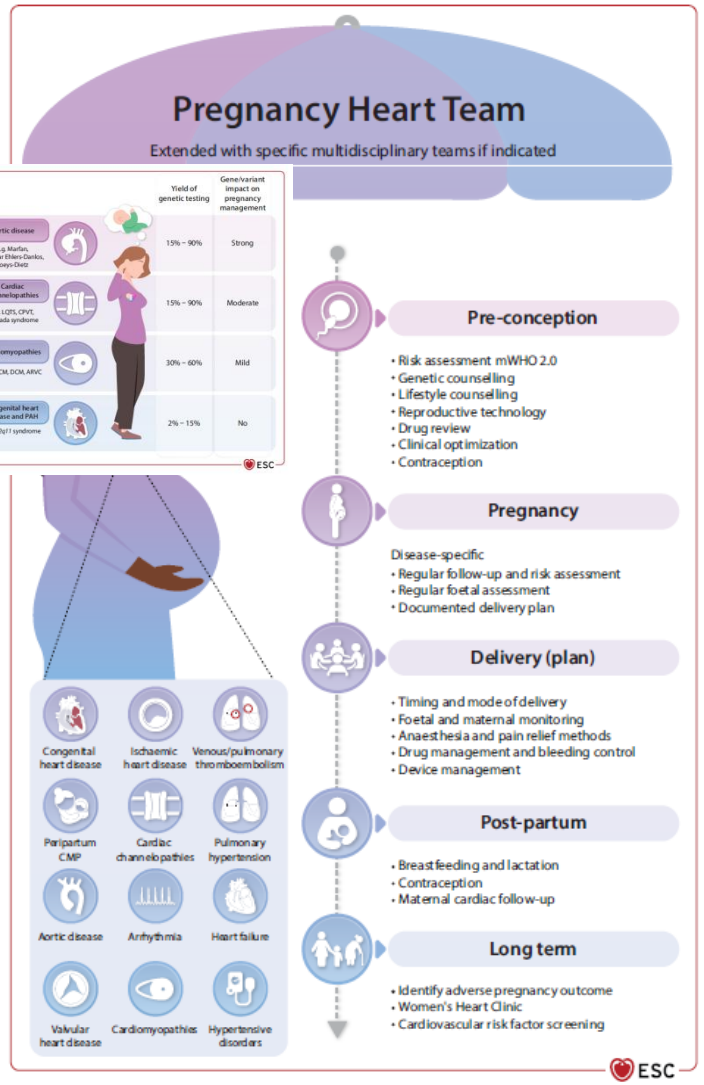
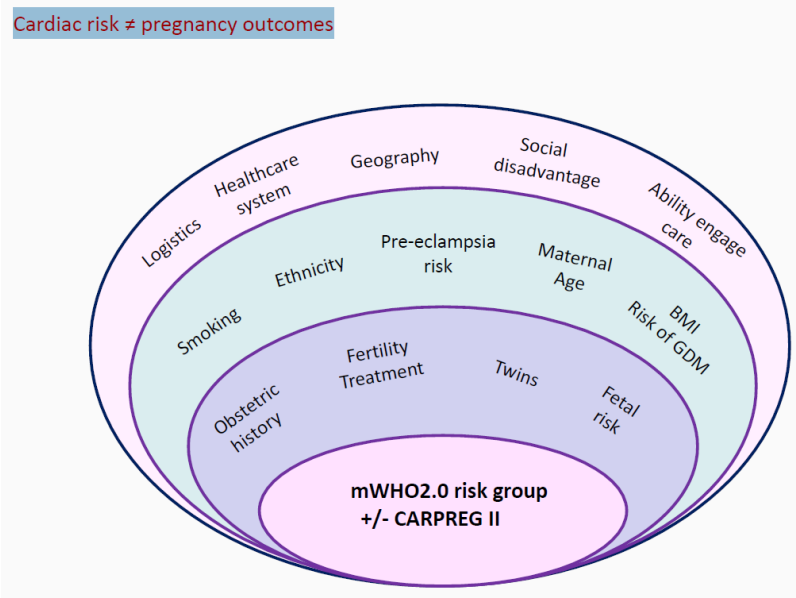
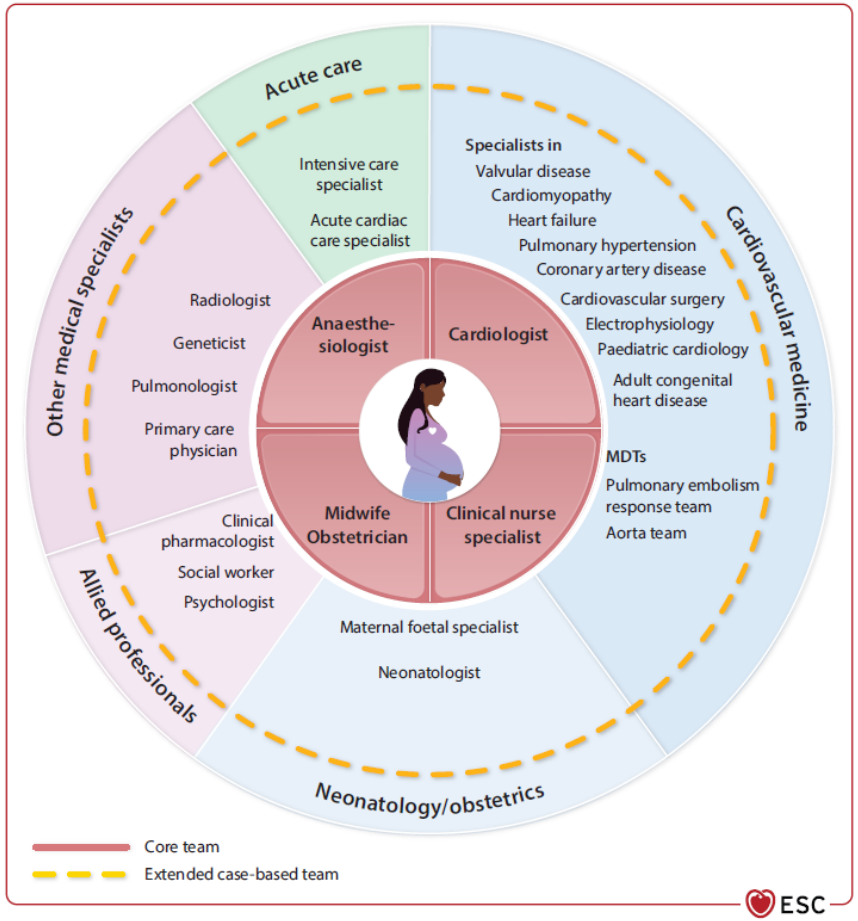
Pregnancy Heart Team - Tým pro těhotné s KVO





- hodnocení rizik
- společné vytváření plánu péče
- průběžné sledování stavu
- koordinace
- vzdělávání pacientek
- psychologické poradenství



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Pro koho je Tým pro těhotné s KVO určen

	mWHO 2.0 I	mWHO 2.0 II	mWHO 2.0 II-III	mWHO 2.0 III	mWHO 2.0 IV
Pregnancy Heart Team	No	No	**Yes**	**Yes**	**Yes**
Counselling	Yes (by regular healthcare professional)	Yes (by regular healthcare professional)	Yes: expert counselling by **Pregnancy Heart Team**	Yes: expert counselling by **Pregnancy Heart Team**	Yes: expert counselling by **Pregnancy Heart Team** with clear & thorough discussion of the very high pregnancy risk & shared decision-making process for termination if pregnancy occurs
Obstetric & Cardiac Care	Local Hospital	Local Hospital	Shared care: Local hospital + **Pregnancy Heart Team**	Care led by **Pregnancy Heart Team** in expert centre	Care led by **Pregnancy Heart Team**
Delivery	Local Hospital	Local Hospital	Shared care with local Hospital + **Pregnancy Heart Team** Location depends on CV status and evolution of pregnancy	Expert centre, care led by **Pregnancy Heart Team**	Expert Centre, care led by **Pregnancy Heart Team**

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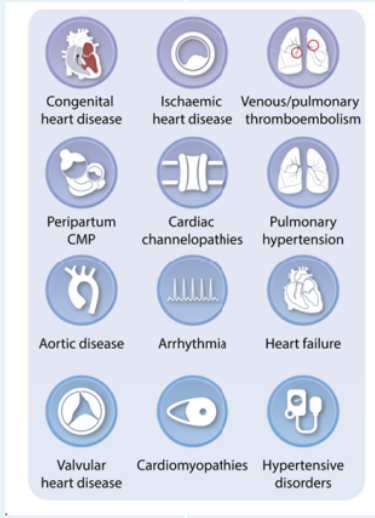
Stratifikace rizika – mWHO 2.0

ESC 2018	mWHO I	mWHO II	mWHO II-III	mWHO III	mWHO IV
Risk description	No detectable increase in mortality & no/mild increase in morbidity	Small increase in mortality or moderate increase in morbidity	Intermediate increase mortality or mod/severe increase morbidity	Significant increase in mortality or severe morbidity	Extremely high risk of mortality or severe morbidity
ESC 2025	**mWHO 2.0 I**	**mWHO 2.0 II**	**mWHO 2.0 II-III**	**mWHO 2.0 III**	**mWHO 2.0 IV**

ESC 2018	mWHO I	mWHO II	mWHO II-III	mWHO III	mWHO IV
		Congenital heart disease			
ESC 2025	**mWHO 2.0 I**	**mWHO 2.0 II**	**mWHO 2.0 II-III**	**mWHO 2.0 III**	**mWHO 2.0 IV**



Congenital heart disease

Ventricular function/Pulmonary hypertension

Arrhythmias (Pacemakers)

Cardiomyopathies (genetic)

Valvular heart disease

Aortopathy

Acquired heart disease/coronary disease

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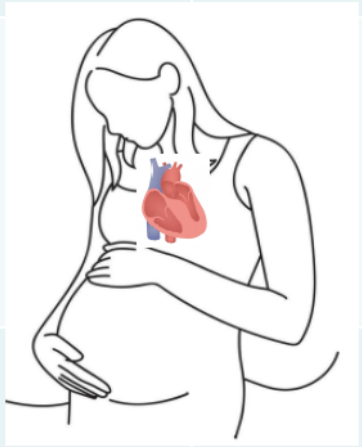
Stratifikace rizika – mWHO 2.0

	mWHO I	mWHO II	mWHO II-III	mWHO III	mWHO IV
ESC 2018			**Hypertrophic Cardiomyopathy**	Previous PPCM without residual LV impairment	Previous PPCM with any residual LV impairment
	mWHO 2.0 I	**mWHO 2.0 II**	**mWHO 2.0 II-III**	**mWHO 2.0 III**	**mWHO 2.0 IV**
ESC 2025	**HCM: genotype positive & phenotype negative**		Low-risk ARVC genotype positive & no/mild phenotype without complications	ARVC with moderate/severe disease	
			HCM without complications	**HCM with arrhythmic &/or haemodynamic complications**	**HCM with symptomatic severe LVOTO:≥50mmHg** **HCM with severely symptomatic LV dysfunction (EF<50%)**
			DCM/NDLVC with normal or mild LVSD: EF>45%	DCM/NDLVC with moderate LV impairment: EF30-45%	DCM/NDLVC with severe LV impairment: EF<30% or NHYA class III/IV



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Stratifikace rizika – mWHO 2.0

mWHO 2.0 I	mWHO 2.0 II	mWHO 2.0 II–III	mWHO 2.0 III	mWHO 2.0 IV
Ventricular (dys)function + pulmonary hypertension				
		Mild left ventricular impairment: EF >45%. Significantly impaired RV (subpulmonary) function.	Moderate left ventricular impairment: EF 30%–45%. Previous PPCM with not more than mild residual left ventricular impairment.	Severe left ventricular impairment: EF <30% or NYHA class III/IV. Previous PPCM with more than mild left ventricular impairment. PAH.
Arrhythmias				
Atrial or ventricular ectopic beats, isolated.	Most supraventricular arrhythmias. Bradycardia requiring pacemaker.	Low-risk LQTS: no previous events + on full dose beta-blocker therapy. Low-risk CPVT: well controlled by medical therapy. BrS with no previous events.	Sustained ventricular tachycardia from any aetiology. LQT2 (post-partum). Symptomatic CPVT and LQTS not adequately controlled by therapy. BrS with previous events.	
Cardiomyopathy				
HCM: genotype-positive + phenotype-negative.		Low-risk ARVC: genotype-positive + no or mild phenotype. HCM without complications. DCM/NDLVC with normal or mild left ventricular impairment: EF >45%.	ARVC with moderate/severe disease. HCM with arrhythmic and/or moderate haemodynamic complications. DCM/NDLVC with moderate left ventricular impairment: EF 30%–45%.	DCM/NDLVC with severe left ventricular impairment: EF <30% or NYHA class III/IV. HCM with symptomatic severe outflow tract obstruction: ≥50 mmHg. HCM with severely symptomatic LV dysfunction (EF <50%).
Congenital heart disease				
Successfully repaired simple lesions without significant residual (haemodynamic) complications (atrial or ventricular septal defect, patent ductus arteriosus, anomalous pulmonary venous drainage).	Unoperated uncomplicated atrial or ventricular septal defect. Repaired tetralogy of Fallot without significant residual haemodynamic/arrhythmic lesions. Transposition of the great arteries with arterial switch without significant residual lesions.	Repaired atrioventricular septal defect without significant residual lesions. Uncomplicated Ebstein anomaly: mild to moderate TR, no tricuspid stenosis, no accessory pathway.	Unrepaired cyanotic heart disease (not Eisenmenger). Systemic RV with good or mildly decreased ventricular function. Uncomplicated Fontan circulation: good ventricular function, no significant valve disease or arrhythmias, good exercise tolerance, and normal arterial saturations. Ebstein anomaly with any complication.	Systemic RV with moderate or severely decreased ventricular function. Fontan with any complication. Eisenmenger syndrome.

mWHO 2.0 I	mWHO 2.0 II	mWHO 2.0 II–III	mWHO 2.0 III	mWHO 2.0 IV
Valvular heart disease				
Small or mild • pulmonary stenosis • mitral valve prolapse without significant regurgitation.		Native, homograft or tissue valve disease not considered mWHO 2.0 I or IV: mild mitral stenosis, moderate aortic stenosis. Moderate valvular regurgitation.	Uncomplicated mechanical valve with stable well controlled INRs. Moderate mitral stenosis. Severe asymptomatic aortic stenosis. Severe left-sided valvular regurgitation.	Severe mitral stenosis. Severe symptomatic aortic stenosis.
Aortopathy				
Non-HTAD mild aortic dilatation (<40 mm).	Turner syndrome without cardiovascular features (BAV, coarctation, AHT, aortic dilatation).	Marfan or other HTAD syndrome without aortic dilatation. Aorta <45 mm in BAV pathology. Repaired coarctation.	Moderate aortic dilatation: 40–45 mm in Marfan syndrome or other HTAD; 45–50 mm in BAV, Turner syndrome ASI 20–25 mm/m^2, other aortic dilatation <50 mm. Marfan with previous aortic root replacement. Previous aortic dissection with stable diameter.	Severe aortic dilatation: >45 mm in Marfan syndrome or other HTAD, >50 mm in BAV, ASI >25 mm/m^2 in Turner syndrome, other aortic dilatation >50 mm. Vascular Ehlers–Danlos syndrome. Severe (re)coarctation. Previous aortic dissection with increasing diameter.
Acquired + coronary heart disease + other				
			Prior SCAD. Prior ischaemic cardiac event (STEMI/NSTE ACS). Prior adverse pregnancy outcome requiring hospitalization. Prior adverse cardiovascular effects of cancer treatment.	

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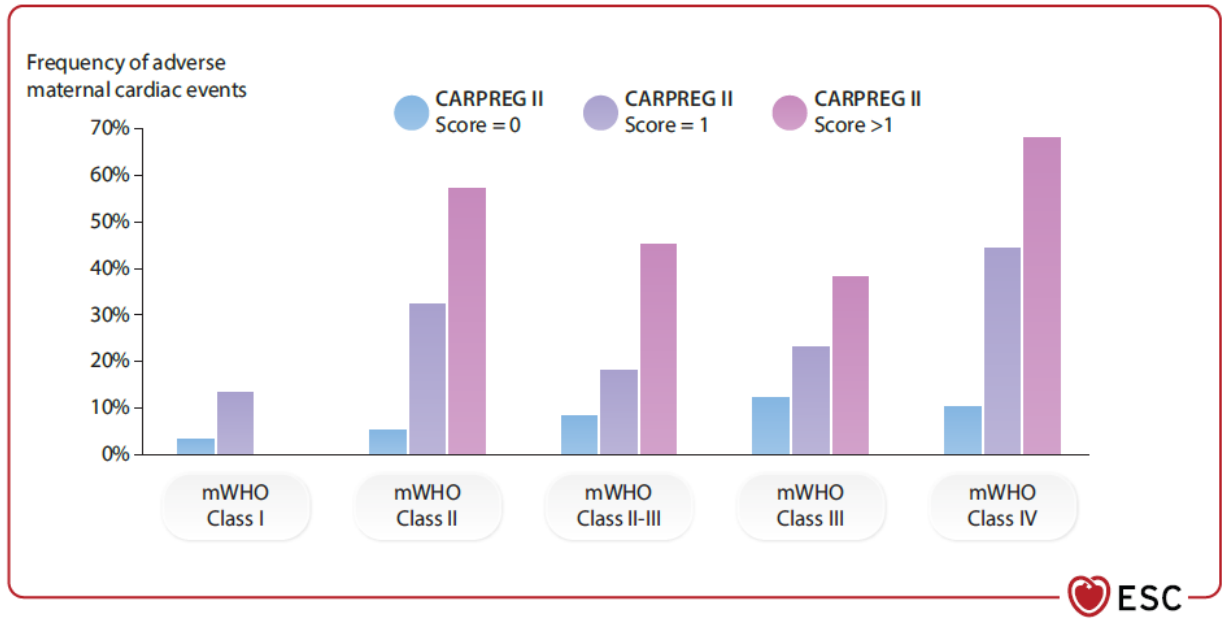
Klasifikace mWHO 2.0 rozšířena o další KVO a zpřesněna začleněním studie Cardiac Disease in Pregnancy (CARPREG) II

	mWHO 2.0 I	mWHO 2.0 II	mWHO 2.0 II-III	mWHO 2.0 III	mWHO 2.0 IV
Risk description	No detectable increase in mortality & no/mild increase in morbidity	Small increase in mortality or moderate increase in morbidity	Intermediate increase mortality or mod/severe increase morbidity	Significant increase in mortality or severe morbidity	Extremely high risk of mortality or severe morbidity
MCE rates Vanhagen et al 2016 Silversides et al 2018	 9.9% 3.1%	 7.7% 21.7%	 17.7% 12.8%	 28.9% 21.1%	 50.3% 35.6%

Utilise additional risk scoring with CARPREG II study

CARPREG II: 1 point	CARPREG II: 2 points	CARPREG II: 3 points
No prior intervention indicated Late presentation	Ventricular dysfunction High-risk left sided heart disease or outflow tract obstruction Pulmonary hypertension Coronary artery disease High-risk aortopathy	Prior cardiac event/arrhythmia Baseline NYHA III/IV or cyanosis Mechanical valve



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Stratifikace rizika – mWHO 2.0

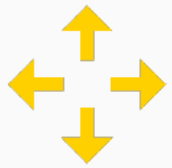
mWHO 2.0 IV	
Risk	
Extremely high risk of maternal mortality or severe morbidity	
2018	**2025**
Pregnancy contrain-dicated: if pregnancy occurs, termination should be discussed	Expert counselling by Pregnancy Heart Team is required, with clear and thorough discussion of very high pregnancy risk and shared decision-making process for termination if pregnancy occurs
Class III	**Class I**

Vascular Ehlers Danlos syndrome (section 8)

Aortic dissection (section 8)

Fontan with complication (section 9)

Pulmonary Arterial Hypertension (section 10)



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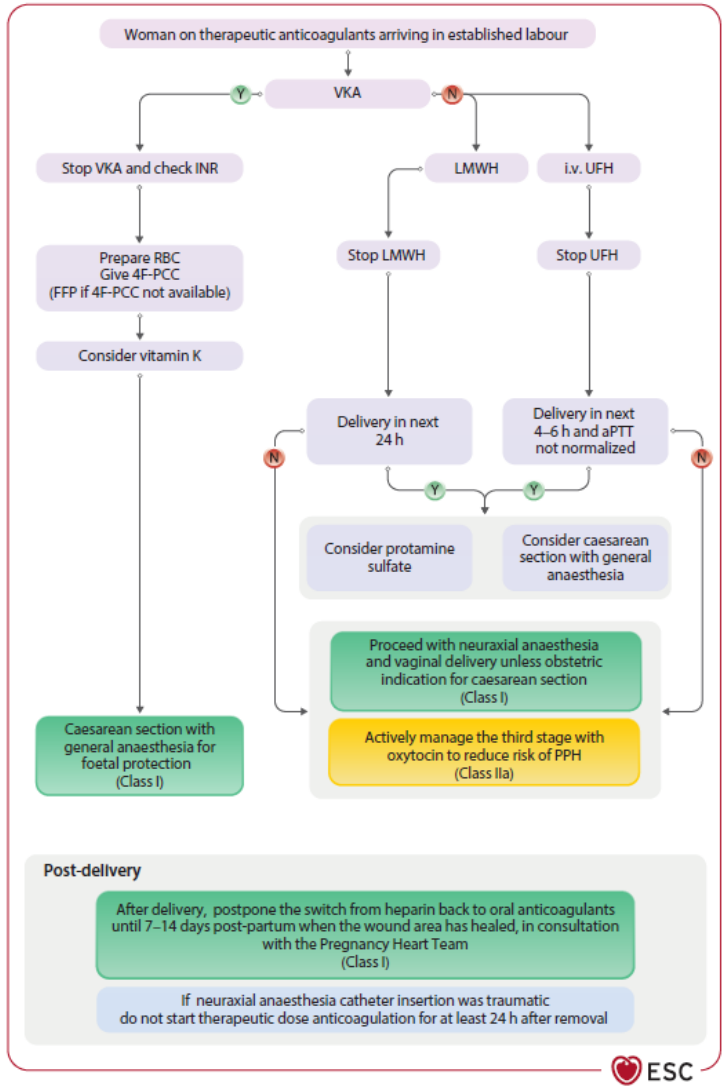
Porod

Recommendations	Class	Level
Timing and mode of delivery		
Vaginal delivery is recommended in most women with CVD.	I	B

Caesarean section is the preferred mode of delivery for

- obstetric indications
- for women presenting in labour who use or have used VKA within the past 2 weeks
- with high-risk aortopathy (mWHO 2.0 class III)
- with hypertrophic cardiomyopathy and severe left ventricle outflow tract obstruction
- acute intractable HF

Management akutního porodu u žen na antikoagulační léčbě



new

new

new

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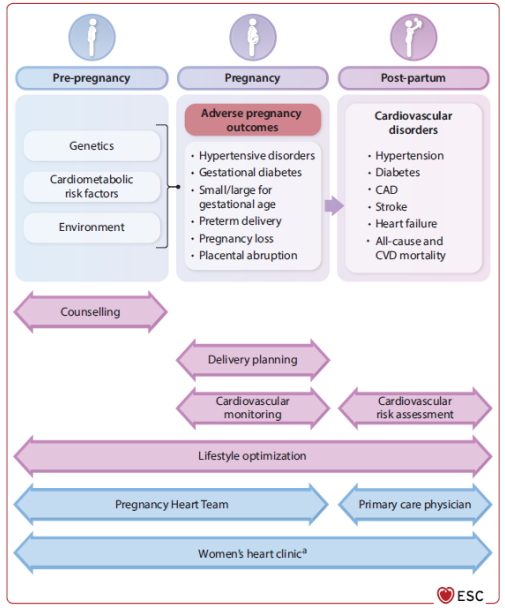
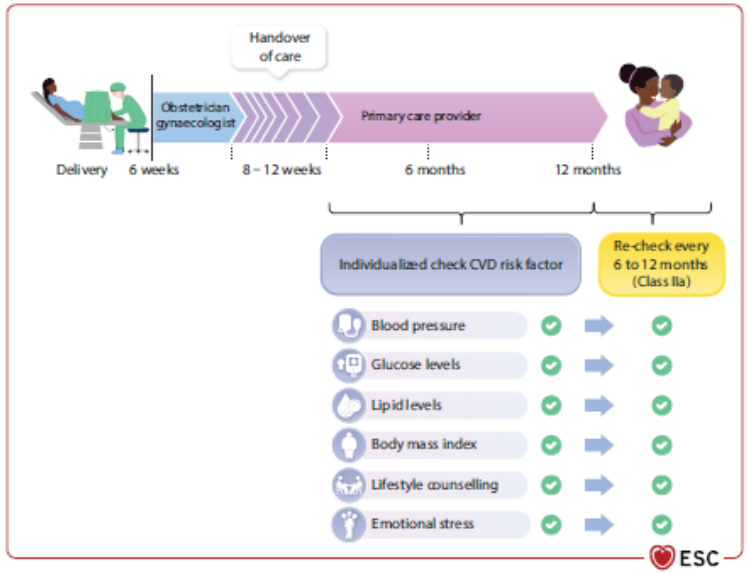
Adverse pregnancy outcomes

Nepříznivé těhotenské výsledky jsou skupinou vzájemně souvisejících poruch, které sdílejí společné mechanismy.

Recommendations	Class	Level
It is recommended to undertake a cardiovascular risk assessment in women with APOs, to recognize and document APOs when CVD risk is evaluated in women, and to provide counselling on the importance of healthy lifestyle choices that optimize cardiovascular health.	I	B





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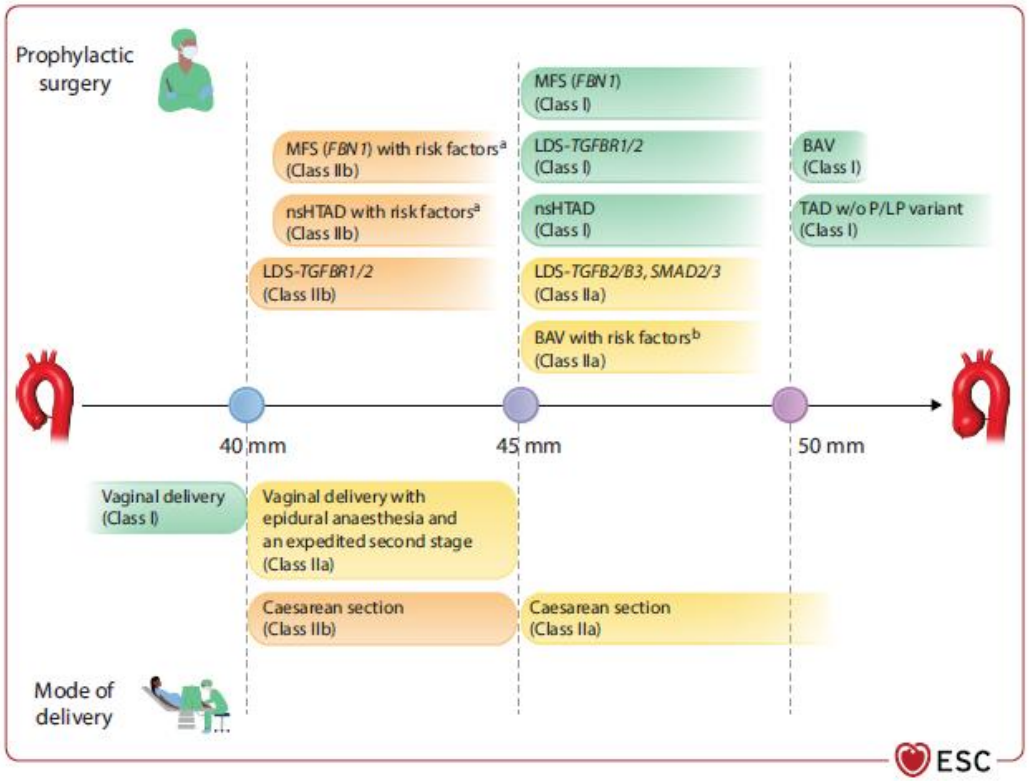
Management žen s aortopatiemi

Recommendations	Class	Level
It is recommended that indications for pre-pregnancy aortic root and/or ascending aortic surgery are guided by aortic morphology, underlying pathology, family history, genetic variant, previous vascular events, and patient's preference.	I	C



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Management žen s VSV

ACHD	Maternal Risk	Obstetric and foetal risk	Monitoring	Pregnancy management & delivery
Left ventricular outflow tract obstruction (LVOTO)				
Shunt lesions				
Pulmonary valve & RVOT disease				
TOF				
Ebstein anomaly				
Transposition of the great arteries				
Single ventricle physiology palliated with Fontan circulation				
Unrepaired cyanotic ACHD (without pulmonary hypertension)				

ACHD	Maternal Risk	Obstetric and foetal risk	Monitoring	Pregnancy management and delivery
Left ventricular outflow tract obstruction (LVOTO)				
Coarctation of the aorta	• ↑ Complication risk if residual obstruction (gradient >20 mmHg, aortic lumen <12 mm), clinical signs of HF, LVEF <40%, NYHA class>1[9] • ↑ Risk of aortic dissection (if aneurysm present) • Uncontrolled hypertension[9]	• ↑ Miscarriage rate[453] • Pre-term birth and low birth weight in 9%[9]	• Close BP monitoring —also early post-partum • Pre-pregnancy CMR and treatment of residual lesions[454]	• Treat hypertension[a] • Consider bed rest, hospital admission and stenting in case of severe symptomatic (re)coarctation (including refractory hypertension or maternal/foetal compromise)[455] • Vaginal delivery preferred unless aneurysm, HF, severe hypertension

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Management žen s PAH

Recommendations	Class	Level
It is recommended to provide clear contraceptive advice to women of childbearing potential with PAH.	I	C
Endothelin receptor antagonists, riociguat, and selexipag are not recommended during pregnancy.	III	C

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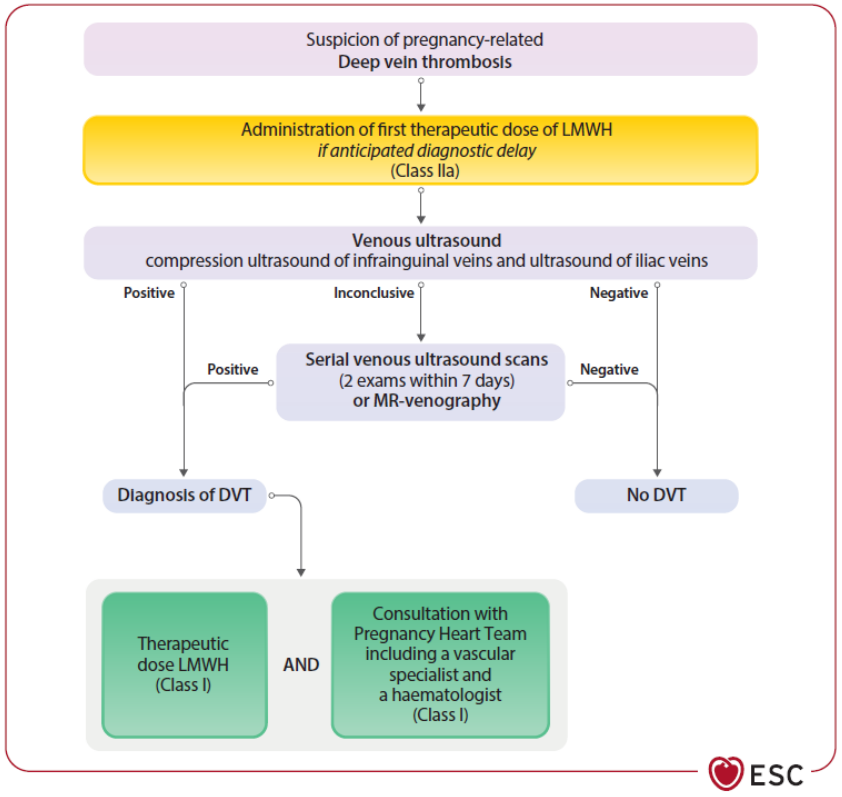
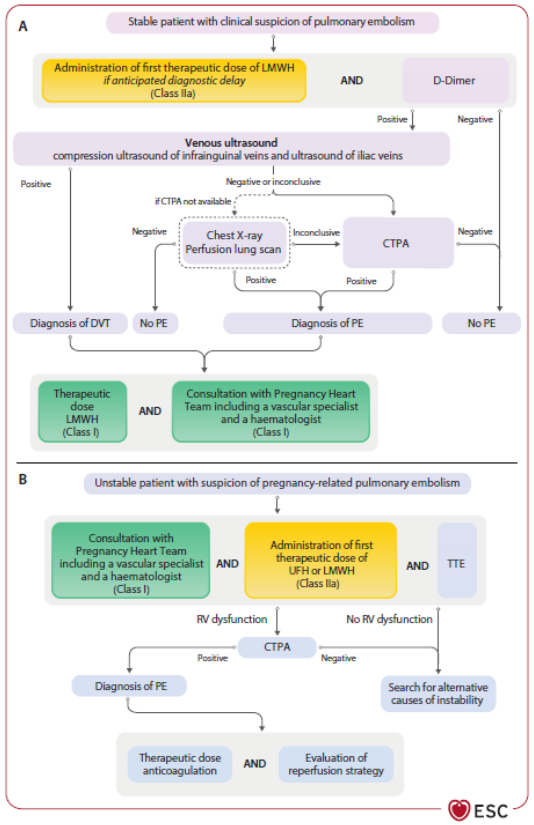
Management žen s VTE

Recommendations	Class	Level
In pregnant women or women in the post-partum period with suspicion of VTE (DVT and/or PE), an immediate formal diagnostic assessment with validated methods is recommended and should not be postponed.	I	B





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Trombofrofylaxe v těhotenství

Medical conditions	Antepartum thromboprophylaxis	Post-partum thromboprophylaxis
History of unprovoked VTE	👍	👍
History of hormone-associated VTE	👍	👍
Homozygous factor V Leiden mutation	👍	👍
Heterozygous factor V Leiden mutation	👎	👎
Homozygous prothrombin gene mutation	👍[a]	👍
Heterozygous prothrombin gene mutation	👎	👎
Antithrombin deficiency	👍[a]	👍[a]
Antiphospholipid syndrome	👍[b]	👍
Protein C or S deficiency	👎	👍[a]
Combined thrombophilia	👍	👍

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Management KVO a těhotenství – update 2025

Topic	New information	Rationale
Clinical scenarios	Algorithms for management of clinical situations in pregnant women	Provide practical information for the clinical cardiologist
Clinical data and research	ROPAC and PPCM registries Cardiomyopathies Primary arrhythmia syndromes Arrhythmias expanded	New or updated clinical management
Genetic testing and counselling	Advancements in testing and pre-implantation procedures	Incorporation of latest management of genetic testing and counselling
Special populations	Heart transplant and Cardio-oncology	

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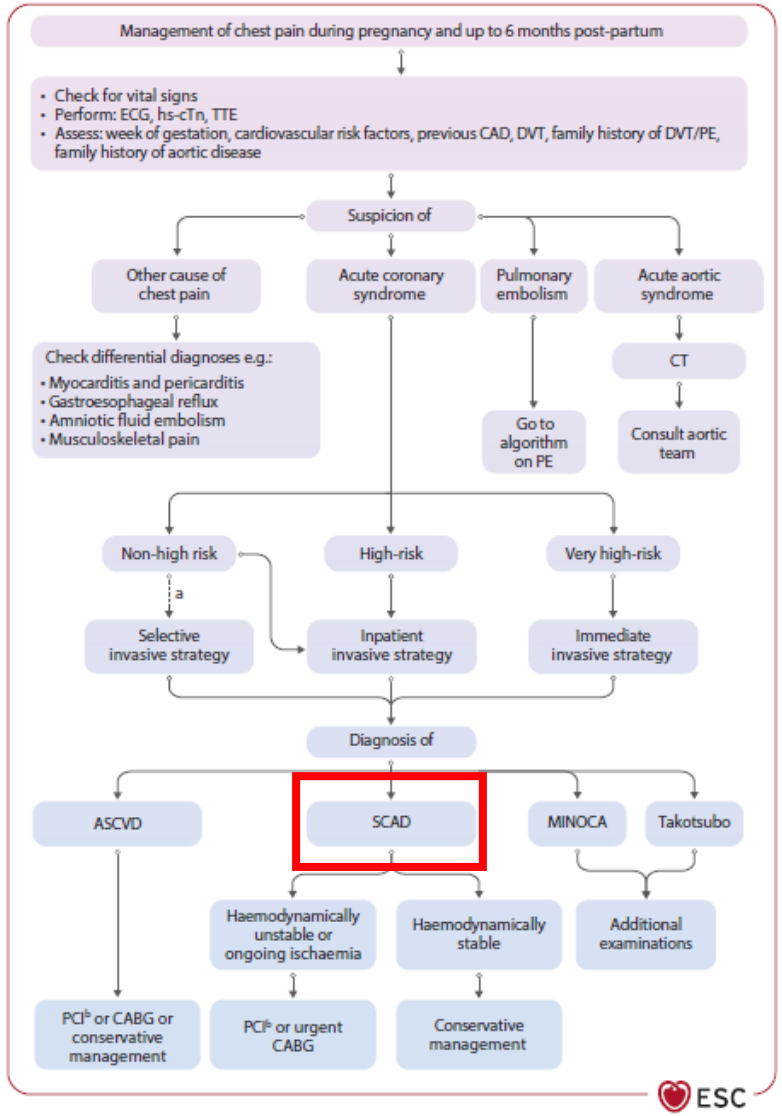
Management bolestí na hrudi v těhotenství



Diagnostics and treatments are as in non-pregnant patients

Pregnant women are younger than the typical ACS patient

Pregnancy specific:

- **Pulmonary embolism**
- **Acute aortic syndrome**
- **Spontaneous coronary artery dissection**

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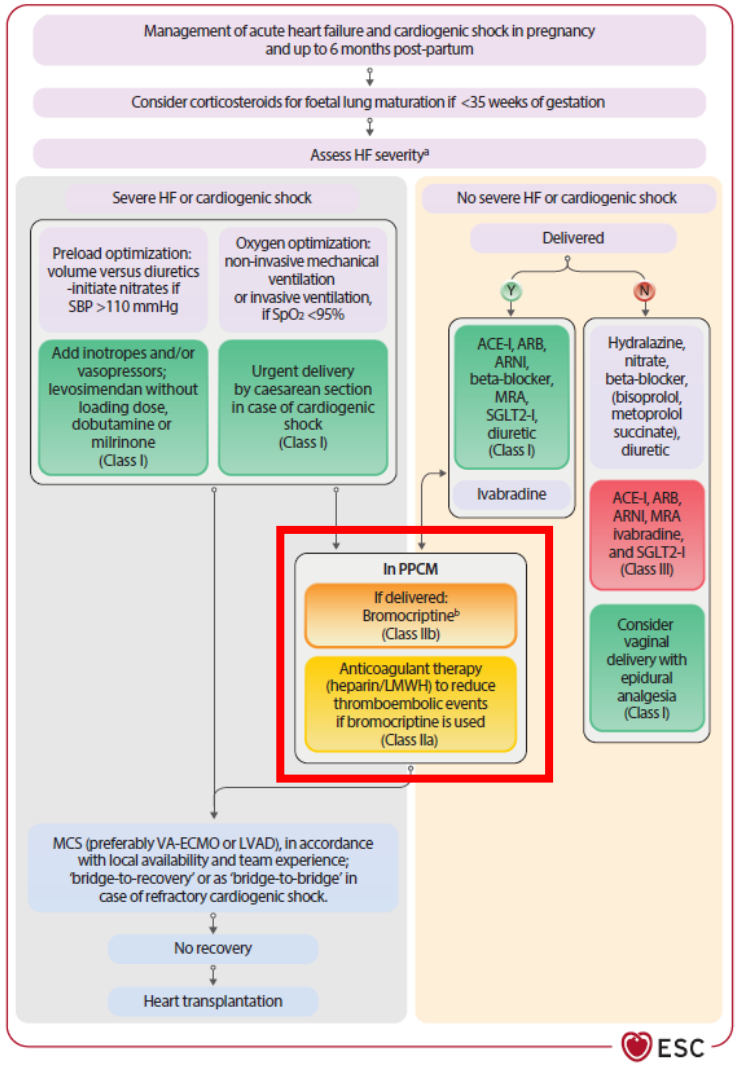
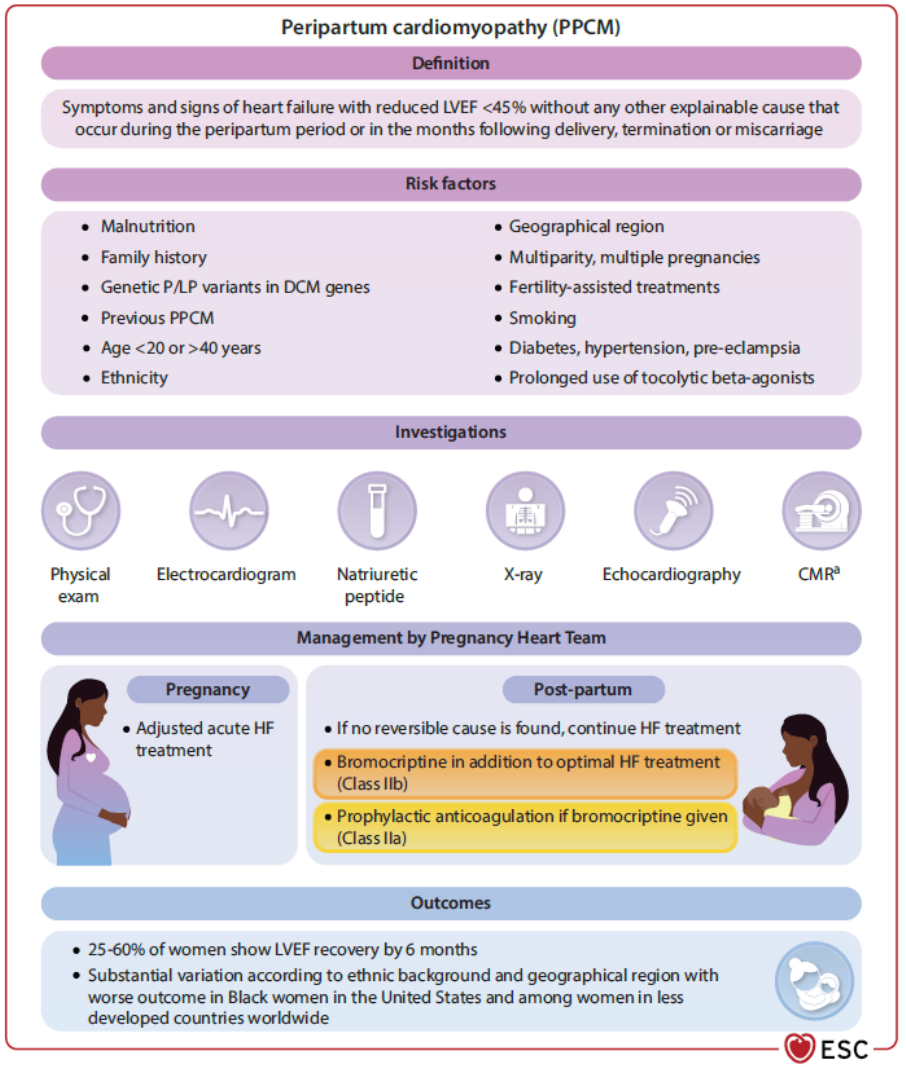
Akutní srdeční selhání a peripartální kardiomyopatie





De Backer J et al., European Heart Journal (2025) 00, 1–107

Peripartální kariomyopatie

Modified WHO 2.0 classification of maternal CV risk

ESC

mWHO 2.0 I	mWHO 2.0 II	mWHO 2.0 II–III	mWHO 2.0 III	mWHO 2.0 IV
Ventricular (dys)function				
		Mild left ventricular impairment: EF >45% Significantly impaired RV (sub-pulmonary) function	Moderate left ventricular impairment: EF 30%–45% Previous PPCM with not more than mild residual left ventricular impairment	Severe left ventricular impairment: EF <30% or NYHA class III/IV Previous PPCM with more than mild left ventricular impairment PAH

Section 7. Peripartum cardiomyopathy		
Genetic counselling and testing should be considered in women with PPCM.	IIa	C
When a reversible course of HF is assumed, treatment in accordance with HF guidelines should be considered for at least 12 months after complete LV recovery (normalization of LV volumes and EF).	IIa	C

A genetic etiology is not considered as a reversible cause.

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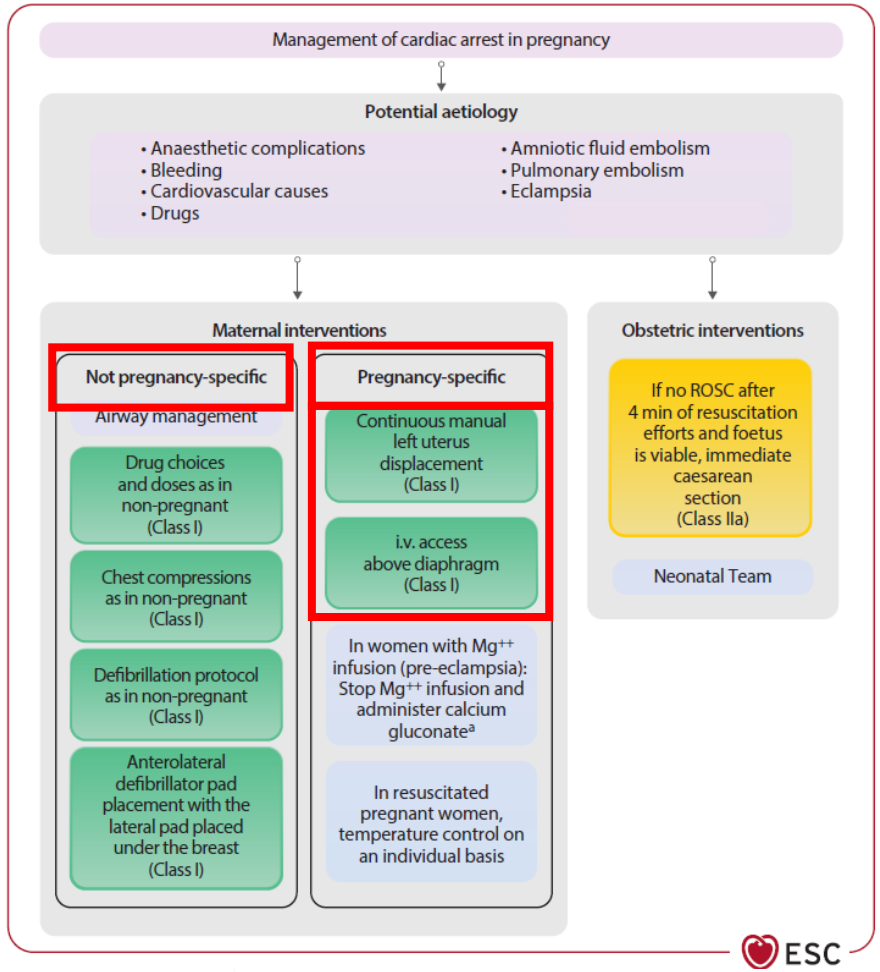
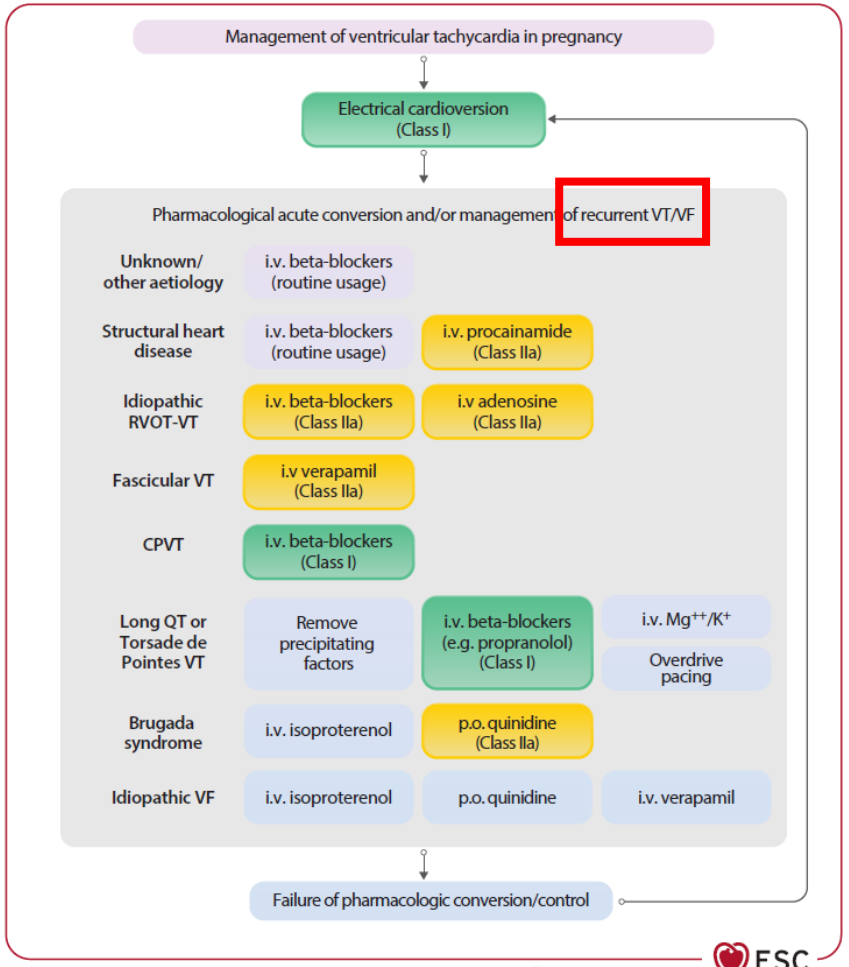
Srdeční zástava a komorové arytmie





new

It is recommended that no drugs are withheld in pregnant women with cardiac arrest due to concerns of teratogenicity. | I | C

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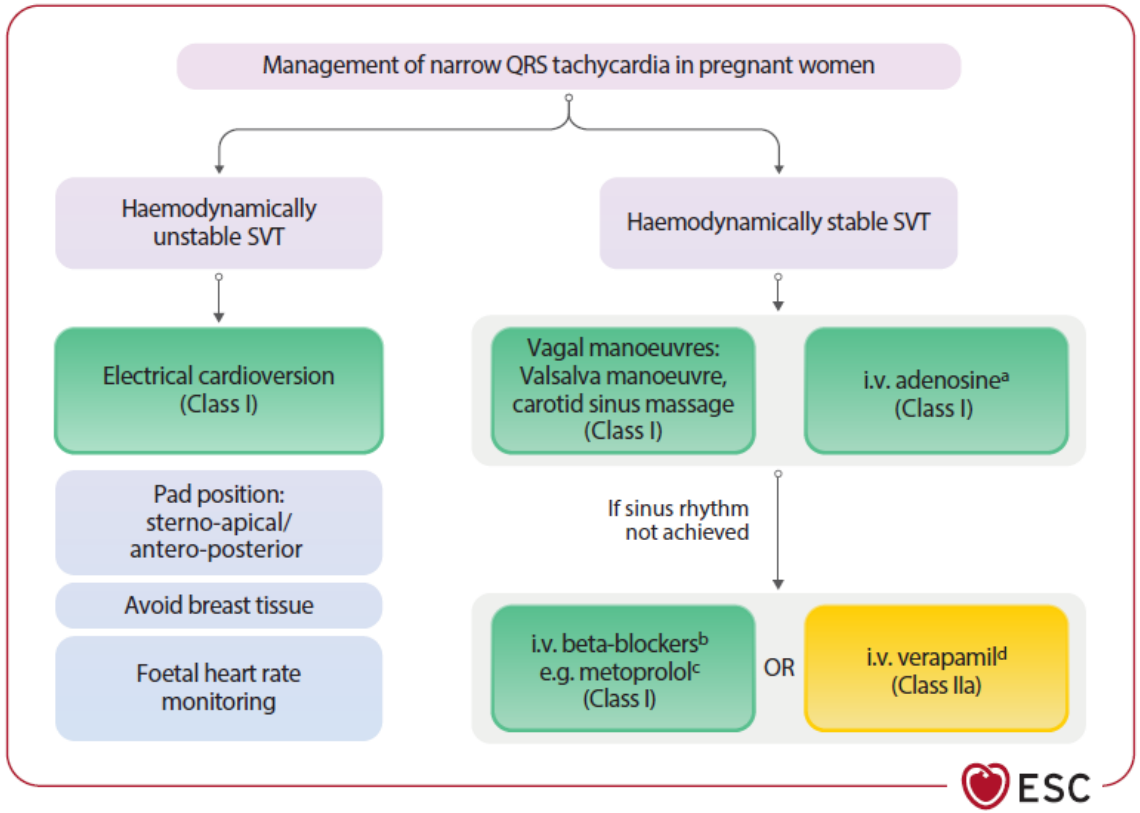
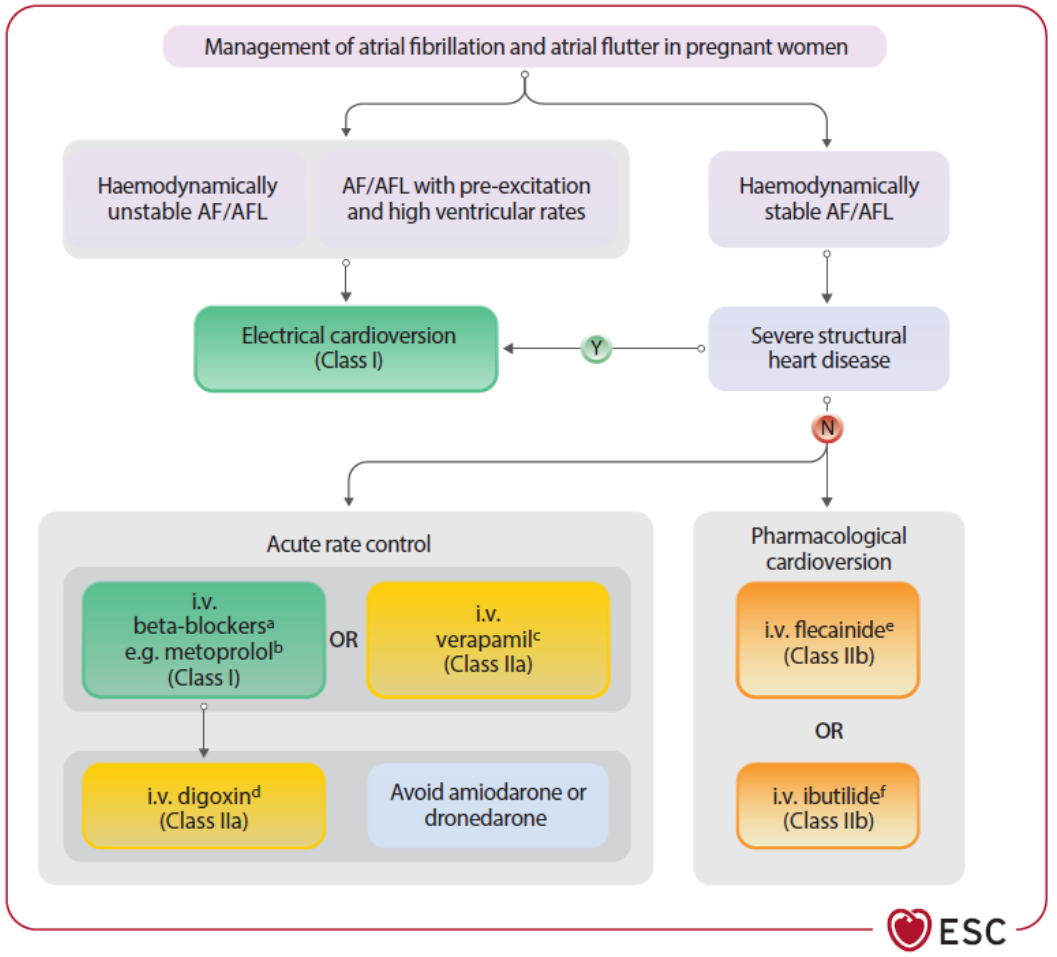
SVT





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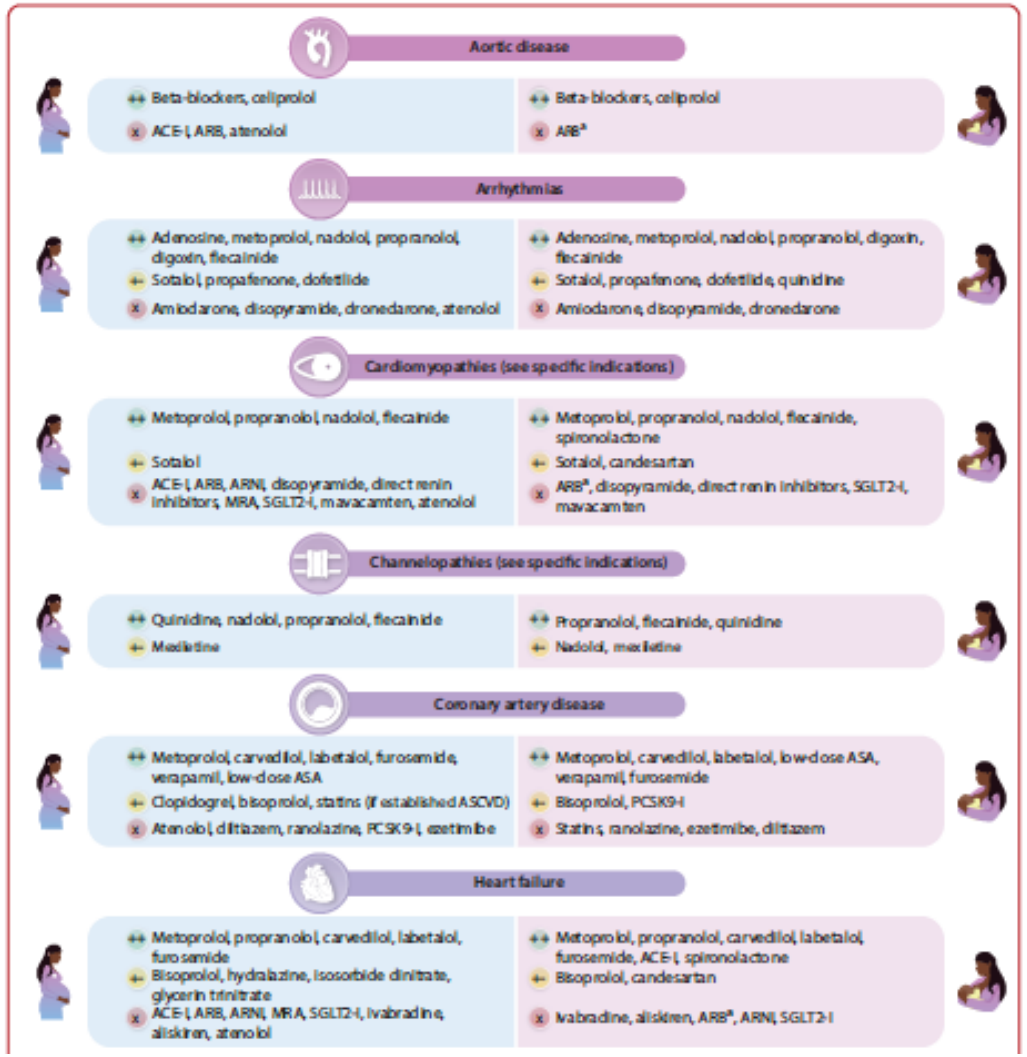
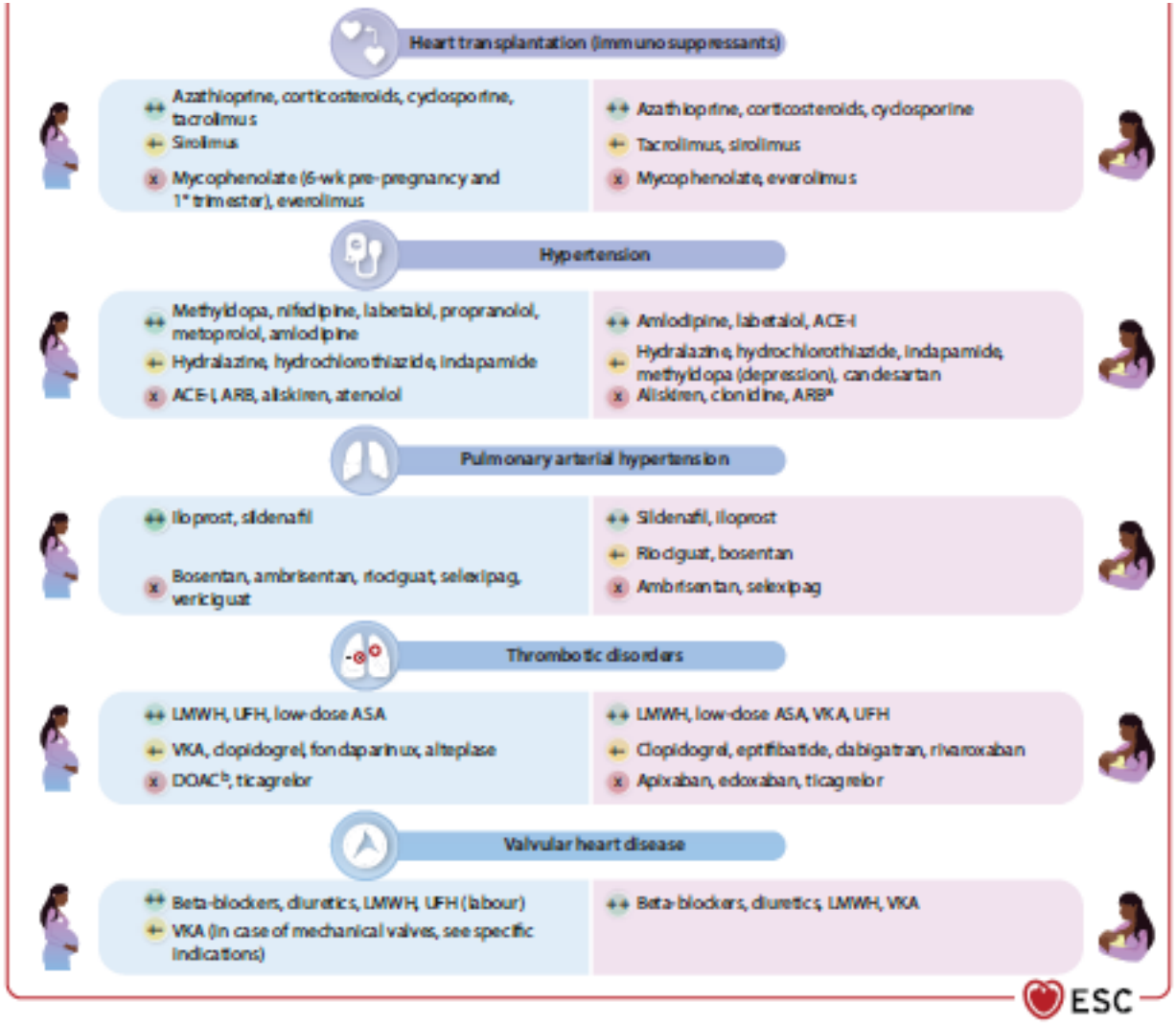
Léky v těhotenství a v průběhu laktace





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De Backer J et al., European Heart Journal (2025) 00, 1–107, **podrobně Table S4**

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Antikoagulace v těhotenství

Indication	Type of anticoagulant	Dosing	Timing
Low thrombosis risk			
VTE prevention/no indication for oral anticoagulation	LMWH	Prophylactic dose	o.d.
Uncomplicated Fontan circulation	LMWH	Prophylactic dose	o.d.
Intermediate thrombosis risk			
VTE (DVT/PE) during pregnancy	LMWH	Therapeutic dose	o.d. or b.i.d.
Persistent/permanent AF at elevated thromboembolic risk	LMWH	Therapeutic dose	o.d. or b.i.d.
Decreased ventricular function (EF <35%) and/ or intracardiac thrombus	LMWH	Therapeutic dose	o.d. or b.i.d.
High thrombosis risk			
Mechanical heart valves			
1. First trimester			
Low VKA dose to achieve required INR	First trimester: VKA or LMWH	INR: weekly to every 2 weeks	
		LMWH: dose adjusted to peak anti-factor Xa level	b.i.d.
High VKA dose to achieve required INR	Switch to LMWH	Dose adjusted to peak anti-factor Xa level (weekly until threshold, every 2–4 weeks thereafter)	b.i.d.
2. From week 13: shared decision a. Continue/switch to VKA with weekly to every 2 weeks INR b. Continue LMWH with dose adjustment as above Delivery: refer to Section 4.5.7.2 (for urgent delivery) and Section 4.5.7.1 (for planned delivery)			

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Primární arytmické syndromy a kardiomyopatie

mWHO 2.0 I	mWHO 2.0 II	mWHO 2.0 II–III	mWHO 2.0 III	mWHO 2.0 IV
Arrhythmias				
Atrial or ventricular ectopic beats, isolated	Most supraventricular arrhythmias Bradycardia requiring pacemaker	Low-risk Long QT syndrome: no previous events + on full dose beta-blocker therapy Low-risk CPVT: well controlled by medical therapy Brugada Syndrome with no previous events	Sustained ventricular tachycardia from any aetiology LQT2 (post-partum) Symptomatic CPVT and LQTS not adequately controlled by therapy Brugada Syndrome with previous events	
Cardiomyopathy				
HCM: genotype-positive + phenotype-negative		Low-risk ARVC: genotype-positive + no or mild phenotype HCM without complications DCM/NDLVC with normal or mild left ventricular impairment: EF >45%	ARVC with moderate/severe disease HCM with arrhythmic and/or moderate haemodynamic complications DCM/NDLVC with moderate left ventricular impairment: EF 30%–45%	DCM/NDLVC with severe left ventricular impairment: EF <30% or NYHA class III/IV HCM with symptomatic severe outflow tract obstruction: ≥50 mmHg HCM with severely symptomatic LV dysfunction (EF <50%)

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Primární arytmické syndromy a kardiomyopatie

Recommendations	Class	Level
Section 6. Pregnancy in women with cardiomyopathies and primary arrhythmia syndromes cont.		
It is recommended that women with HCM with symptomatic LV dysfunction (EF <50%) and or severe LVOTO (≥50 mmHg) wishing to become pregnant are counselled by the Pregnancy Heart Team regarding the high risk of pregnancy-related adverse events.	I	C
Myosin inhibitors are not recommended in women during pregnancy due to lack of safety data.	III	C
Beta-blockers, with pre-pregnancy dose and with nadolol and propranolol as drugs of choice, are recommended during pregnancy in women with LQTS.	I	B
It is recommended to continue beta-blocker therapy during lactation in women with LQTS to reduce arrhythmic risk.	I	B
Pre-pregnancy dose beta-blockers with nadolol or propranolol is recommended in patients with LQT2, particularly in the post-partum period, which represents a high-risk period for life-threatening arrhythmias.	I	B
Beta-blockers, with pre-pregnancy dose and with nadolol and propranolol as drugs of choice, are recommended during pregnancy and lactation in women with CPVT.	I	C

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OTS a kardioonkologie

NEW

Recommendations for heart transplantation and pregnancy

Recommendations	Class	Level
It is recommended to **postpone pregnancy until at least 1 year after heart transplantation**, taking individual risk factors into account.	I	C
In women with a heart transplant, it is recommended that **immunosuppression serum drug levels are monitored** during pregnancy every 4 weeks until the 32nd week, then every 2 weeks until the 36th week, then weekly until delivery, and for 6–12 months after delivery to guide dosing.	I	C
Mycophenolic acid therapy is not recommended in pregnancy and should be discontinued 6 weeks before conception.	III	C

Recommendations for cardio-oncology and pregnancy

Recommendations	Class	Level
It is recommended that pregnant women with cancer who require cardiotoxic cancer therapy are jointly **managed by the Pregnancy Heart Team and the cardio-oncology team.**	I	C
Cardiac troponin and NP measurements may be considered at baseline and during anthracycline chemotherapy in pregnant women with cancer.	IIb	C

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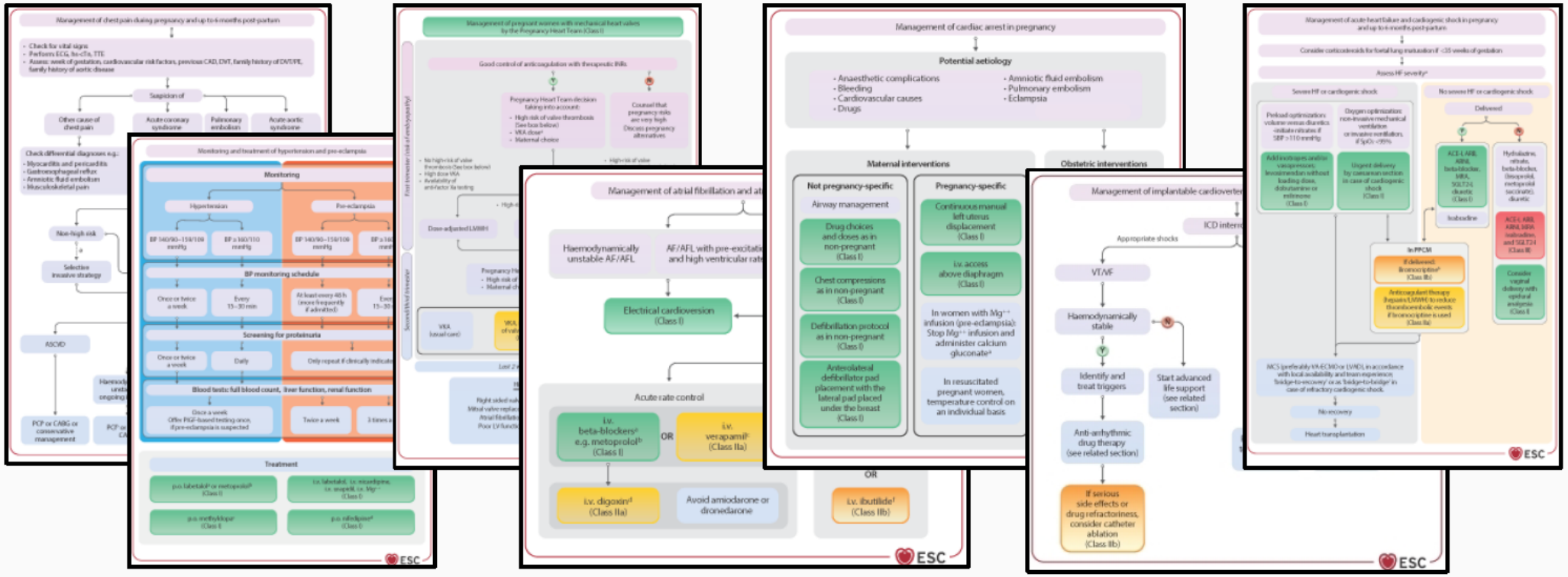
Závěr

Clinical scenarios



In life-threatening situations, diagnostics and treatments should be the same as in non-pregnant women

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