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Nurse Navigation Supports Implementation of Guideline Based Care

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Background

- 2022 ESC guidelines are first published by large multi-national cardiovascular professional society with both cardiology and oncology participation
- CV risk factors, cancer type and treatment have unique treatment considerations
- Barriers to guideline application may differ between institutions but include completion of imaging and blood work, finalized oncology treatment plan, and incomplete baseline CV assessment
- Steps to actualize guidelines into practice are not included in guideline and are recognized as potentially unfeasible

Institution

Background & Methods

- Community based cardio-oncology program within nonprofit healthcare system
- Risk stratification previously done at initial consult
- Referrals primarily received from oncologists and breast surgery
- 2-3 providers from cardiology seeing referrals to cardio-oncology specialty. 1 Certified by ICOS in cardio-oncology. Silver Center of Excellence
- Prior nurse navigator time-share between other cardiac specialty. Time-share scheduler. Medical assistants and sonographers from within cardiology department.
- Addition of full time nurse navigator October 2023 allowed for increased surveillance and monitoring

Key program questions to address

What guidelines and resources are available for cardio-oncology planning?

What is the practice for cardiac surveillance, and for what treatment regimens?

What infrastructure changes are needed by cardiology to facilitate surveillance?

Example of process using 2022 ESC guideline risk stratification

- Obtain treatment plan
- Collect existing patient data
- Identify gaps between patient data and guidelines
- Order testing as needed prior to initial consult

2. Cardiovascular toxicity risk stratification before anticancer therapy

2.1. General approach to cardiovascular toxicity risk in patients with cancer

Table S2 Baseline cardiovascular toxicity risk assessment of patients treated with anthracycline chemotherapy

Risk factor	Score	Level of evidence
Previous CVD		
HF or cardiomyopathy	Very high	B
Severe VHD	High	C
MI or previous coronary revascularization (PCI or CABG)	High	C
Stable angina	High	C
Cardiac imaging		
Baseline LVEF <50%	High	B
Borderline LVEF 50–54%	Medium2	C
Cardiac biomarkers (where available)		
Elevated baseline troponin ^a	Medium1	C
Elevated baseline BNP or NT-proBNP ^a	Medium1	C
Demographic and CVRF		
Age ≥ 80 years	High	B
Age 65–79 years	Medium2	B
Hypertension ^b	Medium1	B
DM ^c	Medium1	C
Chronic kidney disease ^d	Medium1	C
Previous cardiotoxic cancer treatment		
Previous anthracycline exposure	High	B
Prior RT to left chest or mediastinum	High	C
Previous non-anthracycline-based chemotherapy	Medium1	C
Lifestyle risk factors		
Current smoker or significant smoking history	Medium1	C
Obesity (BMI > 30 kg/m ²)	Medium1	C

Adapted from Lyon et al. (2020)¹⁰ with permission.
BMI, body mass index; BNP, B-type natriuretic peptide; BP, blood pressure; CABG, coronary artery bypass graft; CVD, cardiovascular disease; CVRF, cardiovascular risk factor; DM, diabetes mellitus; eGFR, estimated glomerular filtration rate; HbA1c, glycated haemoglobin; HF, heart failure; LVEF, left ventricular ejection fraction; MI, myocardial infarction; NT-proBNP, N-terminal pro-B-type natriuretic peptide; PCI, percutaneous coronary intervention; RT, radiotherapy; ULN, upper limit of normal; VHD, valvular heart disease.
Risk level: Low risk, no risk factors OR one medium 1 risk factor; medium risk, medium risk factors with a total of 2–4 points; high risk, medium risk factors with a total of ≥5 points OR any high-risk factor; very-high risk, any very-high-risk factor.
Medium1 = 1 point.
Medium2 = 2 points.
^aBased above the ULN for local laboratory reference range.
^bSystolic BP > 140 mmHg or diastolic BP > 90 mmHg, or on treatment.
^cHbA1c > 7.0% or > 53 mmol/mol, or on treatment.
^deGFR < 60 mL/min/1.73 m².

Results

- Through program discussion, 2022 ESC guidelines are internationally recognized and utilized by providers during consults. These guidelines are readily available and can be utilized by nursing as well.
- Surveillance is dependent upon patient risk level and requires a complete risk assessment for individual therapies.
- Triage of referral by nurse navigation includes initial ESC risk stratification and identifies gaps. Pre-visit testing orders are then placed by navigator for patients as needed and reviewed/signed by prescribing provider.
- Echoes scheduled prior to visit as needed and reminders made to all patient to have other pre-visit testing complete.

Conclusions

Initial cardio-oncology consult is more complete utilizing this process, allowing for individualized risk assessment and care planning. Specialist is then able to make immediate recommendations, important given time sensitive course of care. Nurse navigator review of patients is needed for timely identification of barriers to incorporating comprehensive CV risk factors and guideline base therapies.

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