Current Status of Cardio-Oncology in Spain: A National Multidisciplinary Survey

National Cardio-oncology Working Group

To allow us to evaluate the current status of cardio-oncology in Spain, please, answer the following questions:

1. Age: ______ years old
2. Sex: □Male □Female
3. Specialist: □ Cardiologist □ Medical oncologist □ Radiation oncologist □ Hematologist
4. Professional Role: □ Division chief □ Head of section □ Attending physician
5. Number of medical staff at your department: ________________________________
6. Region: ________________________________
7. Type of Institution: □ Tertiary hospital □ Secondary hospital □ Outpatient clinic □ County hospital
8. Referral hospital population: ________________________________
9. Number of beds: ________________________________

10. Please indicate which of the following descriptions most accurately defines your current clinical cardio-oncology service:
    □ We have a structured cardio-oncology unit (COU).
    □ We have a dedicated cardiologist in charge of the care of patients with cancer-related cardiovascular complications.
    □ We do not have a structured COU.
    □ None at present but we plan to add these services in the near future.
11. In your opinion, what are the main barriers to the establishment of a COU in your center?
   □ Other departmental priorities.
   □ Lack of funding.
   □ Absence of evidence-based guidelines and specialized attending physicians.
   □ Others (please specify): ________________________________________

12. Do you think it is necessary to implement a structured network among different specialties involved in the care of cancer patients?
   Please score the perceived importance from 1 (least important) to 10 (most important).
   
   1  2  3  4  5  6  7  8  9  10

13. Do you think it is important to develop a standardized protocol for the follow-up of CV complications?
   Please score the perceived importance from 1 (least important) to 10 (most important).
   
   1  2  3  4  5  6  7  8  9  10

14. Do you consider it essential to identify and treat CV risk factors in cancer patients?
   Please score the perceived importance from 1 (least important) to 10 (most important).
   
   1  2  3  4  5  6  7  8  9  10

15. In patients scheduled to receive a potentially cardiotoxic treatment, do you perform a baseline cardiac assessment?
   □ All patients are evaluated by a cardiologist.
   □ Patients are evaluated by a cancer specialist who decides whom to refer for cardiology consultation.
   □ Patients are only evaluated by a cancer specialist.
   □ Patients do not receive cardiac assessment at baseline.
16. **How important should monitoring patients for CV complications during cancer treatment be considered?**
   Please score the perceived importance from 1 (least important) to 10 (most important).

17. **Are patients receiving cardiotoxic drugs monitored during treatment?**
   - ☐ Yes, our institution has a specific protocol for cardiotoxicity.
   - ☐ Yes, but monitoring is carried out without a specific protocol.
   - ☐ No monitoring is done, patients are assessed only if symptoms appear.

18. **Different cardiac imaging techniques are currently available for the diagnosis of cardiotoxicity. Please indicate which techniques you use in routine clinical practice, their priority, and why.**

   **a. Isotopic ventriculography (MUGA):**
   - ☐ MUGA is used in your usual clinical practice.
   - ☐ MUGA is not employed in your usual clinical practice.
   i. Priority (number your priority of use from 1 to 3, with 1 being the highest):
      1. ☐
      2. ☐
      3. ☐
   ii. If you use them, indicate the reason:
       - ☐ Availability in your center.
       - ☐ Scientific evidence.
       - ☐ Other (please specify): ____________________

   **b. Echocardiography:**
   - ☐ Echocardiography is used in your usual clinical practice.
   - ☐ Echocardiography is not used in your usual clinical practice.
   i. Priority (number your priority of use from 1 to 3, with 1 being the highest):
      1. ☐
      2. ☐
      3. ☐
   ii. If you use them, indicate the reason:
       - ☐ Availability in your center.
       - ☐ Scientific evidence.
       - ☐ Other (please specify): ____________________
c. Cardiac biomarkers (troponin, NT-proBNP):

- Cardiac biomarkers are used in your usual clinical practice.
- Cardiac biomarkers are not used in your usual clinical practice.

i. Priority (number your priority of use from 1 to 3, with 1 being the highest):
   1. □
   2. □
   3. □

ii. If you use them, indicate the reason:
   - Availability in your center.
   - Scientific evidence.
   - Other (please specify): ______________________

19. In relation to cancer patients who develop cardiac toxicity secondary to oncological treatments:

- All are jointly evaluated by oncology, hematology, radiotherapy and cardiology to plan their treatment and follow-up.
- Only patients referred by the cancer specialist are evaluated by a cardiologist.
- Patients with cardiotoxicity are assessed only by the oncologist (hematologist or radiation oncologist) who decides on their treatment and follow-up.
- Other.

20. How important is the impact of cancer treatment interruptions on cancer prognosis?
   Please score the perceived importance from 1 (least important) to 10 (most important).

   1  2  3  4  5  6  7  8  9  10

21. Do you believe long-term monitoring of cancer survivors for CV complications is valuable?
   Please score the perceived importance from 1 (least important) to 10 (most important).

   1  2  3  4  5  6  7  8  9  10

22. Please rate how strongly you agree with the following statement (1 = strongly disagree to 10 = strongly agree): “A structured network among specialties may improve the complex care of patients with cancer and cardiovascular disease”.

   1  2  3  4  5  6  7  8  9  10
23. **Your institution has the following units or resources** (you can check several options).
   - □ Cardiology department.
   - □ Interventional cardiologist.
   - □ Acute cardiovascular care unit.
   - □ Critical care unit.
   - □ Transplant program.
   - □ Cardiac surgery department.

24. **Please estimate how many consultations (inpatient and outpatient) in the cardiology service at your institution are related to oncology patients.**
   - □ < 100
   - □ 100-500
   - □ 500-1000

25. **Please estimate how many requests for echocardiography studies at your institution per year are related to oncology patients.**
   - □ < 100
   - □ 100-500
   - □ 500-1000
   - □ > 1000

26. **With regard to the previous question, what is the percentage of oncology requests in relation to the total number of echocardiograms performed by your cardiac imaging laboratory?**
   - □ < 5%
   - □ 5%-10%
   - □ 10%-15%
   - □ > 15%

27. **Please indicate the total number of new cancer cases attended annually at your department?**
   - □ < 500
   - □ 500-1000
   - □ > 1000
28. How many requests for cardiovascular imaging studies in cancer patients are performed at your institution?

- □ < 100
- □ 100-500
- □ 500-1000
- □ > 1000

Thank you so much for your help.

National Cardio-oncology Working Group