Oncocardiology Units: Experiences from Spain

Xavier Bosch
Hospital Clínic, Barcelona
Cardio-oncology Units

• **Are not:** CV imaging units performing a lot of studies + cardiology consultations to manage CV complications.

• **Are:** Structural or functional units focused on the CV health of pts with cancer (prevention, monitoring, early detection and Rx) using a multidisciplinary comprehensive approach to allow pts to receive the best possible cancer Rx at the lowest CV risk.

They should also promote education and research.
Estimated degree of cardiological assistance to patients with cancer in Spain
What are the barriers in Spain?

1) Country-level
   – Lack of a dedicated Council and Working Groups in the ESC & National Societies
   – Lack of evidence-based clinical standards & recommendations
   – Limited educational opportunities
   – Lack of support from the pharmaceutical industry

2) Hospital-level
   – Lack of institutional support. Judged as interesting but not a priority.
   – Not perceived as unmet need by Cardiology & Oncology Departments
   – Budget restriction; funding
Cardio-Oncology Unit: Resources

**Human:**
- 24 doctors from 6 departments
- 2 dedicated cardiologists at part time

**Logistics:**
- Imaging Unit, Cardiology Department
- Quick diagnosis clinic: 2 days per week
  - ECG
  - Holter ECG
  - Echocardiography-Doppler
  - Treadmill
- E-consultation to answer rapid questions
La Paz Hospital Protocol: Initial Visit by oncologist

1) Detect CV risk factors
   - If any CV Risk Factor → Rapid e-consultation

2) Calculate ESC-SCORE risk of 10-year cardiac mortality
   - ECHO-Doppler only if SCORE >5% + Chem potential myocardial toxicity

3) Detection of high-risk pts with:
   - Suspected CVD
   - Prior cancer, Chem/Radioth

Cardio-Oncology Consultation
Protocol: On-treatment Follow-up

1. Clinically: Follow the same pathway as in initial visit

2. Monitoring:
   • hs-cTnT & NT-proBNP before each cycle is recommended
   • Echo-Doppler if:
     • ↑ Biomarkers or symptoms of HF
     • End of treatment
   • Cardio-Oncology consultation if any are abnormal
A Cardio-Oncology Unit in our hospital?

That’s fine but we have no funding, and the Institution budget have been decreased.

Be creative. Let’s do it efficiently, whithout an increase in human and structural resources . . . . .
How does the Cardiology Department react in front of a Budget restriction?

CV Department Budget 2010-2015
1) AMILOIDOSIS & MULTIPLE MIELOMA UNIT (AMU)
Structural Multidisciplinary Unit

- 1 Pathologist
- 2 Nefrologists
- 4 Hematologists (2 Fellows, 1 Data Manager)
- 2 Biochemistry
- 2 Immunologists
- 2 Cardiologists

CLÍNIC BARCELONA
Hospital Universitari
AMILOIDOSIS & MULTIPLE MIELOMA UNIT

Supported by the Institution and with the close collaboration of

**HPT Program (HPT Unit, Apheresis, Cryopreservation, Intensive care)**

**LAB**
- Hematopathology, Pharmacology, Cytogenetics, Molecular & Clinical Genetics

**Internal Medicine**
- Internal medicine, Systemic Diseases

**ICEMEQ**
- Rheumatology, Traumatology

**IMAGING**
- Musculoskeletal Radiology, Nuclear Medicine

**Other**
- Oncologic Radiotherapy, Neurology, Pharmacy, Hepatology, Ginecology, Molecular Biology-UB
Located in the Hematology Department

Dedicated outpatient clinics:
• Hematology: daily
• Nephrology: twice a week
• Cardiology: weekly

Hemato-Oncology Day-Care
Clinical Trials Unit
AMU Funding

• **Institution:** None. Doctors from other departments working at part time

• **Pharmaceutical Industry:** Clinical Trials, specific collaborations.

• **Education:**
  » Symposiums
  » Fellowships

• **Research grants:**
  • Instituto de Salud Carlos III (projects FIS, RyC, Web of Cancer)
  • AECC, AGAUR, IMF
  • Institut Josep Carreras
AMU Core meetings

Weekly.

All pts are presented for discussion
• Initial evaluation & Rx.
• Response to Rx.

Other meetings:
• Administrative
• Research
• Education
2) Functional Cardio-Hematooncology Unit

Institutional Funding:
None. 2 cardiologists working at part time

Facilities:
• Imaging Units: Cardiology & Radiology Departments
• Dedicated outpatient clinics: twice a week
• Hemato-Oncology Day-Care
• In-hospital consultations:
  • by phone
  • face to face

High interpersonal communication & collaboration
Protocolized baseline assessment:

- Identify & treat CV risk factors
- Identify pts at high-risk of Cardiotoxicity:
  - Age >70
  - Prior CV disease or cancer, HTN.
  - Prior Radiotherapy or Anthracycline treatment
  - Prior Cardiotoxicity
  - Special regimes.

LVEF at baseline, before HSCT or Dox >300 mg/m²

Preventive Rx with enalapril and/or carvedilol in:

- High-risk patients
- HTN, DM.
- Low-threshold in general
1. Cardio-Oncology Units or Programs should be actively supported by Scientific societies, Health care providers, Institutions, and patient’s Associations.

2. Even with limited funding and Institutional support, small functional units can do a great job.

3. As in the case of reperfusion networks, the type of Unit should be adapted to the local needs and facilities.

4. Good communication, collaboration, and perseverance are the key.