Cancer-related Complications and Comorbidities: impact on treatment, treatment efficacy, survivorship and quality of life
Cancer-related complications and comorbidities add a highly significant burden on patients across Europe and are in many cases fatal.\textsuperscript{1,2,3}
What are Comorbidities?

Comorbidity means more than one illness or disease occurring in one person at the same time.

Comorbidities are negatively associated with multiple QoL indicators.

Both cancer and its treatments may impact comorbidity outcomes.

Most cancer patients, even up to almost 90%, report at least one comorbid condition.

Patients with comorbidities are at increased risk of complications.

Patients with comorbidities are less likely to receive anti-cancer treatment with curative intent.
What are complications?

Oncologic complications can **occur because of treatments.**

Cancer patients are at risk of severe complications due to the **underlying malignancy or its treatment.**

Patients dealing with complications have **higher mortality rates.**

For more information visit: [ECPC Webpage on Comorbidities](#)
Cancer-Associated Thrombosis (CAT)/ Venous Thromboembolism (VTE) and Cancer

CAT is one of the leading causes of death in cancer patients.\textsuperscript{9,10}

Patients with cancer are estimated to have a 2 to 20-fold higher risk of developing VTE.\textsuperscript{13}

The diagnosis of CAT can negatively impact cancer patients’ treatment, leading to delays in cancer treatment and further afflicting their health.\textsuperscript{11,12}

VTE adds an extra financial burden to the healthcare system, which can be avoided through low-cost interventions such as screening.\textsuperscript{14,15}

Up to 78% of cancer patients who experience VTE do so as outpatients, hence hospitalised cancer patients should be assessed and considered for thromboprophylaxis.\textsuperscript{16}
Cardiotoxicity produced by cancer therapies is still a major limitation that can significantly affect the clinical benefits and cancer patients’ survival and quality of life. 17,18,19

The increased burden of cancer treatment-related cardiotoxicity is also becoming increasingly prevalent. 20,21

Effective cancer treatment must entail cardiotoxicity management and cardiovascular monitoring to ensure high quality of life for cancer patients. 22
It is estimated that the deaths of 10-20% of patients with cancer can be attributed to malnutrition. 23

Many patients who need adequate and timely nutritional support do not receive it. 24,25

Only 30%-60% of patients with cancer who were at risk of malnutrition received nutritional support. 23

Oncologists and patients are often unaware of cancer-related malnutrition and its impact. 24,25
Obesity and Cancer

People living with obesity have an increased risk of developing several types of cancer. ²⁶

Surgery, surgical recovery, and outcomes are more challenging and can worsen the condition of obese cancer patients. ²⁷

Large number of obese cancer patients receive limited dosages of chemotherapy. ²⁸

Obese cancer patients after treatment are often experiencing reduced quality of life, including functional impairment, psychosocial distress, limitations in social functioning, and emotional problems. ²⁹
Depression is a comorbid disabling syndrome that affects approximately 15% to 25% of cancer patients.30

Due to physical changes such as amputations, hair loss, etc., or the concurrent symptoms such as fatigue, pain, nausea, etc.31

Cancer diagnosis and treatment have an impact on patient’s psychological health.

Anxiety, and depression might result in decreased adherence to treatment, poorer cancer survival, increased suicide risk, and additional health expenditures.32
Neuro(psycho)logical complications and Cancer

Around **15-20%** of cancer patients have **neurological complications during their illness**. 33

**Cognitive impairment** in cancer patients is frequently observed both **during treatment and survivorship**. 34,35,36,37
Pain and Cancer

Pain is the most common symptom of cancer at diagnosis and rises in prevalence throughout and beyond cancer treatment. 38

Between 33% and 40% of cancer survivors suffer from chronic pain. 39,40,41,42

Pain can severely impact patient’s physical and psychological health, functional status, and quality of life. 43,44

Experienced pain has a negative impact on patients’ daily activity, mobility, functioning, sleep quality, entertainment, social interaction, and professional life. 45,46
Ageing and Cancer

Treating cancer in older patients at risk of complications remains challenging, mostly due to limited available resources. 47,48,49

Decision-making for older patients with cancer is a key challenge influenced by many factors.

It is crucial that for older cancer patients to consider characteristics including functional status, comorbidities, polypharmacy, functional status, mobility, nutritional status, mental health, cognitive status, social support, and quality of life, in the context of their preferences. 50
Ageing and Cancer

Although the majority of cancer incidence and mortality occurs in patients ≥ 65 years old, this age group is still underrepresented in randomised clinical trials (RCTs) that constitute the evidence base informing standard anticancer treatment decisions.\textsuperscript{51,52,53} This leads to a remaining discrepancy between those fitting the criteria to be selected for a study and the real-world patients.\textsuperscript{54,55} In most cases, the recommended drug dosages are different for older cancer patients, and some of them may experience treatment-related complications.\textsuperscript{56}
Infectious diseases and Cancer

Infectious agents are major contributors to cancer incidence worldwide and are estimated to be responsible for up to 25-50% of all cancer cases in the world. 57

HBV and HCV are responsible for up to 76% of liver cancer cases worldwide. 58

Unlike other forms of cancer, carcinomas caused by viral infections are largely preventable through vaccination or treatments. 59
Tobacco accounts for at least 30% of all cancer deaths and 80% of lung cancer deaths.

Smoking heightens the risk of more than 10 types of cancers, and also worsens cancer outcomes and lowers survival rates.
Alcohol and Cancer

One bottle of wine per week is associated with an increased absolute lifetime cancer risk for non-smokers of 1.0% (men) and 1.4% (women).

The harms that result from chronic daily drinking are: the spectrum of alcohol dependency, hypertension, cancer of the gastrointestinal tract, breast, pancreas and liver, preventable nutritional dementia of Wernicke/Korsakoff Syndrome, and teratogenicity to the foetus.
A collaboration of the Cancer-related Complications and Comorbidities Initiative Members:

- European Cancer Patient Coalition (ECPC) - (Chair)
- European Association for the Study of Obesity (EASO)
- European Association of Urology (EAU)
- European Brain Council (EBC)
- Eurocarers
- European Cancer Organisation
- European Federation of Neurological Associations (EFNA)
- European Federation of Nurses Associations (EFN)
- European Geriatric Medicine Society (EuGMS)
- European Pain Federation (EFIC)
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