**INTRODUCTION**

Childhood, adolescent and young adults (CAYA) female patients treated with alkylating agents in childhood for haematological disease are at risk for ovarian impairment. Accordingly, the current pivotal challenge in the care of long-term survivors is to screen patients exposed to gonadotoxic treatments in order to precisely identify women with diminished ovarian reserve, to whom provide a reproductive counselling.

Anti-Müllerian Hormone (AMH) has been proposed as a predictor of ovarian reserve in women1-2, but data about its reliability in the setting of iatrogenic ovarian impairment are lacking.

**AIM**

We aimed at describing the pattern of residual ovarian function in a cohort of haematological cancer survivors, assessing the relationship between the cumulative dose of alkylating agents administered (expressed as Cyclophosphamide Equivalent Dose - CED) and Anti-Müllerian Hormone levels.

**METHOD**

**Inclusion criteria**
- Adolescents or young women exposed to gonadotoxic treatments for paediatric lymphoma or leukemia between 01.01.92 and 30.06.19 and
- Menarche achieved at least 12 months before
- Off-therapy for more than 12 months

**Exclusion criteria**
- Syndromic conditions involving gonadal impairment
- Polycystic ovarian syndrome
- Haematopoietic stem cell transplantation

**Data collection**
- Clinical: anagraphical, related to treatment, endocrine
- Lab: LH, FSH, oestradiol, AMH-SDS (Z score, estimated with reference to the Lie Fong et al reference ranges for age)1

Population enrolled: 81 patients

- Underlying disease: ALL: acute lymphoblastic leukaemia
  NHL: non Hodgkin lymphoma
  HL: Hodgkin lymphoma
- Exposure to radiotherapy
- Exposure to Cyclophosphamide Equivalent Dose (CED)

**RESULTS**

Ovarian function in the study population

Need for hormonal therapy (HT)
- Menarche achieved spontaneously and HT never needed
- Menarche achieved spontaneously, HT started for secondary amenorrhea

The effects of age upon treatment

The effects of CED

**CONCLUSIONS**

- CED, above 7.2 g/m²↓ AMH ↑ risk for DOR
- Pelvic RT, older age at diagnosis ↑ risk for ovarian impairment

Ovarian assessment for all women treated with alkylating agents and/or radiotherapy is recommended

Age-normalized AMH is a tool for early detection of ovarian impairment

**REFERENCES**