Associazione Italiana Radioterapia e Oncologia clinica

Società Italiana di Radiobiologia

Impact of geriatric assessment on QoL of elderly onco-hematologic patients (ONCO-AGING) candidate to complex treatments: interim results

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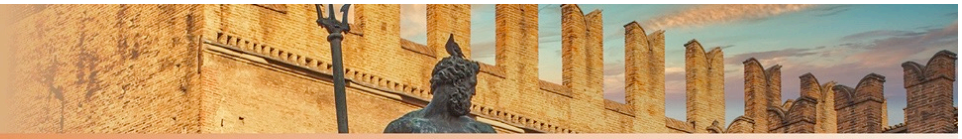


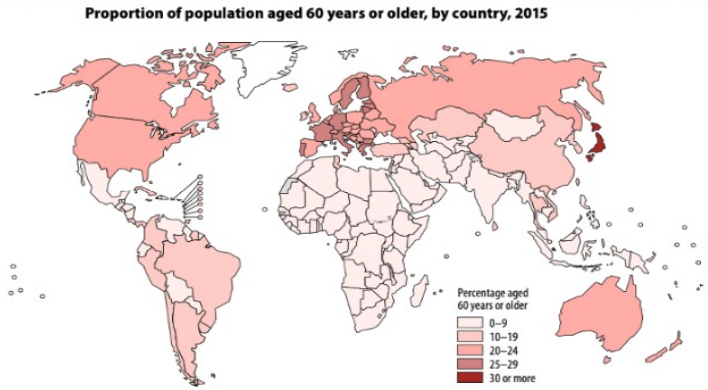
DICHIARAZIONE

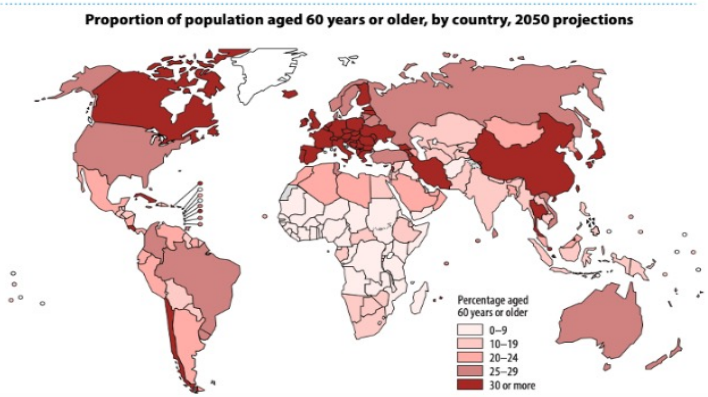
Relatore: CARLA PISANI

Come da nuova regolamentazione della Commissione Nazionale per la Formazione Continua del Ministero della Salute, è richiesta la trasparenza delle fonti di finanziamento e dei rapporti con soggetti portatori di interessi commerciali in campo sanitario.

- Posizione di dipendente in aziende con interessi commerciali in campo sanitario: **NIENTE DA DICHIARARE**
- Consulenza ad aziende con interessi commerciali in campo sanitario: **NIENTE DA DICHIARARE**
- Fondi per la ricerca da aziende con interessi commerciali in campo sanitario: **NIENTE DA DICHIARARE**
- Partecipazione ad Advisory Board: **NIENTE DA DICHIARARE**
- Titolarità di brevetti in compartecipazione ad aziende con interessi commerciali in campo sanitario: **NIENTE DA DICHIARARE**
- Partecipazioni azionarie in aziende con interessi commerciali in campo sanitario: **NIENTE DA DICHIARARE**
- Altro

Oncological treatment in elderly patients





The need of oncological treatment in elderly patients is rising together with the increase in life expectancy

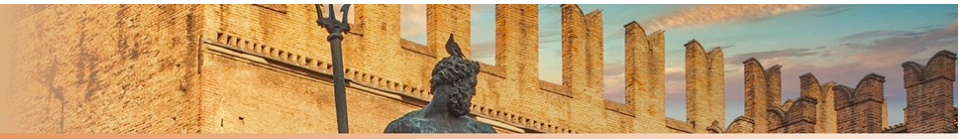
→ **How could we quantify the frailty?**

Older patients are under-represented in clinical trials

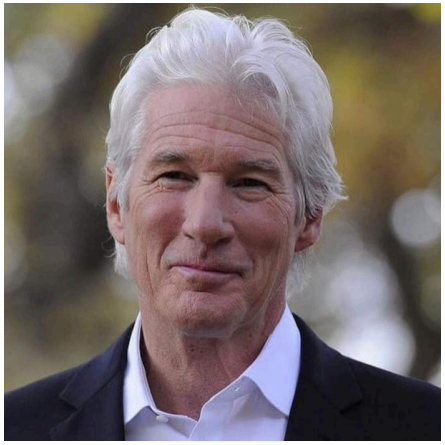
→ **less evidence-based information exists to guide the treatment of these patients**

AIRO2022

XXXII CONGRESSO NAZIONALE AIRO
XXXIII CONGRESSO NAZIONALE AIRB
XII CONGRESSO NAZIONALE AIRO GIOVANI



Radioterapia di precisione per un'oncologia innovativa e sostenibile



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BOLOGNA, 25-27 NOVEMBRE
PALAZZO DEI CONGRESSI

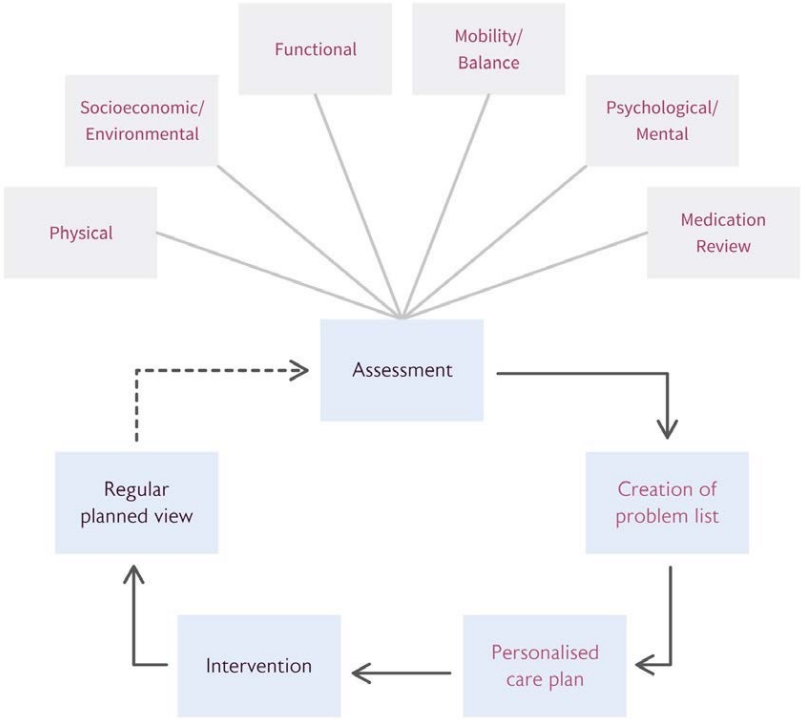
Assessing older cancer patients

- Focus on **disease** characters (history, histology, staging).
- Focus on **patient's** characters and functional status (**NOT ONLY PS!**)
- Geriatric 8 (G8) can be used to screen and detect patients who could benefit from a geriatric assessment.

	Items	Possible answers (score)
A	Has food intake declined over the past 3 months due to loss of appetite, digestive problems, chewing or swallowing difficulties?	0 : severe decrease in food intake
		1 : moderate decrease in food intake
		2 : no decrease in food intake
B	Weight loss during the last 3 months	0 : weight loss > 3 kg
		1 : does not know
		2 : weight loss between 1 and 3 kgs
		3 : no weight loss
C	Mobility	0 : bed or chair bound
		1 : able to get out of bed/chair but does not go out
		2 : goes out
E	Neuropsychological problems	0 : severe dementia or depression
		1 : mild dementia or depression
		2 : no psychological problems
F	Body Mass Index (BMI (weight in kg) / (height in m²)	0 : BMI < 19
		1 : BMI = 19 to BMI < 21
		2 : BMI = 21 to BMI < 23
		3 : BMI = 23 and > 23
H	Takes more than 3 medications per day	0 : yes
		1 : no
P	In comparison with other people of the same age, how does the patient consider his/her health status?	0 : not as good
		0.5 : does not know
		1 : as good
		2 : better
	Age	0 : >85
		1 : 80-85
		2 : <80
	TOTAL SCORE	**0 – 17**

Comprehensive Geriatric Assessment (CGA)

- 9 questionnaires used to assess overall health status in geriatric patients.
- *CGA can be used to stratify patients screened with G8:*
  *- **Unfit (prefrail)***
  *- **Frail***
- Proposed to identify patients who require personalised interventions to improve outcomes.

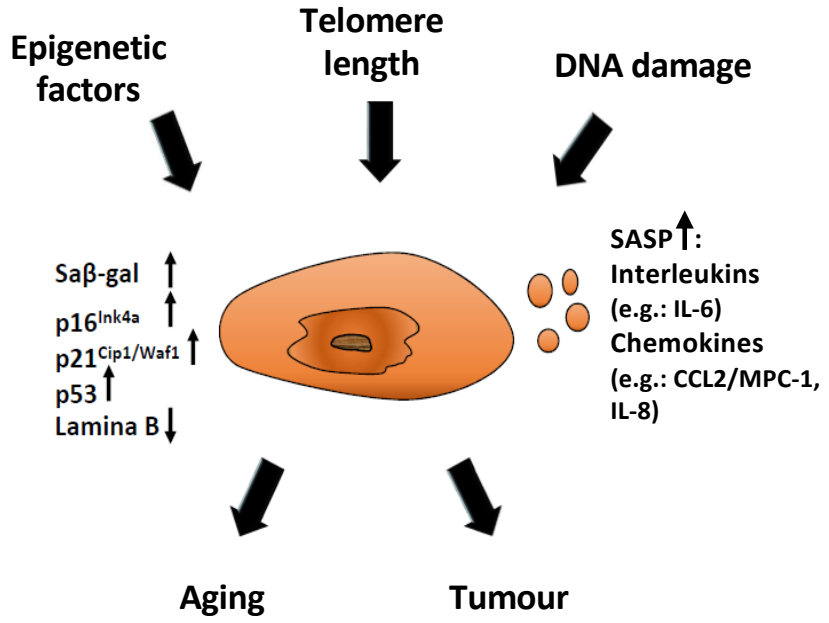


Aging and cellular senescence

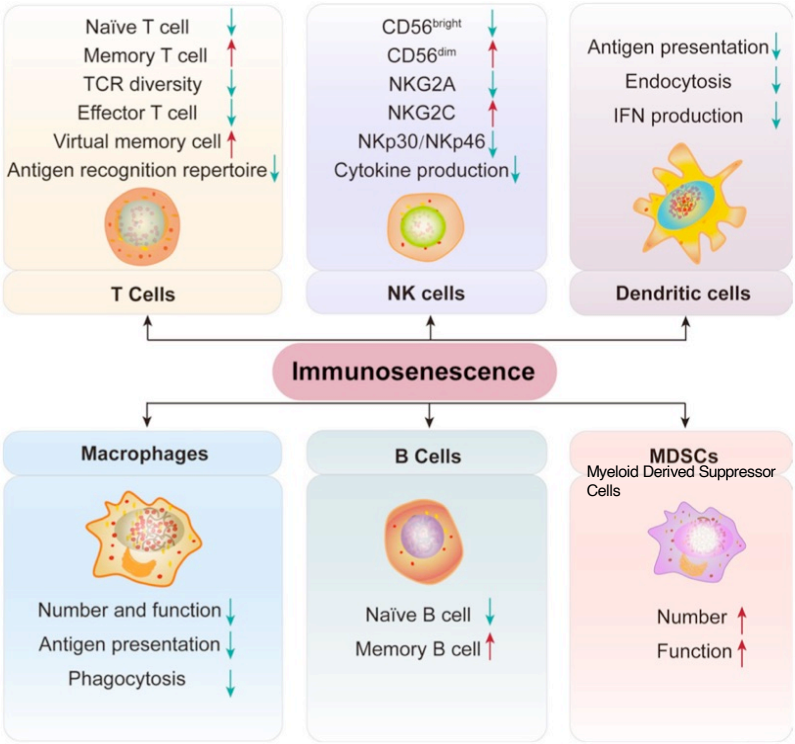
Induction of a senescent phenotype

↓

Promotion of aging-related diseases (e.g.: chronic inflammation, cancer).



Immunosenescence



- Senescence in immune cells is associated with a decrease in adaptive immune functions, decrease infection resistance, and increased autoimmune risk
- the inability to induce a strong immune reaction against them results in higher susceptibility to cancer in people who has less efficient immune system such as old people and immune-suppressive people
- The low number and low efficient immune system in older people are partially due to a high number of senescent

Aims of the study

- Test the impact of the CGA on the QoL of elderly onco-haematological patients eligible for multimodal/targeted therapy, who resulted fragile at the G8 screening.

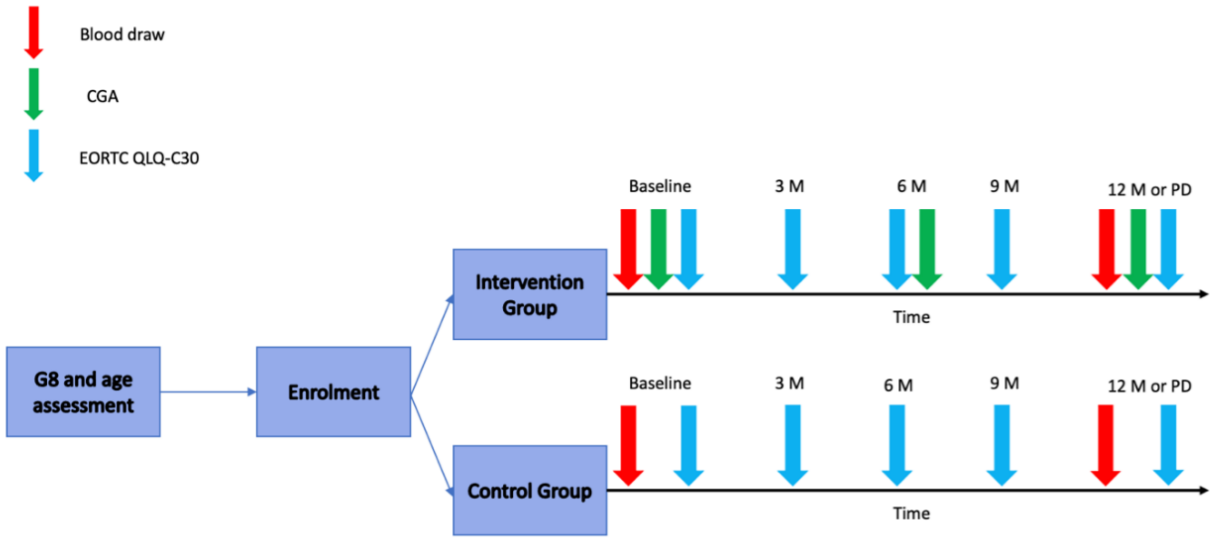
- Investigate the impact of CD3+ T-cells senescence and MDSCs in the peripheral blood on cancer progression and overall survival (OS).

Materials and methods (1)

Inclusion criteria:

- Patients aged ≥ 65 years old diagnosed with solid/haematological neoplasia.
- Eligible to 1° line therapy with CT or biological/target drugs or concurrent radio-chemotherapy.
- Screening G8 score ≤ 14/17.

Materials and methods (2)



Intervention group:

- Senescent CD3+ T cells/MDSCs evaluation at baseline and after 12 months/PD.
- QLQ-C30 QoL questionnaire every 3 months.
- Geriatric evaluation + CGA at baseline, at 6 months and 12 months/PD.

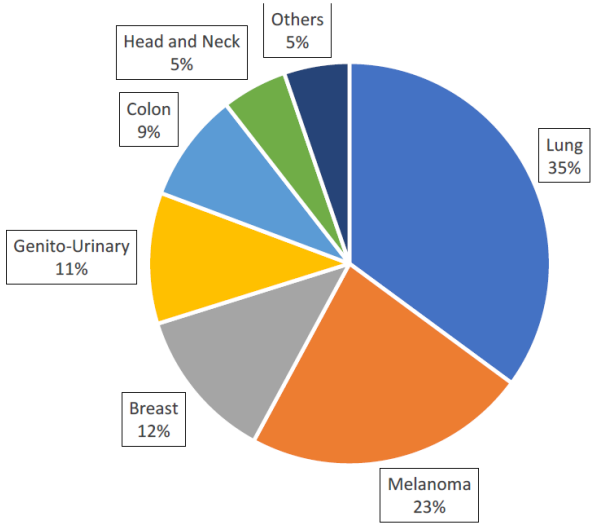
Control group:

- Senescent CD3+ T cells/MDSCs evaluation at baseline and after 12 months/PD.
- QLQ-C30 QoL questionnaire every 3 months.

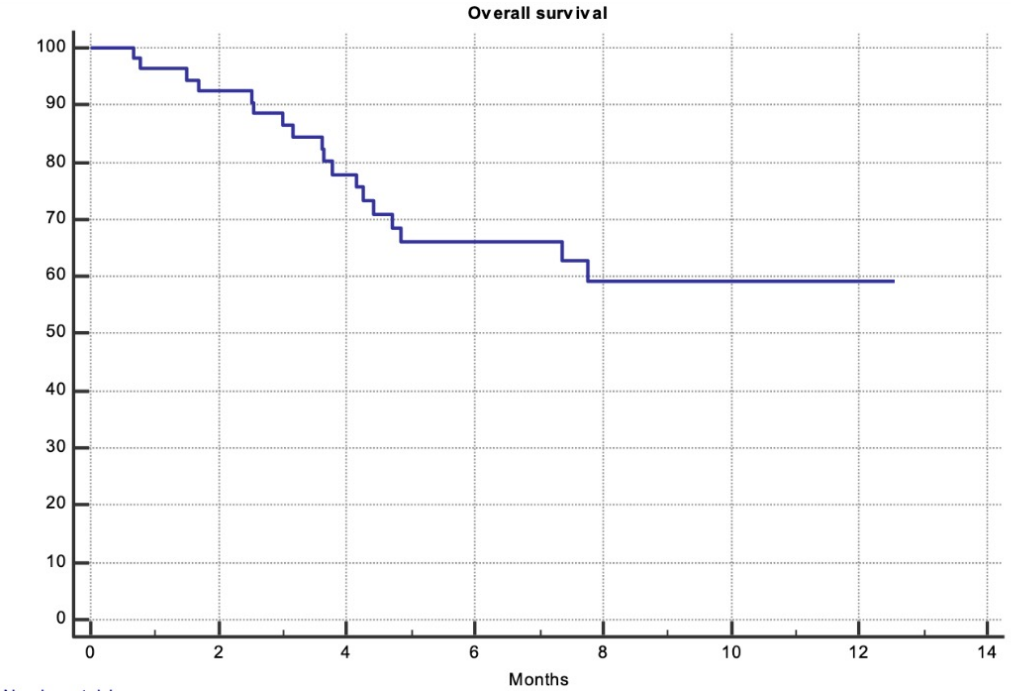
Gender (%)	
Male	61.9
Female	38.1
Age	
Median	75 (range: 65-91)
Number of comorbidities (%)	
< 4	53.5
≥ 4	46.5
Number of concomitant drugs (%)	
< 4	29.1
≥ 4	70.9
Screening G8 score	
Median	12 (range: 3-14)
Treatment modality (%)	
Targeted/biological therapy	76.1
Concurrent radio-chemotherapy	23.9

Pz characteristics

- ✓ 155 patients enrolled from 12/2019 to 02/2022
- ✓ Interim results for 57 patients (1:1 randomisation).



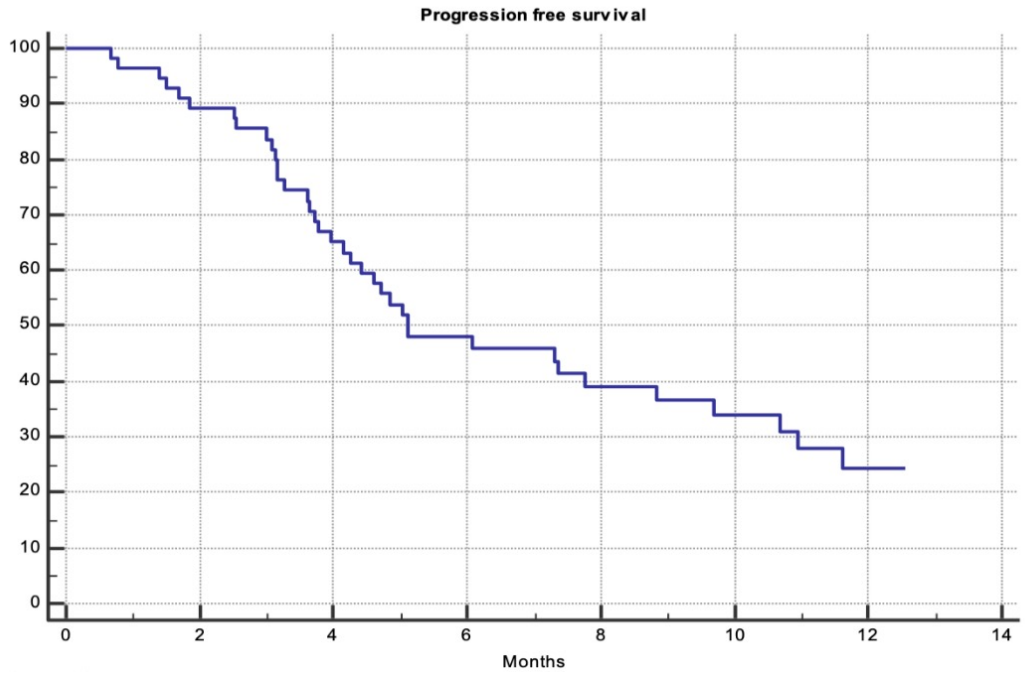
Overall survival (OS)



- 1° quartile: 4.1 months.
- Median OS: not reached.

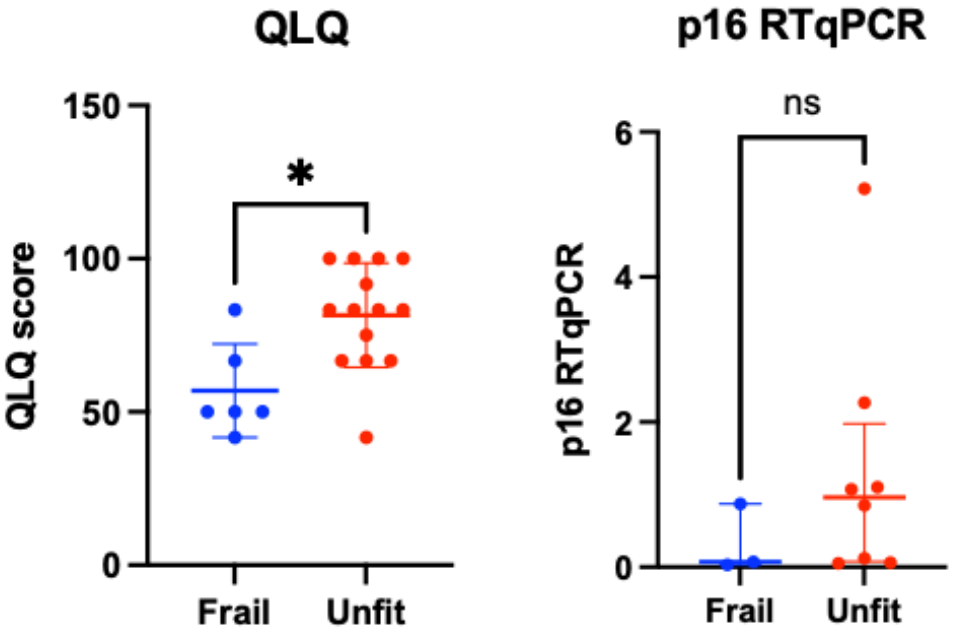
The median age of the cohort must be taken in mind (75, range 65-91) since as per se is a risk factor for death.

Progression-free survival (PFS)



- 1° quartile: 3.1 months.
- Median PFS: 5 months.
- 3° quartile: 11.62 months

Frail vs unfit: differences in QoL and p16 expression



- **Unfit patients present a significantly better QoL compared to frail ones** (median QLQ score: 83.33 vs 48, $p < 0.05$).
- **Difference in expression of p16 in CD3+ T cells between frail and unfit patients** (although not significant at the moment).

Impact of CGA and p16 on OS and PFS

- *Although not statistically significant at the moment, both CGA and senescent CD3+ T-cells may identify patients at higher risk of death.*

- *No univocal correlation between the questionnaires/p16 expression and the risk of disease progression.*

	G8		QLQ		RFI		p16 (RT)		p16(dd)	
	ρ	p-value	ρ	p-value	ρ	p-value	ρ	p-value	ρ	p-value
G8			0.19	0.157	-0.41	0.061	0.10	0.597	0.014	0.951
QLQ					**-0.63**	**0.002**	0.17	0.357	0.093	0.668
RFI							**-0.74**	**0.009**	-0.500	0.391
P16										
P16										

Conclusions

- CGA and T-cell senescence may predict patients' outcome in terms of OS.
- Frail patients at CGA have worse QLQ score → importance of QoL assessment in clinical setting.
- Correlation between CGA and p16 expression → potential biochemical biomarker for frailty.
- Preliminary results that still have to be confirmed and completed.
- Build evidence on the management of elderly and fragile cancer patients in order to personalise the therapeutic approach.

Thanks for your attention

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