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**21-23 JUNE**

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# NICSO (Italian Network of Supportive Care in Cancer) RESEARCH PROGRAM

## MASCC/ISOO

Annual Meeting on Supportive Care in Cancer

[www.mascc.org/meeting](http://www.mascc.org/meeting)

Follow us on Twitter: @CancerCareMASCC



#MASCC19

# Conflict of Interest Disclosure

Paolo Bossi, MD

- Consulting Fees (e.g., advisory boards): Roche, Merck Serono, Kyowa Kirin, AstraZeneca, MSD, Angelini, SunPharma and Sanofi



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# Clinical trials and scientific projects by NICSO

- Mission of NICSO is developing trials and increasing knowledge about supportive care in patients during all their pathway of care



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# Clinical trials and scientific projects by NICSO

- Monitoring adverse events (AE) by oncological treatments – National trial
- Defining treatment with immunotherapy (IT) in challenging populations at higher risk of AE
- Real world data from challenging pts treated with Immunotherapy



# Clinical trials by NICSO

*Studio Nazionale NICSO:  
Progetto Di Monitoraggio Medico-  
Infermieristico Degli Effetti  
Collaterali Da Terapie Oncologiche*



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## PHYSICIAN AND NURSE-BASED STRATEGIES TO MONITOR ADVERSE EVENTS BY ONCOLOGICAL TREATMENTS



# Background

- Lack of compliance to guidelines in supportive care during oncological treatments causes an increased frequency and duration of AEs
- Early discovery of AEs may offer a better approach and a reduction of severity and duration



# Background

- Better management of AEs may favorably impact on respect of treatment dose-intensity
- Employing PRO measures of toxicities allow to improve sensitivity and may increase pt QoL and survival



# Open questions

*How to better assess and monitor toxicities induced by treatments?*

Who should be in charge of evaluating toxicities?

*Could we empower patients in AEs prevention?*

How much the prompt evaluation of toxicities may reduce time spent with toxicities?



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# Study Design

*Multicenter, randomized, open label trial comparing the use of a standard «dashboard» to guide prevention/treatment of Tox given by the physician*

**VS**

the same indications of the «dashboard» + a periodic empowerment of the patient through a phone call by a specialized nurse



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# Objectives of the study

## PRIMARY:

to assess number of days with any toxicity (evaluated by PRO CTCAE) grade  $\geq 3$

## SECONDARY:

- Incidence and duration AEs grade 1-2;
- Number of unplanned access to ER or to unplanned visits;
- Number of days spent as inpatient due to Toxicities
- Quality of life

## Exploratory:

- Dose intensity of oncologic treatment



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# Study population

Any kind of patient with solid tumour treated for the first time with

- Adjuvant chemotherapy
- Targeted agents
- Immunotherapy



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# Inclusion criteria

## Adjuvant chemotherapy:

- Antracyclin + cyclofosfamide  $\pm$  taxanes (Breast cancer)
- Oxaliplatin + fluoropyrimidine (Colon cancer)
- Platinum based therapies (Lung cancer)

## Targeted agents:

- sunitinib, pazopanib (Kidney cancer)
- gefitinib, erlotinib, afatinib, crizotinib (Lung cancer)
- vemurafenib  $\pm$  comimetinib, dabrafenib  $\pm$  trametinib (Melanoma)
- everolimus  $\pm$  exemestane (Breast cancer)
- CKI (Breast cancer)
- Vandetanib, lenvatinib (Thyroid cancer)
- vismodegib (BCC)
- imatinib (GIST)

## Immunotherapy:

- anti CTLA4
- antiPD1/PDL-1



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# Dashboard and Nurse phone call

- **DASHBOARD** = Informative sheet, built with the expertise of a multidisciplinary team and containing the updated guidelines for prevention and treatment of AEs due to the different treatments
- **NURSE PHONE CALL**: phone call made weekly by a group of experienced nurses, with the aim of coaching the patient and empowering him/her to recognize and treat AEs due to the therapy.  
Nurses will guide patients to choose the right action with regard to toxicities.



# Tools to measure endpoints

- **PRO CTCAE**: administered to all the patients weekly, for 4-6 months
- **EORTC QLQ-C30**: administered every month
- Dose intensity assessment
- Number of unplanned visits and ER accesses measured through clinical charts



# Statistical considerations

- Estimated prevalence of 15% (time spent with tox grade 3-4), with power = 0.9 and alpha = 0.05, we would like to show a reduction to 5% of the time spent with tox grade 3-4 in the experimental arm
- Sample size = 207 pts per arm in each group of treatment (1252 pts overall)
- 24 months of accrual



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# NICSO Centers



- 53 Centers involved in Italy
- 415 pts enrolled till now
- First results: Jan 2020





# Expectations



- To define standard of care in monitoring toxicities according to each treatment
- To prospectively describe the pattern of toxicities with PRO
- To assess the use of emergency services



# Defining treatment with immunotherapy (IT) in challenging populations at higher risk of AE

- Immunotherapy has been approved in several indications based on the positive results of phase III trials
- However, phase III trials are not fully representative of the whole population, as several exclusion criteria exist



# Challenging populations at higher risk of AE

## WHO ARE THEY?

- **Elderly** pts
- Pts with underlying ***major infections*** (HBV/HCV/HIV)
- Pts with **autoimmune diseases** of any kind
- **Solid transplant** recipients
- Pts with **lymphoproliferative disease** or receiving **transplant** for hematological malignancy



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# Room for IT in challenging populations at higher risk of AE?

- We performed an extensive literature review to evaluate the existing data and to give expert opinions of a multidisciplinary group of physicians involved in care of pts with immunotherapy induced toxicities



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# Elderly pts

- ▶ Older adults with good performance status appear to benefit similarly to single-agent checkpoint inhibitor therapy as their younger counterparts
- ▶ Overall toxicity appears similar, but hospitalizations and influence of poor functional status and multimorbidity in the real world remain.
- ▶ The role of a geriatric assessment for older adults receiving immunotherapies remains unclear but may be useful to gauge fitness for more intense therapies, such as combined immunotherapy, chemoimmunotherapy, or chemotherapy/radiation plus immunotherapy strategies
- ▶ More research is needed to evaluate the correlation between markers of immunosenescence among older adults receiving immunotherapy and the effect of these relationships on biological, clinical, functional, and patient-reported outcomes.



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# Pts with HBV infection

- ▶ Patients with active HBV infection (HBsAg pos, HBV DNA  $\geq 2,000$  IU/mL, ALT > ULN) should be put on long-term therapy with entecavir or tenofovir, until HBsAg seroconversion
- ▶ Inactive carriers of HBsAg (HBsAg pos, HBeAb pos, HBV DNA < 2,000 IU/mL, ALT normal) receiving ICIs have to receive prophylaxis with lamivudine, entecavir or tenofovir, until 12-18 months after completion of ICIs, although risk of reactivation is probably low
- ▶ In patients with cured HBV infection (HBsAg neg, HBcAb pos, HBsAg pos or neg) receiving ICIs, should be monitored for HBsAg or HBV DNA without active therapy



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# Pts with HCV infection

- ▶ Treatment with ICIs appears to be safe in patients with chronic HCV infection
- ▶ Treatment for HCV should be offered to all patients with detectable viral load
- ▶ Safe and successful treatment in the presence of an untreated hepatitis C infection with a detectable viral load has been reported



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# Pts with autoimmune diseases

- ▶ ICI can induce a wide variety of rheumatic irAEs either in previously undiseased patients or in those with pre-existing autoimmune conditions
- ▶ Reports of rheumatic irAEs have been sparse and were only described in case reports or small series
- ▶ Frequency of rheumatic irAEs in previously undiseased patients is variable and arthralgias and myalgias seem the most frequent
- ▶ Frequency of rheumatic irAEs in patients already affected by rheumatic diseases who develop cancer in the course of their diseases is higher
- ▶ Severe events are rare and in most cases steroid therapy is resolute





# Real world data from challenging pts treated with Immunotherapy

- Through Phase IV clinical studies, new drugs can be **tested continuously** to uncover more information about efficacy, safety and side effects after being approved for marketing



# Phase IV trials: are necessary?

✓ YES!

Phase I-III trial are conducted  
in a **relatively limited number of patients:**

→ Therefore, when looking at rarer AEs, it is possible  
that they are under-reported or even not reported!



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# RARER ADVERSE EVENTS

- The case of cardiotoxicity.

The NEW ENGLAND JOURNAL of MEDICINE

BRIEF REPORT

## Fulminant Myocarditis with Combination Immune Checkpoint Blockade

Douglas B. Johnson, M.D., Justin M. Balko, Pharm.D., Ph.D.,

### REVIEW ARTICLE

**Potential cardiac risk of immune-checkpoint blockade as anticancer treatment: What we know, what we do not know, and what we can do to prevent adverse effects**

Paolo Spallarossa<sup>1</sup> | Giovanni Meliota<sup>1</sup> | Claudio Brunelli<sup>1</sup> |

Probl Cancer 42 (2018) 422–432

Full text lists available at ScienceDirect



ELSEVIER

Curr Probl Cancer

journal homepage: [www.elsevier.com/locate/cpcancer](http://www.elsevier.com/locate/cpcancer)



Cardiotoxicities associated with immune checkpoint inhibitors

Shu Yang<sup>a</sup>, Aarti Asnani<sup>b,\*</sup>



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# RARER ADVERSE EVENTS

Cardiovascular toxicities associated with immune checkpoint inhibitors: an observational, retrospective, pharmacovigilance study

*Joe-Elie Salem, Ali Manouchehri, Melissa Moey, Bénédicte Lebrun-Vignes, Lisa Bastarache, Antoine Pariente, Aurélien Gobert, Jean-Philippe Spano, Justin M Balko, Marc P Bonaca, Dan M Roden, Douglas B Johnson, Javid J Moslehi*

Lanc Oncol Nov 2018



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ICI → more **myocarditis, pericardial diseases, supraventricular arrhythmias, and vasculitis** compared with adv events in the full database



# Phase IV trial in **SELECTED** population

- **Opposite selection** in respect to registration trial... only specific subgroups not included (or less-included) in clinical trials

**Aim:** *to test the drug effect in specific populations (subpopulations)*



# IMMUNOTHERAPY IN PATIENT POPULATIONS AT HIGHER RISK OF ADVERSE EVENTS

- Observational phase 4 multicenter study, in challenging populations treated with immunotherapy per clinical practice.
- **Aim:** is to observe the rate of high-grade toxicities in this specific population. Results will be indirectly compared to what observed for “fit patients” normally represented in clinical trials.



# COOPERATION IS THE KEY OF SUCCESS, ALSO IN SUPPORTIVE CARE!



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Thanks by NCSO!

