

The Economic Analysis of Social Security Costs Cancer-Related in Italy

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Introduction and objectives

In Italy, more than 21,000 workers every year lose their ability to work because of a cancer diagnosis [1]. This study aims to estimate social welfare costs related to social security allowances provided by law for and financed by public expenditure for patients affected by a curable disease. This kind of disease represents the first cause of reduced availability to Italy and in many other countries as well.

In case of an accident or illness, after five years of work contributions, all employees registered with the Italian National Social Security Institute (INPS) have the relative benefit from the issue of Invalidity Pensions.

Results

The model estimated an average of about 200,000 beneficiaries affected by cancer each year. 181,500 get the Disability Benefits and 16,500 get the Invalidity Pensions. Results show an increasing trend for disabled workers (+130%), and a decreasing trend for incapable workers (-137%).

Figure 2. Disability Benefits and Invalidity-Pensions beneficiaries affected by cancer, 2014-2023.

| Year | Disability Benefits | Invalidity-Pensions |
|------|---------------------|---------------------|
| 2014 | 181,500 | 16,500 |
| 2015 | 185,000 | 16,000 |
| 2016 | 188,000 | 15,500 |
| 2017 | 191,000 | 15,000 |
| 2018 | 194,000 | 14,500 |
| 2019 | 197,000 | 14,000 |
| 2020 | 199,000 | 13,500 |
| 2021 | 200,000 | 13,000 |
| 2022 | 200,000 | 12,500 |
| 2023 | 200,000 | 12,000 |

Figure 2. Disability Benefits and Invalidity-Pensions costs due to cancer, 2014-2023.

Estimated costs show the same trend: in 2014 expenditure for all OEs amounted to €1.1 billion, while in 2023 to €1.8 billion. In 2014, the expenditure for all IPs was equal to € 754 million, while in 2023 to € 600 million. In 2023 total expenditure for both benefits was equal to more than € 2.3 billion.

Conclusions

The economic burden involves economic and social costs of particular relevance due to the high prevalence of these diseases [2].

This study attempts to estimate the overall social costs induced by cancer in Italy, which represent an important element of the total burden of disease. The disability insurance costs caused by cancers have a significant and constantly increasing impact on the Italian Social Security System. Exploring what is hidden in these dynamics and ensuring more rapid access to innovative treatments could reduce these costs (accompanied by an increase in QoL) through the reduction of people requiring a Social Security benefits INPS.

Methods

The analysis is based on the database of disability issue since awards of INPS. Applications with a primary diagnosis of cancer were selected, in the period 2014-2023.

Figure 2. Approval and request applications for Disability Benefits and Invalidity Pensions due to Cancer, 2014-2023.

References

- [1] INPS. Disabilità e invalidità: dati e statistiche. Roma: INPS; 2019.
- [2] Nardone C, Sciannamea V, Migliorini R, Sciannamea V, Mennini FS, et al. (2020) The economic burden of musculoskeletal disorders on the Italian social security system estimated by a Monte Carlo simulation. *Stomatologia*, 43, 33.
- [3] Galati M, Di Stefano PA, Marco Carlo Scudiero. *WILEY-SCIENCE Direct*. Co. Italia. Venezia, 2008.
- [4] ISTAT. I numeri del cancro in Italia 2019. 2020.

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INTRODUCTION AND OBJECTIVES

In Italy, more than 21.000 workers every year lost their ability to work because of a cancer diagnosis [1]. This study aims to estimate social welfare costs, related to social security allowances provided by Italian law and financed by public expenditure, for patients affected by a neoplastic disease. This kind of disease represents the first cause of reduced workability, in Italy and in many other countries as well.

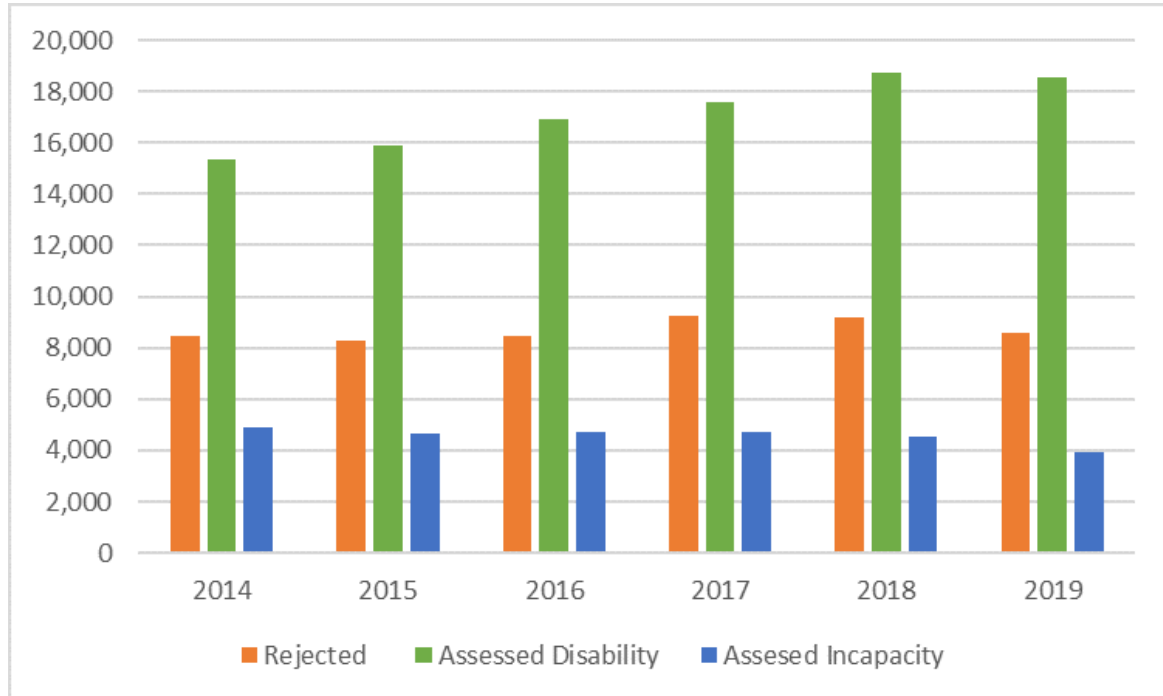
In case of an accident or illness, after five years of work contributions, all categories registered with the Italian National Social Security Institute (INPS) have the right to benefit from two types of benefits: Disability Benefits (DB) and Incapacity Pension (IP).

INPS' medical forensic committees assess the incapacity for work of workers affected by serious illnesses: in case of an assessed loss of workability of at least two-thirds, the Disability Benefit (DB) is granted, and working activity may continue; in case of a total and permanent incapacity for any work, the Incapacity Pension (IP) is granted, and the beneficiary must cease working activity. The Italian law (Law n. 222/84) establishes the administrative eligibility criteria (years of contributions, etc.).

METHODS

The analysis is based on the database of disability insurance awards of INPS. Applications with a primary diagnosis of cancer were selected, in the period 2014-2019.

Figure 1. Approved and rejected applications for Disability Benefits and Incapacity Pensions due to Cancer, 2014-2019



The probabilistic model, starting from approved claims, estimated the number of existing beneficiaries. The amount of the allowance provided depends on the type of benefit (lower for DB and higher for IP), on the type of pension scheme to which the worker belongs, and on the contributions paid by the single worker who applies for benefit. The distribution of beneficiaries among these different schemes is not known, and the exact monthly amount per single worker is unknown. For this reason, a Monte Carlo simulation was performed in order to estimate costs due to social security benefits for workers affected by cancer [2,3]

RESULTS

The model estimated an average of about 200,000 beneficiaries affected by cancer each year: 141.500 get the Disability Benefits and 56.000 get the Incapacity Pensions. Results show an increasing trend for disabled workers (+34%), and a decreasing trend for incapable workers (-11%)

Figure 2. Disability Benefits and Incapacity Pensions beneficiaries affected by cancer; 2014-2019.

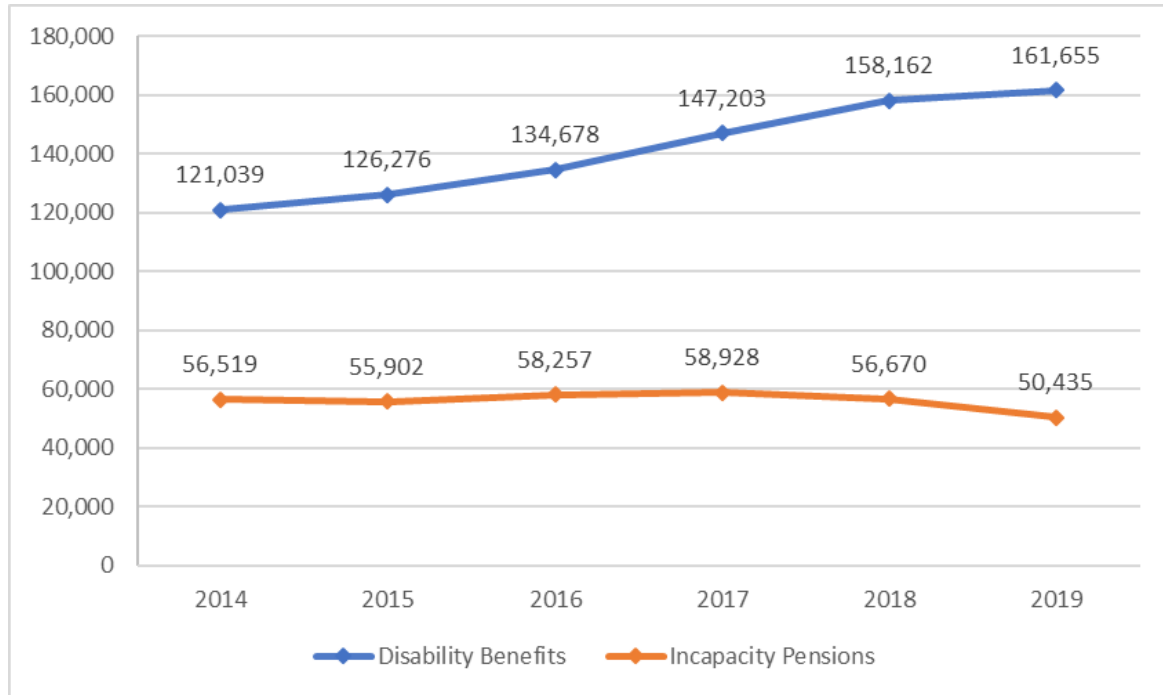
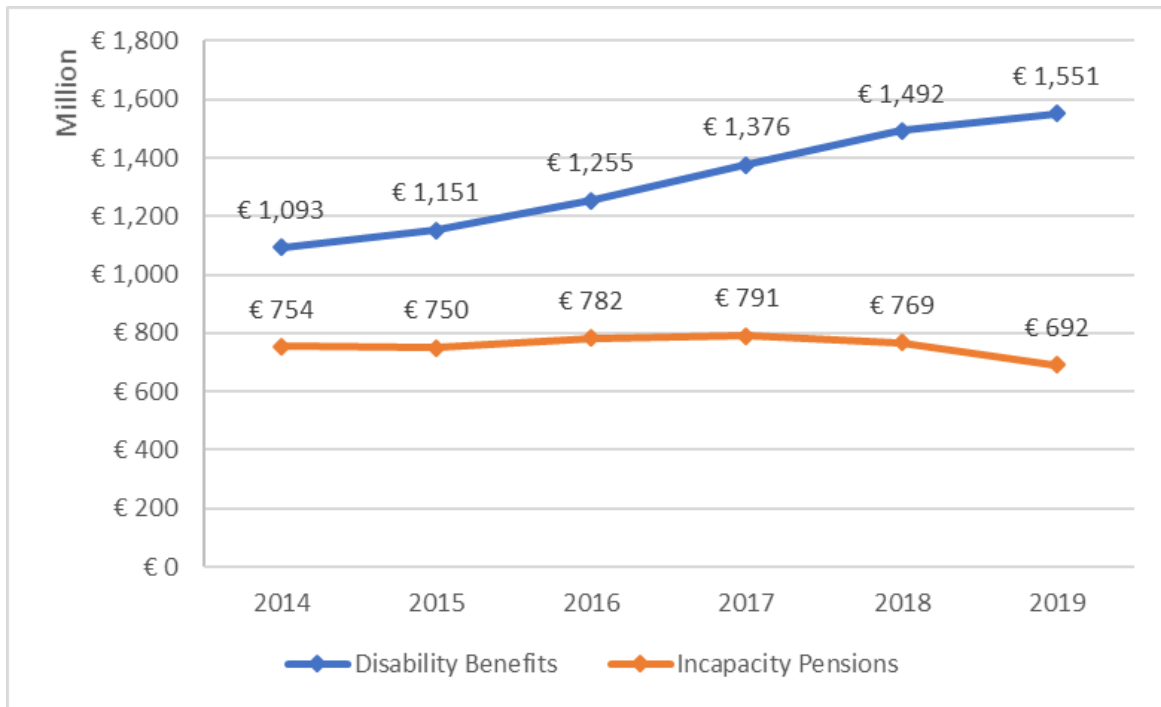


Figure 3. Disability Benefits and Incapacity Pensions costs due to cancer; 2014-2019.

Estimated costs show the same trend: in 2014 expenditure for all DBs amounted to € 1,1 billion, while in 2019 to € 1,6 billion. In 2014, the expenditure for all IPs was equal to € 754 million, while in 2019 to € 692 million. In 2019 total expenditure for both benefits was equal to more than € 2,2 billion.



CONCLUSIONS

The neoplastic diseases involve economic and social costs of particular relevance due to the high prevalence of these diseases [3].

This study attempts to estimate the overall social costs induced by cancer in Italy, which represent an important element of the total burden of disease. The disability insurance costs caused by cancers have a significant and constantly increasing impact on the Italian Social Security System. Exploring what is hidden in these dynamics and ensuring more rapid access to innovative treatments could reduce these costs (accompanied by an increase in QoL), through the reduction of people requesting a Social Security benefit to INPS.

REFERENCES

- [1] INPS, Databases and financial statements – Statistics Observatories.
- [2] Russo, S., Mariani, T. T., Migliorini, R., Marcellusi, A., & Mennini, F. S. (2015). The economic burden of musculoskeletal disorders on the Italian social security pension system estimated by a Monte Carlo simulation. *Reumatismo*, 45-56.
- [3] Kalos M.H., Whitlock P.A. Monte Carlo Simulation. WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim, 2008
- [4] AIOM, AIRTUM. I numeri del cancro in Italia 2020, 2020.