

OPINION PAPER

# RESEARCHERS' PYRAMID. A NEW OPPORTUNITY FOR ITALIAN ONCOLOGY RESEARCH INFRASTRUCTURE?

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Doi: 10.48286/aro.2021.03

### History

**Received:** Jan 20, 2021

**Accepted:** Feb 12, 2021

**Published:** Mar 1, 2021

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## ABSTRACT

The "Researchers' Pyramid" has represented the first main effort to formally recognize in Italy a specific category of professionals that, despite working in the healthcare field, has never been able to benefit from the stabilization options granted to the rest of

the medical and healthcare staff. Stabilization of researchers by the Pyramid should in fact represent a chance to hire a large number of professionals that have been working in local public IRCCS and IZS for a long time, like the Clinical Research Coordinators.

During the last trimester of 2019, we decided to start an investigation on the impressions of researchers about the new legislation, which introduced the researchers' Pyramid. This is a new path of 5 + 5 years thought to culminate with the stabilization of the researcher according to merit criteria, which should have ensured a big turning point compared to their working conditions. Three months later, in the midst of a national emergency, we verified how much the reform staff had really impacted the working life of people who at that time should be totally dedicated to research against the virus.

Over half of respondents is optimistic regarding the actual benefit of the reform for employment stability. Over half (63.4%) of the "not optimistic respondents" considers the Pyramid a false path towards stabilization. Concerns were expressed

in relation to the evaluation criteria during the ten-year period, considered by a third of the interviewed too exclusive and often not very suitable. Many individuals (41.5%) report the poor valorization of personnel and much apprehension was recorded relating to the possibility of extending the reform to other institutes. Only 1412 of the over 35,000 potential beneficiaries have been hired.

The reform overall seems like an important opportunity for entry level or inexperienced personnel, a watered-down compromise for expert professionals. The fear conveyed from the great majority of the interviewed is that the pyramid is only a trick. It talks about a stabilization process, although it hasn't clarified how, after the ten-year period, this will take place. It also allows a partial solution of the problem in a very small share compared to the total number of clinical centers that do research.

## KEY WORDS

*Pyramid; researchers; stabilization; skills; precariousness.*

## IMPACT STATEMENT

The paper provides an overview of the researchers' impressions about the new legislation that should have ensured a big turning point compared to their working conditions.

## BACKGROUND

The research in Italy is characterized by profound contradictions: great minds working in a system lacking economic resources and completely based on precariousness, as well as the total nonexistence the researcher as a profession in the National Health System. A scenario that clashes with the application of the European Charter for Researchers principles (1): researchers as professionals; stimulating and well-equipped research environment and training centers; flexibility required to conduct research activities; stability of working conditions; adequate salary and social security and professional growth; geographic mobility, both intra-sectorial and between public and private centers; intellectual property right.

The only effort that in the recent years has been made in our country is a ministerial reform called "Researchers' pyramid", a long reform work addressed to public cancer research and treatment (IRCCS) and zoo prophylactic institutes (IZS). Started in June 2016 with a mapping of all precarious staff (approximately 3800 people, 44 clinical research professional

profiles, divided into two different categories: researcher and research supporting professionals) (2) culminated in late 2019 with the approval, by the Council of Ministers, of the contract template signed by the Agency for the Negotiation Representation of Public Administrations (ARAN) and by the involved labor unions (3). The reform process collectively known as the "Researchers' Pyramid" (4-8) provides a 10 year working path: a 5-year, fixed-term subordinate employment contract, renewable for a further 5 years after a positive suitability assessment and in the presence of two types of conditions:

1. subjective: if the researcher is successfully evaluated based on productivity modalities and criteria;
2. objective: if the Center has financial availability.

The positive evaluation after ten years would enable, after verification of compliance with regulatory requirements, the inclusion of this new role in the National Health Service, in a way that still need to be defined.

In order to favor “veteran precarious”, the personnel that by 31/12/2017 had accrued at least 3 years of seniority in the last 5 years were granted access to the new contracts without having to pass a new examination.

The commitment of the ministry has divided public opinion from the very beginning. On one hand, Institutions and the directors of institutes involved have always strongly defended it, describing it as a historical initiative that would have brought great advantages for the precarious personnel. On the other hand, researchers and the research personnel in time have become ever more hesitant in regards to its actual feasibility, denouncing major shortcomings in the contents of the reform (9-11). During the last trimester of 2019, unaware of how much the research scenario would have changed due to COVID-19, we decided to launch an investigation on the impressions of potential beneficiaries of the Researchers’ Pyramid and to identify the critical elements of this reform. Three months later, in the midst of a national emergency, we verified how much the reform staff had really impacted on the professional life of people who at that time were completely dedicated to research on the virus. During this period of deep emergency, in fact, public opinion has restored a great deal of interest in clinical research and the key role of researchers. Particularly in Italy, deeply affected by the emergency, people have regained their trust towards the work of health professionals and have widely called upon the research field to make the ultimate effort. However, if on one hand this has prompted the competent authority to put in place a series of measures to try to speed up clinical trials and the use of effective drugs (12-14), on the other hand it has once again underlined the profound precariousness of Italian research.

## METHODS

In September 2019, the GIDM (Gruppo Italiano Data Manager) shared with its members an online survey that could be completed anonymously, meant for the biomedical research personnel in Italy. The questionnaire comprised of a descriptive section with a short summary of the main novelties introduced by the Researchers’ Pyramid and a link to another page for more information, followed by different questions (binary or multiple choice, short answer, scoring question), divided in two sections:

- general – respondent’s information: type of workplace, knowledge on the Ministry’s initiative, general impressions on the topic;
- specific – respondent’s evaluations on the single novelties introduced by the reform.

A copy of the survey is contained in available in **appendix 1-survey**.

Two semi-structured questionnaires were used as pilot to interview 10 researchers and 10 research assistants, coming from 5 institutes representing all the typologies foreseen by the questionnaire.

It is impossible to make a precise estimate of the study sample size, as GIDM members were given permission to spread the questionnaire among other colleagues. Considering the impossibility to define a priori a sample of respondents and considering the nature of the investigation, the decision was made to keep the survey open for 3 months and analyze the data, once more than 50 responses have been registered. Data were analyzed at the end of December.

In March 2020, a revision of the official documentation available was made to understand how many researchers and support staff had actually benefited from a stable contract, being able to “officially” work even during lockdown.

## RESULTS

The questionnaire was completed by 147 respondents; the majority (n = 109, 74%) has declared to be already familiar with the Ministry’s initiative. As for the direct seniors of the respondents, a large portion (n = 64, 43.5%) seems unaware of the reform and in many cases (n = 53, 36.1%) their knowledge on the subject is not reported.

The origin of the respondents is diverse, the majority being employed at public IRCCS/IZP (n = 78, 53.1%) or public Hospitals/University/Local Health Company (n = 50, 34.0%) (**figure 1**).

The respondent’s profession was not included in those listed in the Pyramid in the minority of cases (n = 28, 19%), while for the greater part it corresponded to a profession included in the “Clinical Research Assistant” (n = 21, 55.1%) and “Clinical Researcher” categories (n = 38, 25.9%).

Regarding the actual benefit of the reform in terms of employment stability, over half of the respondents declared to be optimistic (Group A: n = 101, 68.7%). Of the remaining share (Group B), almost

all (Group C, n = 41, 89.1%) were willing to provide three main reasons why the Pyramid would not be an adequate solution (**figure 2**). Over half of the sample of the Group C (n = 26, 63.4%) considers the Pyramid a false path towards employment stabilization, leading to a prolongation of the precarious status, and, as highlighted by 15% of the interviewed (n = 7), without even providing real motivations on the process of inclusion at the end of the ten-year period in the Pyramid. Concerns were also expressed in relation to the evaluation criteria during the ten-year period, considered by a third of the interviewed (n = 11)

to be too exclusive and often not very suitable for the assigned role. Many individuals report (n = 17, 41.5%) the poor personnel recognition, due to inadequate pay and lack of a managerial-process. Much apprehension was recorded relating to the possibility of extending the reform to the non IRCCS/IZS public institutes (n = 4, 9.8%), the actual feasibility and sustainability of the system (n = 2, 4.9%), and the accuracy of the established criteria to access the pyramidal course (n = 2, 4.9%). Returning to the total sample, when called to give a vote between 1 (low) and 10 (high) on the extent of the pyramid as the solution, even if partially,

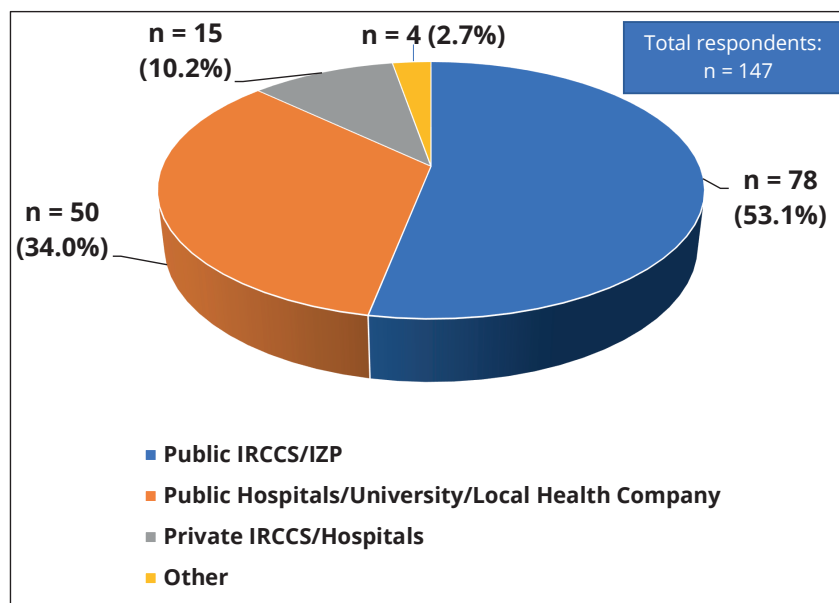


Figure 1. Workplace of respondents.

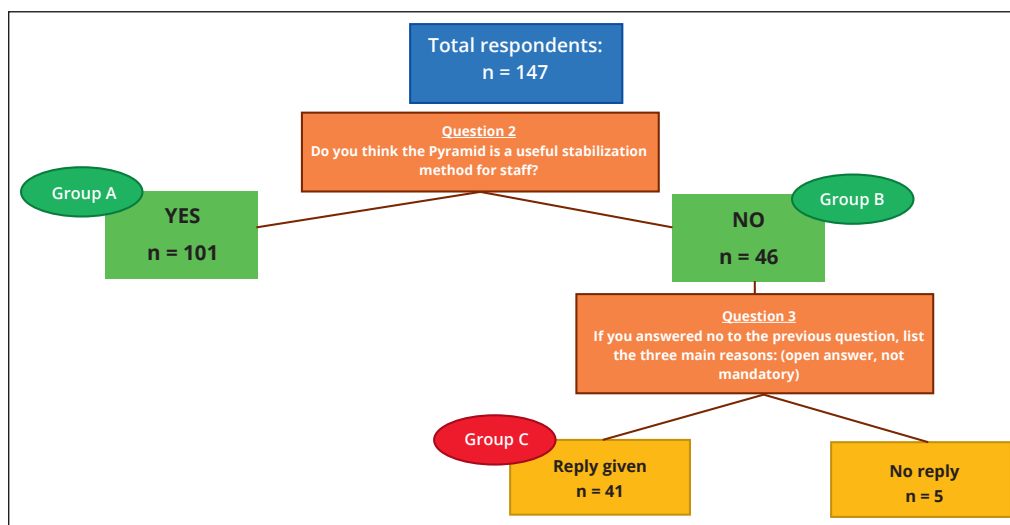


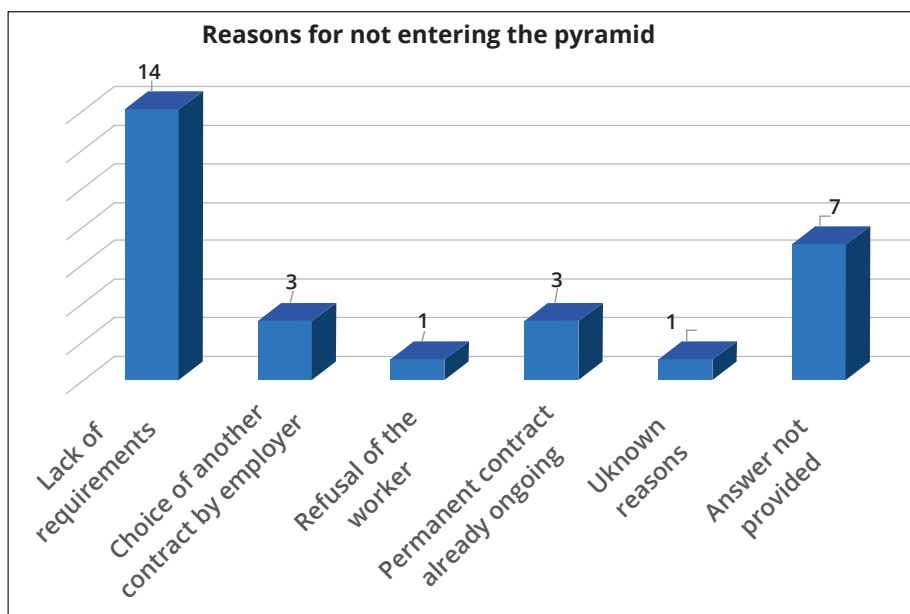
Figure 2. Impressions regarding the real usefulness of the reform for staff stabilization.

to precariousness, the average vote was 5.5, with most respondents having an intermediate opinion (scored 5: n = 28, 19%; scored 6: n = 26, 17.7%). Collected votes regarding the actual possibility to extend the reform to public institutes showed a similar average result (5.2), while more optimism emerged in relation to the potential implementation of the pyramid system in private IRCCS and hospitals (average score 6.6) (**table I**). Of those working in public IRCCS/IZS, more than half (n = 45, 53.8%) was granted access to the pyramidal stabilization process, 29 (37.2%) were cut out, and a smaller portion denied having knowledge in the matter (n = 7.9%). The most common reason for being excluded was the lack of necessary prerequisites (n = 14, 48.3%) (**figure 3**). In terms of the specific employment categories described in the reform, the respondents have not expressed a clear-cut position: a little over half of

them (n = 88, 59.9%) considers it consistent with their educational and professional background, while the remaining portion holds an opposite position. Among the given reasons for the latter, the following stand out: a) the flattening of the background compared to that of the majority of potential beneficiaries (39% of respondents), b) the inadequate remuneration (33.9%), and c) the impossibility to pursue a managerial position. The question as to why the possibility to pursue a managerial position was not included is shared among all respondents: 92.5% (n = 146) does not agree. When having to say with a score from 1 (low) to 10 (high), to what extent the contract suggested by the Pyramid elevates the professional figures included, the respondents expressed an intermediate opinion with an average score of 5.5. As for the remuneration, focusing on those respondents working for public IRCCS/IZS that en-

POTENTIAL EXTENSION	SCORE N (%)									
	1	2	3	4	5	6	7	8	9	10
PUBLIC INSTITUTES	18 (12.4)	12 (8.3)	11 (7.6)	11 (7.6)	24 (16.6)	19 (13.1)	19 (13.1)	10 (6.9)	5 (3.4)	16 (11.0)
IRCCS/PRIVATE HOSPITALS	15 (10.2)	6 (4.1)	3 (2.0)	12 (8.2)	21 (14.3)	22 (15.0)	28 (19.0)	17 (11.6)	7 (4.8)	16 (10.9)

**Table I.** Possibility of extending the reform to other institutions.



**Figure 3.** Reasons for not entering the pyramid.

tered the stabilization process, the majority (n = 25, 59.5%) considers their future wage will decrease compared to their current one, a large portion (n = 15, 35.7%) believe it will not be subject to substantial differences, while only two were confident on an increase in wage.

A wide range of responses was collected regarding to the degree of possibility that, following the ten-year process outlined by the Pyramid, the personnel would be in fact stabilized, with only a minor portion of respondents (n = 23, 15.6%) convinced that chances for this to occur could be over 50% (figure 4).

With the first (and for now only) hiring phase, 1412 professionals were hired (five-year contract), for a total of 31 institutions involved (figure 5).

## DISCUSSION

This reform program led by the Ministry, the “Researchers’ Pyramid”, has represented the first main effort to formally recognize a specific category of professionals that, despite working in the healthcare field, has never been able to benefit

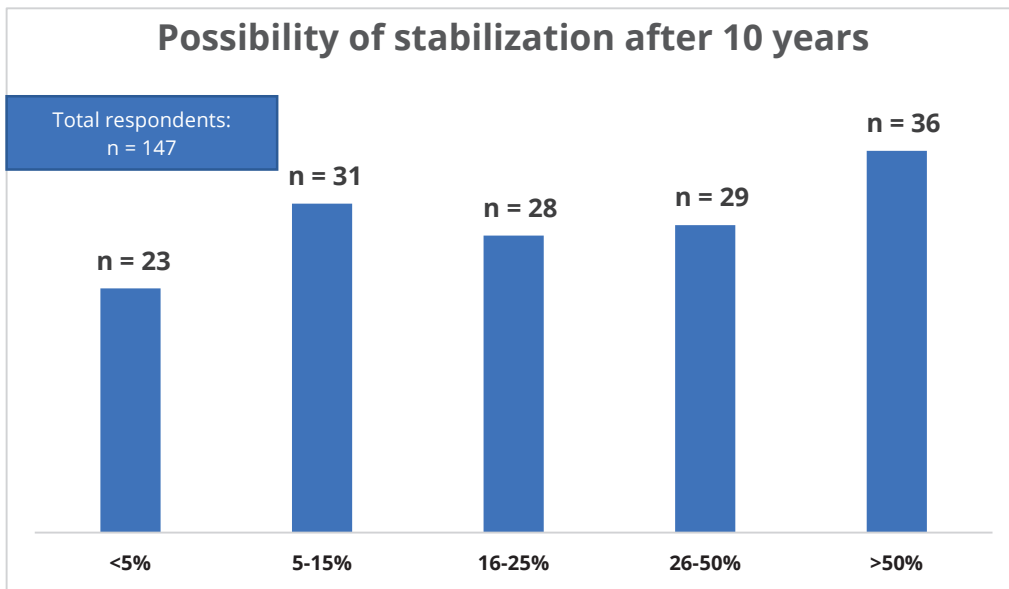


Figure 4. Possibility of stabilization after 10 years.

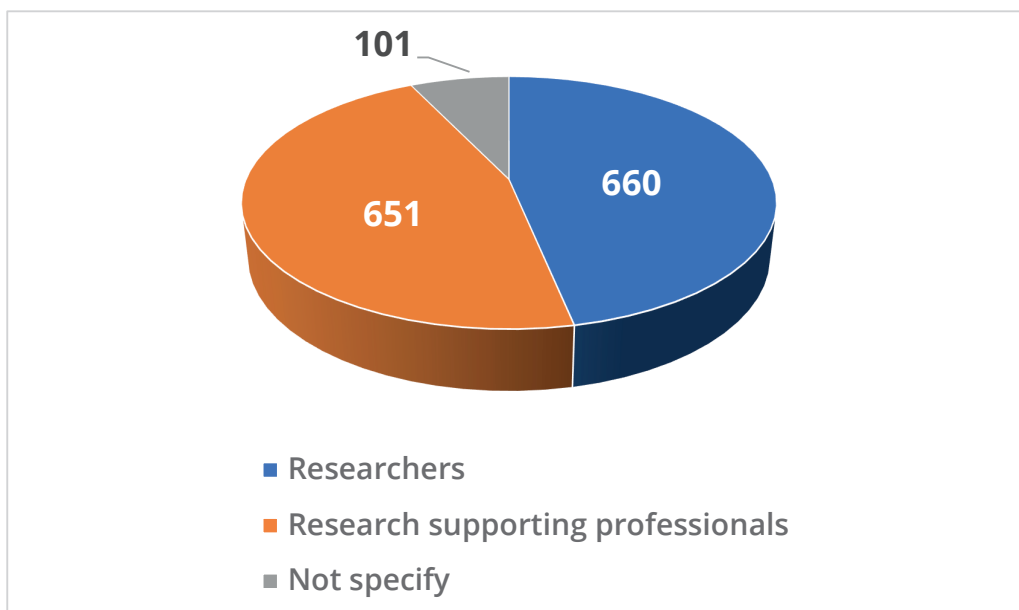


Figure 5. Number of professionals hired (five-year contract).

from the stabilization options granted to the rest of the medical and healthcare staff. Stabilization of researchers has in fact always been a privilege for few, de facto unattainable for those research profiles considered "atypical", like that of the Clinical Research Coordinators.

This process pictured by the Pyramid should represent, provided it is indeed achievable and financially sustainable, a chance to hire a large number of professionals that have been working in local public IRCCS and IZS for a long time.

However, despite the great emphasis given to this initiative by politics and some of institutes' directors, most of the potential beneficiaries and trade unions have bitterly criticized it in terms of content, highlighting many critical points. A first major inconsistency are the criteria to access the Pyramid: the fact that in order to benefit from the reform it is required for the professional to have accrued 3 years of seniority in the last 5 years in the same workplace, has de facto cut out many professionals that, despite being able to count up to decades of seniority will not be recognized with the latter because accrued under a different contract type that excludes a dependent relationship (VAT, scholarships) and/or neutralized by several contract interruptions. This data is confirmed in our research, according to which the lack of the prerequisites is the most common reason for failed access to Pyramidal system. Another critical aspect lies in the indicators that should be used for the periodical renewal according to the pyramidal system. The first drafts of the decree necessary to clear out this aspect had from the start reflected very restrictive prerequisites, conflicting with the possibilities pyramidal professionals were offered, de facto seeming much more restrictive compared to those that were currently used to evaluate the existent executive directors (managerial profiles), who ultimately will remain greatly privileged both on a professional categorization level and on a financial one, unlike the beneficiaries of the reform. This reform would increase the despised 3 approach of "Publish or Perish", so to speak, that already underlies clinical research. Moreover, the publication indicator is not applicable with most profiles included in the Pyramid (clinical research coordinators, budget and contracts office and library staff) who's main focus is far from that of publishing scientific papers. The final version of the decree, published while the survey was still available for completion online, has ultimately confirmed these concerns, by indicating

very restricting prerequisites, particularly for the clinical researcher's profile.

The investigation has also confirmed the inadequacy of the professional status in respect to the educational and professional background of the potential beneficiaries. The two categories established by the reform, despite including seniority upgrades, will never equal those of current health managers. This aspect is in contrast with the curricula of the personnel identified by the Ministry that, often, in addition to the decennial experience acquired on the job, has been recognized with prestigious academic titles, such as specialization courses and/or PhDs. An understatement of abilities is a dangerous risk reported by the respondents and already highlighted in the past by several professionals. A decrease in salary is yet another risk for many of those who have access to the pyramidal system that will have to face a reduction of their salary compared to their current one, to the point that it's preferable not to access the pyramidal system.

The professional classification also calls for attention that, in both categories envisioned by the Ministry, is very specific: in case of absence of an executive position in the pyramid, professionals would end up to with supervisors that could possibly be lacking necessary skills to supervise.

The reform, overall, seems like an important opportunity for entry level or inexperienced personnel, a watered-down compromise for expert professionals.

The numbers regarding the implementation of the reform are also not very encouraging: 1412 people are undoubtedly a small group compared to the totality of professionals who have been waiting for a real contract, often for decades.

Indeed, not less important, the fear conveyed from the great majority of the interviewed and already notified by groups of this field: Pyramid talks about a stabilization process, although it has not clarified how, after the ten-year period, this will take place. For this reason, for now, as most professionals put it, it is all a matter of procrastination of the issue, with most of them believing only a minimal portion will be indeed stabilized. In fact, industry associations often remember 1412 people hired for now have only a five-year contract in their hands, very different from the chimera of the indeterminate contract advertised by Institutions (15). It will be very interesting to investigate with future work on the percentage of actual reconfirmations in the 10 years foreseen by the pyramid and above the

share, and modalities with which this staff will officially and permanently become an integral part of the National Health System.

A delicate issue remains unresolved: the reproducibility.

Assuming that these issues will be resolved and that the permanent stabilization of public IRCCS and IZS will become reality, there is still great skepticism in relation to the possibility of extending this initiative to private IRCCS/Institutes. Particularly regarding to the extension to public hospitals, universities and ASL that, despite not having been contemplated by the Ministry, keep on representing an important research source, both basic and clinical, and that to this day are still subject to unsustainable employment loss. The number of centers involved in clinical research in Italy is close to two thousand, a much larger number than the share of institutions that can benefit from the reform. Does the staff in these centers have less of a right to consider research a job?

Meanwhile, the virus continues to circulate and there is more and more talk on research. Perhaps the time has become to consider it a real job, not just a passion.

By the end of 2019, the rapid spread of the new severe acute respiratory syndrome (SARS) coronavirus (CoV), named SARS-CoV-2 or 2019-nCoV (16-18), made Italy one of the most affected countries: with 37 860 confirmed cases and 4032 deaths according to the data of Istituto Superiore di Sanità on 20<sup>th</sup> of March 2020 (19). The arrival of the pandemic has put a strain on our nation, from many points of view. Firstly on our National Health System, already strongly weakened by years of continuous cuts, poor investments and little attention from politics to the point that Nature denounced it on February 2018 (20).

On an economic level, with a very long lockdown period and, no less important, on an organizational and psychological level, with the life of health workers completely out of whack (21-25).

Even the biologist who first isolated the virus in It-

aly is a precarious worker; a reality that has greatly stirred public opinion coming to terms with a problem well known among experts, that had been pointed out for years. "Underpaid excellences", 3,500 precarious workers make Italian research great", newspapers wrote (26).

How can these "ghost professionals" contribute to the battle towards COVID, particularly now that as non-employees their access to the hospital / research centers is denied? In full awareness of not being able to formally suggest a revision of the law, we would like to underline the most critical aspects being: i) the lack of a concrete career possibility for researchers, ii) the absence of salary adequate to the level of education and the skills acquired, iii) the total uncertainty about what can happen to the researcher at the end of the 10-year period foreseen by the pyramid.

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## ETHICS

### Fundings

There were no institutional or private fundings for this article.

### Conflict of interests

The authors have declared no conflict of interests.

### Availability of data and material

N/A

### Authors' contribution

ST, CC: conceptualization; ST, CC, AF: methodology; CC, IF: formal analysis; ST, CC, SS: formal investigation; CC: data curation; ST, CC, RC: writing - original draft preparation; SS, ASEG, MM, SP, CT: writing - review & editing; ST, CC: supervision; ST, CC: project administration.

### Ethical approval

N/A



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## APPENDIX 1-SURVEY

### Section one

1. Were you already aware of this Ministry initiative?
  - a.** Yes
  - b.** No
2. Do you think it is a useful stabilization method for staff?
  - a.** Yes
  - b.** No
3. If you answered no to the previous question, list the three main reasons: (open answer).
4. To what extent do you think it may be a solution, albeit partial, for the problem of precariousness in the research sector?  
*(score from 1-low, to 10-high).*
5. To what extent do you think this initiative can be transferred to private IRCCS or hospitals?  
*(score from 1-low, to 10-high).*
6. To what extent do you think this initiative can be transferred to non-IRCCS institutions?  
*(score from 1-low, to 10-high).*
7. Does your profession fall into one of the two profiles indicated in the contract?
  - a.** Yes, Researcher
  - b.** Yes, Professional Health Research Collaborator
  - c.** No
8. In what type of facility do you work?
  - a.** Public IRCCS/IZS
  - b.** Private IRCCS/Hospital
  - c.** Public Hospital/University/ Local health Company
9. If you work in a Public IRCCS / IZP, have you entered the stabilization path envisaged by the Pyramid?
  - a.** Yes
  - b.** No
10. If you have not entered the stabilization path, can you indicate the reason? (open answer).

### Section two

1. Based on your role and job description, do you consider the professional category foreseen in the contract (D special / D) to be appropriate?
  - a.** Yes
  - b.** No
2. If you answered no to the previous question, please indicate the 3 main reasons (open answer).
3. How much do you think that the contract proposed by the pyramid adequately enhances the professional figures it frames?  
*(score from 1-low, to 10-high).*
4. In what percentage do you think that, at the end of the ten-year path envisaged by the contract, the staff will be effectively stabilized?
  - a.** < 5%
  - b.** 5-15%
  - c.** 16-25%
  - d.** 26-50%
  - e.** > 50%
5. The Pyramid has 3 contribution brackets, but excludes a management path. Do you think it correct?
  - a.** Yes
  - b.** No
6. If you work in a public IRCCS / IZP and are part of the stabilization process, you believe that the new contract will be, on a salary basis:
  - a.** Disadvantageous compared to the previous one
  - b.** Similar to the previous one
  - c.** Advantageous compared to the previous one
7. Are its managers aware of the innovations introduced by the Pyramid?
  - a.** Yes
  - b.** No
  - c.** I don't know