

The impact of the SARS-CoV-2 pandemic on healthcare provision in Italy to non-COVID patients: a systematic review

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Abstract

Background Italy has been one of the countries most affected by the SARS-CoV-2 pandemic and the regional healthcare system has had to quickly adapt its organization to meet the needs of infected patients. This has led to a drastic change in the routine management of non-communicable diseases with a potential long-term impact on patient health care. We investigated the management of non-COVID-19 patients across all medical specialties during the pandemic in Italy.

Methods A PRISMA guideline-based systematic review of the available literature was performed using PubMed, Embase, and Scopus, restricting the search to the main outbreak period in Italy (from 20 February to 22 June, 2020). We selected articles in English or Italian that detailed changes in the Italian hospital care for non-COVID-19 patients due to the pandemic. Our keywords included all medical specialties in combination with our geographical focus (Italy) and COVID-19.

Findings Of the 4643 potentially eligible studies identified by the search, 247 studies were included in the systematic review. A decrease in the management of emergencies in non-COVID patients was found together with an increase in mortality. Similarly, non-deferrable conditions met a tendency toward decreased diagnosis. All specialties have been affected by the reorganization of healthcare provision in the hub-and-spoke system and have benefited from telemedicine during the pandemic.

Interpretation Our work highlights the changes taking place in the Italian public healthcare system in order to tackle the developing health crisis due to the COVID-19 pandemic. The findings of our review may be useful to analyze future directions for the healthcare system in the case of new pandemic scenarios.

Keywords: COVID-19; non-COVID patients; Italy; National Health System;

Introduction

Since the first case of the novel coronavirus (COVID-19) was reported in Wuhan, China in December 2019, viral infection spread at an alarming rate worldwide. On January 30, 2020, the World Health Organization (WHO) described COVID-19 as a Public Health Emergency of International Concern, and by March 11, 2020, it was officially declared a pandemic.¹ Italy was the first European country to be affected by COVID-19 with the first case being diagnosed on 20 February in a man living in the province of Lodi (NorthWest Italy).² The epidemic went on to affect all regions in Italy, with higher incidence rates in the north. The peak of the COVID-19 epidemic in Italy was reached in the last week of March with over 5500 new cases per day.

There has been a gradual decline since then as a result of strict containment measures that shaped the Italian lockdown phase. However, especially during the first phase of the epidemic, the outbreak put the Italian National Health System (Servizio Sanitario Nazionale, SSN) under unprecedented pressure.

In an attempt to direct the available resources at counteracting and limiting the effects of the pandemic, deferrable and non-urgent medical activities were suspended. On the other hand, patients with life-threatening conditions, such as myocardial infarction and stroke, or chronic conditions, such as diabetes, retained the right to their medical needs being met.

In these circumstances, several medical domains have been constrained by different resource allocations with unpredictable long-term consequences on patient health care.^{3,4,5}

Here, we present a systematic review of the literature which illustrates the direct and indirect effects of the COVID-19 pandemic on the management of non-COVID patients across all medical specialties.

Methods

This systematic review was performed in accordance with PRISMA guidelines.⁶ The search was conducted on 22 June 2020 on three different databases: PubMed, Embase, and Scopus without any date restriction. All the keywords were investigated

within the title and abstract in both “AND” and “OR” combinations. Our keywords included all medical specialties (and potential synonyms) in combination with our geographical focus (Italy or Italian) and COVID-19. The full search strategy is reported in Table 1, Supplementary Material.

Selection of the studies

The literature search returned original papers published between 1979 and 2020 – especially for the keyword “coronavirus”. Since our focus was the novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and the first positive case in Italy was detected on 20 February, the literature search was restricted to the period from 20 February to 25 June, 2020. The databases were queried via an R script on their respective APIs, checked and cleaned for duplicates (via title, DOI and/or database id), and exported into Excel.

In the second stage, studies were selected based on their titles and abstracts: each study was independently evaluated by three different raters (AnB, GA, GL). When there was a lack of agreement among the screeners, ensemble majority voting was used for the final decision. The full texts of the selected papers were thus analyzed by two reviewers in terms of relevance and inclusion/exclusion criteria (MMO and GA). When these reviewers disagreed over the inclusion or exclusion of a paper, a third reviewer was responsible for the final decision (GL). In addition, the reference lists of selected papers were reviewed in order to find pertinent studies not identified during the initial search.

Inclusion and exclusion criteria

The simultaneous co-occurrence of the following characteristics was considered for the inclusion of articles: (i) articles focusing on the SARS-CoV-2 infection/COVID-19 disease; (ii) articles focusing on the impact on patients based in Italy or on the Italian hospital organization; (iii) articles detailing COVID-19-associated changes in the Italian hospital care for non-COVID-19 patients. All the investigated articles were published in English or Italian.

Type of studies

Original papers, editorials, comments, research letters, case series and studies focusing on non-COVID patients in Italy were included.

Data extraction and quality assessment

Data were extracted from the papers by one of the investigators (TP) and were subsequently checked for accuracy by other reviewers (GL, AnB). Disagreements regarding data extraction among reviewers were solved by consensus. Extracted data included: type of medical specialty involved (surgical, medical, or public health), geographical location (north, south, centre or nationwide), type of patients (COVID/non-COVID), type of study (article or research letter/comment/editorial). No quality assessment was possible as over 32% of entries were not articles but consisted of comments, research letters, opinions or editorials – for which no quality guidelines are available.

Investigated Outcomes

This systematic review investigated the impact of the COVID-19 pandemic on patients' healthcare provision and hospital organization in Italy. Our primary goal was to identify potential short-term and long-term effects on the health of non-COVID patients. Our secondary goals were to identify: (i) organizational and/or clinical settings and decisions that were particularly effective (or counterproductive) during the pandemic; and (ii) similarities and differences across medical specialties and regional areas.

Results

The results are shown in Figure 1. After searching the databases, we identified a total of 4643 papers, from three different databases. Database merges and the removal of duplicate resulted in 1262 records, of which 100 were immediately removed as they were not related to COVID-19 (articles published before the pandemic in Italy). A total of 1162 records were then screened: 166 were removed as not relevant to Italy; 534 were removed as they referred to COVID-19 patients rather than non-COVID-19 patients. A total number of 247 were deemed eligible, of which 81 consisted of comments/letters/opinions/editorials.

Oncology and radiotherapy were the most represented category (47 papers), followed by surgery (24 for general surgery, 9 for neurosurgery, 2 for cardio-surgery,

2 for vascular surgery, and 3 further types), cardiology (19) and dermatology 14. There was one paper each for rheumatology and microbiology.

Overall, 133 papers were related to clinical disciplines, 89 to surgery, and 24 to services. In terms of the geographical distribution, many papers provided general recommendations without a specific geographical identification (75). Lombardy was the most represented region (72), followed by Lazio (21) and Emilia Romagna (15). In the south, Campania was the most represented region (11), followed by Puglia (4). Marche, Piedmont and FVG had 7 papers each, Tuscany and Veneto 9 each. Overall, 73 were general/nationwide, 105 pertained to northern regions, 54 to central regions and 15 to southern regions and islands. The studies included are reported in Table 2, Supplementary Material.

Management of emergencies

In general, non-COVID patients admitted to emergency departments (ED) decreased and remained well below the standard levels⁷⁻¹¹. The youngest age classes declined dramatically, whilst the oldest age classes progressively increased, remaining considerably above the standard rate of the local ED.⁸

Table 1 shows the most relevant data regarding cardiovascular emergencies, including stroke. In northern Italy, the emergency gradually took over most of cardiology intensive care units (ICUs).⁹ As expected, the net effect of this reorganization was a significant reduction in sites and staff committed to the treatment of cardiovascular diseases.¹⁰⁻¹¹ Comparing out-of-hospital cardiac arrests in the same period of the previous year, Baldi *et al.* found that the median arrival time of the emergency medical service was three minutes longer in 2020, and the proportion of patients who received cardiopulmonary resuscitation from bystanders was 15.6% lower. Among patients in whom resuscitation was attempted by emergency medical services, the incidence of out-of-hospital death was 14.9% higher in 2020 than in 2019.⁷ This finding was confirmed by additional studies highlighting an unpredictable decrease in acute coronary syndrome-related hospitalization in high-volume centres^{12,13,14,15} and pacemaker implantation during the weeks following the COVID-19 outbreak.²¹⁻¹⁸

Of note, one study showed a 49% reduction in acute heart failure admission to hospital.¹⁹ The patients admitted had longer door-to-balloon and symptoms to PCI

times, higher hs-cTnI levels at presentation, lower residual LV function at discharge, and higher predicted late cardiovascular mortality on the GRACE score.¹³

A lower number of patients with minor strokes and TIAs, longer onset-to-door and door-to-treatment times for major strokes, and reduced number of transfers from spokes centres were also reported.^{11,20} As a result, the number of patients who underwent intravenous thrombolysis or bridging therapy (combined intravenous and thrombectomy) decreased by –26% and –30%, respectively.

In addition, as a consequence of the reduction in the patient eligibility for bridging therapy, the number of primary thrombectomies (performed with all the necessary personal protective equipment owing to the risk of infection²¹) increased by 41%. Most of these patients had very serious strokes that would have benefited from early diagnoses.²²

The decrease in hospital admissions, confirmed by a survey across multiple countries including Italy^{23,24}, resulted in increased door-to-needle times and therapeutic windows being missed for patients suffering from severe strokes.²⁵ More studies are needed to confirm these data and to evaluate the impact on death rates; however, recent reports from other countries seem to confirm this trend.^{26,27}

The reduction in available ICU beds, massively dedicated to COVID-19 patients with acute respiratory failure, and the fear of infection resulted in the shrinkage of surgical activities in all fields^{28–38} and a reduction in urgent endoscopic procedures in COVID-free hospitals.²⁹

Each sub-specialty defined various non-deferrable surgical procedures that had to be guaranteed, causing a drop in consultations requested by emergency departments as in the case of urgent urology.³⁰ The surgical community were also faced with a shortage of blood components, derived from fewer donations due to lockdown and fear of infection.³¹ To compensate for the initial fall (–10%) in blood donations in the first week of March, the government promoted a national media campaign on the importance and safety of blood donation as a priority to maintain basic healthcare services for non-COVID patients.³² No blood-transmitted SARS-CoV-2 infection has been reported to date.³³

Children's emergency departments also showed a substantial decrease in visits.³⁴ This might reflect the scarcity of resources or the reluctance of parents and health care workers to expose children to the risk of viral infection in a health-care setting, in addition to lower rates of acute infections and trauma.³⁵ However, this

phenomenon has been detrimental to the health of non-COVID child patients: 12 cases of delayed access to hospital care were reported during the week March 23–27 across five hospitals of an Italian Children's Hospital Research Network. Half of the children were admitted to an ICU and four died, highlighting the high risk of delaying access to hospital care.³⁶ As a result, life-threatening conditions (i.e. abdominal pain, severe ketoacidosis) seemed to be more frequent, requiring in some cases an aggressive approach.³⁵

The same phenomenon affected dermatology³⁷. Tartari et al. compared two different weeks, before and after the outbreak of the COVID-19 pandemic in Italy, showing a decrease in unjustified referrals (93% reduction) in dermatological emergency services.³⁸

Despite medical care for emergencies and urgent treatments being continuously provided throughout the pandemic, the lack of personnel, resources, and ICUs beds along with the patients' fear of being infected in hospital affected patient management and substantially delayed the provision of ordinary medical activities. These initial data seem to show a decrease in emergencies and an increase in mortality. We strongly suggest undertaking detailed studies to further explore this phenomenon.

Management of non-deferrable conditions: the hub-and-spoke system

To tackle the massive impact of the overflow of SARS-CoV-2 infected patients, hospitals in Italy had to undergo a significant reorganization.^{39–40} In order to manage conditions needing non-deferrable treatment while avoiding the risk of infection, hub-and-spoke centres were created and widely used throughout the country.^{50,55–58} In the hub-and-spoke model, a main campus or hub supplies the most intensive medical services, while satellite campuses or spokes offer more limited services at sites distributed across the neighbouring area.⁴¹

Neurological surgery was particularly affected by the ICU reorganization, as it often requires a period of intensive monitoring in ICUs.^{22,60–62} All the cases of elective neurological surgery were deferred, while urgent neurosurgical pathologies (above all traumas) and non-deferrable tumour cases were transferred to hubs.^{27,29–33,61,67,68}

A specific urgency classification for tumour cases was developed based on symptoms, radiological findings, and suspected malignancy of the lesion.^{16,42–44} Some minimal activities were still performed at spoke centres, only for very critical

cases or when specific tools were required (i.e. gamma knife treatment of neoplastic lesions).^{16,42,45,46}

This provided an unprecedented opportunity for transversal collaboration among different teams, representing real innovation in such a competitive setting.^{58,64}

A hub-and-spoke system was also organized for vascular surgery and cardiac surgery units. All elective surgery was reduced and urgent surgery (including aortic aneurysms, valvular diseases or severe coronary diseases) was performed only in hub centres, preferring the endovascular to the open surgical approach whenever possible.^{70–72} A transcatheter approach was generally preferred, as it usually does not require an ICU bed or a ventilator.⁴⁷

The limitation of all non-urgent surgical activities also applied to general surgery^{73–78} and obstetrics.^{48,49} In highly-infected areas (such as Lombardy), hub centres were created⁵⁰ to treat only advanced symptomatic tumours^{81–83}, while elective oncological surgery procedures continued to be performed in less affected regions.^{50,51} This was an important issue for oncological patients, especially older ones.^{85–88}

Many possible ways of minimizing the risks were proposed: to postpone treatments or elective surgery for stable cancer in endemic areas, to provide patients with greater personal protection, and to offer more intensive surveillance or treatment.^{52–54} For example, neoadjuvant treatments were recommended or increased⁵⁵ to defer surgical admission for as long as possible.^{50,51,55,56} For other medical conditions requiring surgery under particular circumstances, such as relapse of inflammatory bowel disease, dedicated hubs were identified.^{94–57}

Interestingly, a tendency toward treatments aimed at reducing hospitalization was also found in medical oncology.^{58,59}

Some regions such as Tuscany created protocols for home care in order to avoid exposure to hospital settings.⁶⁰ Oncological care delivery and cancer diagnosis^{100–102} were dramatically reduced by the SARS-CoV-2 outbreak, even though suboptimal care and treatments may result in worse cancer-related outcomes. Oncologists were thus asked to preserve the continuum of care of patients, while adopting mitigation strategies to reduce the likelihood of infection in all cancer patients.^{103–61}

Arduino et al. described a worrying delay in the diagnosis of oral cancer in north-west Italy during the Covid pandemic.⁶² Moreover, the cessation of elective

activities, screening programs⁶³, and the drastic reduction in services regarding breast cancer restricted evaluations to only clinical observations of palpable lesions with the elevated risk of missing new diagnoses.⁶⁴ Although not requiring a structural reorganization, palliative care was forced to find a new balance between family member visits and patients' needs.^{116–119}

In orthopaedics, the reorganization led to the identification of poly-specialist major trauma centres and specialistic referral centres for minor trauma or non-deferrable orthopedic surgeries (i.e. septic arthritis or malignant tumours).^{120–127} There was a reduction in the number of proximal femur fractures in two centres⁶⁵, as well as a reduction in hip and knee arthroplasties.⁶⁶

A similar re-organization was also carried out for plastic surgery: only post-traumatic, oncological and burn treatments were guaranteed.^{130–132} A new approach based on enzymatic debridement was proposed for burns in order to reduce the need for burn surgery.⁶⁷

In urology, only urgent, non-deferrable procedures (colicky flank pain, gross hematuria and acute urinary retention) were authorized after careful multidisciplinary evaluation,^{134–138} which led to a drop in urological surgical activities.⁶⁸ Whenever possible, alternative treatments not requiring general anaesthesia (i.e. radiotherapy for genitourinary cancers) were suggested as being preferable.^{69,70,71}

Oral and maxillofacial surgery⁷², otolaryngology^{73,74} and ophthalmology^{144–147} also suspended all non-urgent treatments, especially considering the high risk of infection of healthcare workers while manipulating the upper airways and eyes.⁷⁵ Only the treatment of trauma, malignant neoplasms, and severe infections was guaranteed.^{142,149–152}

In the context of radiotherapy, all follow-up visits involved a phone call in advance in order to postpone non-urgent cases.^{153–156} The initial consultations of patients needing treatment for malignant tumours were conducted as normal^{157–159}, as were certain treatments such as bone metastase radiotherapy.⁷⁶ Specific approaches, such as short fractionated radiotherapy, were suggested.⁷⁷

All non-urgent and deferrable radiation treatments were delayed, while therapies for patients with a better prognosis (benign and functional diseases) were postponed.^{78,79}

Dermatology departments were also involved in an extensive reorganization.^{80,81} Dermatological anti-neoplastic treatments were provided in the dermatology clinics

of many centres, such as Bologna⁸², Naples⁸³, Modena⁸⁴ and Ancona⁸⁵, which also maintained urgent dermatological procedures and consultations required by other hospital wards. As awareness of the severity of the COVID-19 increased, some patients were concerned about continuing their medications, however all centres followed specific recommendations and advised patients not to suspend these drugs without consultation.^{170–173}

Lastly, microbiology labs underwent unprecedentedly high workloads with the increasing number of samples (swabs or serological tests) to analyze for the identification of Sar-Cov-2 infection. An extensive reorganization of the microbiology lab activities thus also occurred. In a large teaching hospital in Rome, the introduction of night shifts and the creation of a dedicated team significantly improved the number of samples processed, without interfering with the daily laboratory routines.⁸⁶

Hub-and-spoke centres represented an important change in care provision, especially in the most affected regions involving almost all specialties. However, data on the efficacy of this reorganization, measured in terms of health outcomes (such as mortality) are lacking. To date, only a few reports^{100,102,113} suggest a tendency toward a decrease in diagnosis for non-deferrable conditions despite the hub-and-spoke organization. Further epidemiological studies are needed to verify the emerging picture and to evaluate the impact on mortality rates.

Replacement therapies: dialysis and transplantation

Dialysis units experienced a profound change in their management, with the introduction of COVID-19 isolation rooms and the identification of dedicated healthcare professionals.^{87,88} Rombolà et al. proposed three actions to be taken in order to dialyze non-COVID patients safely: hygiene measures, the use of PPE to protect patients and the healthcare team, and the protection of the dialysis ward with an isolated area for testing patients suspected of infection.⁸⁹

In general, all transplant programs were profoundly affected by the pandemic.^{178–180} First of all, the wall-to-wall screening of donors and recipients was established in order to identify positive patients that would not be able to donate or receive blood, in view of the high mortality rates of COVID-19 in immunocompromised patients.^{78,180–183} Secondly, the widespread reduction in available ICU beds led to an estimated 15% drop in transplants compared with the average of the last five years⁹⁰, such as

liver transplantations.⁹¹ Transplantation was thus suggested only in true end-stage organ failure, preferring conservative treatments (maximizing pharmacological therapy) in all other patients.^{184,185,187}

Management of deferrable conditions and telemedicine

The management of chronic conditions also suffered.⁹² Cesari et al. found that the integration of care services collapsed: admissions to post-acute/long-term care facilities were reduced and several person-tailored interventions were suspended – e.g., physical therapists for mobilization.⁹³ Lasevoli et al. reinforced the view that the current pandemic has had dramatic consequences for the mental health of serious psychiatric patients.⁹⁴ All this inevitably led to a drastic reduction and a substantial reorganization of the clinical activity in many specialties⁹⁵ (Table 1), postponing elective treatments and switching to telemedicine (TM)⁹⁶ for consultation or not to leave vulnerable high-need patients without proper follow-up^{228,234}.

The implementation of TM occurred in different ways and to varying degrees depending on the specific center and specialty. An online questionnaire administered to the 176 Directors of Italian Radiation Oncology Departments revealed that, to guarantee the continuity of care, telematic consultations for RT treatments were activated in 78 centres (62.4%)¹⁵⁵. A similar survey for RT centres in Lombardy region revealed that 84% of RT facilities cancelled out-patient follow-up visits, 68% activated telematic consultation and 30% adopted working from home solutions¹⁵⁶. Another survey administered to 122 medical oncology departments homogeneously distributed on the national territory, revealed that in 72% of cases alternative ways to get in touch with patients have been used, like telephonic interviews with interpretation of laboratory and radiologic examination reports. According to Pietrantonio et al., WhatsApp turned out to be adequate to give a rapid answer to most queries from oncologic patients¹⁰⁸. Brunasso et al. started a teledermatologic service in smartworking using phone calls and emails by which could monitor almost 94% of their patients²³⁴. In a Department of Urology in Northern Italy, 55% cases were screened undergoing telephone consultation²⁵³.

TM has been shown to have beneficial impacts on heart failure outcomes in a comparative analysis between 2020 and 2019 by Salzano et al.²⁰⁰. Finally, TM positively impacted patients' life as documented by a survey in which 85% of patients were satisfied with the remote interview modality and the reduction of economic and

time costs related to going to the clinic. Most of those subjects (90%) expressed their willingness to continue to be included in remote evaluation programs²²⁸.

TM consists in the distribution of health-related services and information via telecommunication technologies and represents an elective approach to managing deferrable conditions during the COVID-19 pandemic in Italy. Almost all specialties benefited from TM during the pandemic. In many cases, the short-term results have been particularly encouraging, although a longer follow-up is needed to assess the efficacy of these measures. The results are summarized in Table 2.

TM has deeply influenced non-COVID patient care, enabling the remote diagnosis and monitoring of patients and allowing clinical data sharing between patients and physicians. However, the long-term effects on common health outcomes need to be carefully studied.^{97,98} Avoiding face-to-face contact via TM has been one of the most effective measures to limit the spread of SARS-Cov-2 infection, although many issues have been raised, such as privacy management and the lack of clear guidelines.^{194–198}

Discussion

On 11 March 2020, the World Health Organisation (WHO) declared COVID-19 to be a pandemic.¹ However, Italy was already in lockdown, with decrees aimed at limiting mobility and strengthening the National Health System. On March 9, 2020⁹⁹, most outpatient services were temporarily suspended, except for a few treatments that were considered urgent and non-deferrable. Clinical support for early isolation, treatment, and, where needed, intensive care of COVID-19 patients (or suspect cases) became the priority, with a massive allocation of dedicated resources.

A large increase in all-cause mortality was revealed during the epidemic, greater than the number of deaths attributed to COVID-19 cases. The possible causes of this increase include the large number of severe undiagnosed COVID-19 cases, the reduced access to health services due to the disruption of normal working processes or due to the fear of contamination of sick patients affected by other diseases, and possibly other factors.¹⁰⁰

We provided a snapshot, across all medical specialties, of how the provision of treatments to non-COVID patients in Italy has been impacted by the shortage of resources imposed by the pandemic.

Measures put in place to mitigate the outbreak, such as social distancing and confinement, contributed to discourage access to emergency department (ED) all over the country, also for those conditions requiring urgent care. As a result, there was a significant decrease in overall ED admissions and a substantial reduction in all-specialty surgical consultations.⁹⁻¹¹ Cardiovascular emergencies paid significant tolls with a significant delay in time-sensitive emergency operations.^{9,19} More recent evidences, consistent with our results, showed a significant decrease in mean number of endovascular therapies per hospital performed before and after COVID-19 confinement along with a significant increase in mean stroke onset-to groin puncture time²⁶⁰. A delayed presentation of STEMI patients that may led to worsened prognosis and unnecessary deaths has also been observed²⁶¹. Moreover, an additional study confirmed that more in-hospital cardiovascular deaths occurred in March 2020 compared with March 2019, a finding possibly due to late hospital presentations and consequent greater disease severity that affected eligibility and outcome of cardiovascular procedures²⁶².

As stated before, the hospitalization system was remodelled to allocate appropriate resources to manage patients with COVID-19; consequently, hubs were identified for specialized medical activities. Hub-and-spoke centres represented an important change in care provision, especially in the most affected regions, involving almost all specialties. However, data on the efficacy of this reorganization, measured in terms of health outcomes (such as mortality) are lacking. To date, only few reports^{100,102,113} suggest a tendency toward a decrease in diagnosis for non-deferrable conditions despite the hub-and-spoke organization. Cautious and evidence-based studies are needed to properly assess the overall impact of this model on measurable outcomes. The hub-and-spoke system seems to be a valid model, at least, in the management of ischemic emergencies²⁶⁴; further epidemiological studies are needed to verify the emerging picture and to evaluate the impact on mortality rates.

A pandemic is a dynamic scenario, requiring reorganization and flexibility of the healthcare delivery. TM, which consists in the distribution of health-related services and information via telecommunication technologies, proved a pragmatic

approach to managing deferrable conditions during the COVID-19 pandemic in Italy. TM has deeply influenced non-COVID patient care, enabling the remote diagnosis and monitoring of patients and clinical data sharing between patients and physicians with adequate protection for both. Moreover, TM allows for more flexibility on the side of both the clinician and the patient, as consultations can easily be rescheduled, and meetings can be held from home²³⁴.

Almost all specialties benefited from TM during the pandemic, with short-term results particularly encouraging in some cases. In general, the pandemic has demonstrated that information technologies should be more promoted independently from this specific context¹⁵⁵. However, a longer follow-up is needed to assess the efficacy of these measures on common health outcomes^{97,98}. Avoiding face-to-face contact via TM has been one of the most effective measures to limit the spread of SARS-Cov-2 infection, although many issues have been raised, such as privacy management and the lack of clear guidelines.^{194–198} We strongly encourage to overcome these limitations to further promote the multiple opportunities of TM in tune with its pivotal role during the second phase of COVID-19 pandemic in Italy²⁶³.

One limitation of this systematic review is the heterogeneity in publication type, which prevented the execution of a meta-analysis to summarize the findings together with a quality assessment. Another important issue is the potential underreporting, although the studies did cover experiences from the whole country.

Our work thus suggests that a public health crisis has resulted from the pandemic, a concern raised in other countries too, such as France.²⁵⁹ More detailed, population-based studies are needed to assess whether emergency management benefited from the reorganization adopted. Nevertheless, the hub-and-spoke system and telemedicine undoubtedly played – and continue to play – a crucial role in dealing with non-deferrable and deferrable conditions, respectively.

Contributions

T.P. and G.L. conceived and designed the study. T.P. collected the data. G.L, M.M.O, An.B, G.A., Al.B. analyzed and selected the data. F.C. and T.P. supervised data analysis. G.L, M.M.O., An.B, G.A., Al.B., T.P., wrote the manuscript. M.M.O.

and An.B. revised and edited the manuscript. L.Z. and P.R. revised the final version of manuscript.

Declaration of interests

We declare no competing interests.

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References

- 1 WHO Director-General's opening remarks at the media briefing on COVID-19 - 11 March 2020. <https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020> (accessed June 20, 2020).
- 2 Livingston E, Bucher K. Coronavirus Disease 2019 (COVID-19) in Italy. *JAMA* 2020; **323**: 1335.
- 3 Portnoy J, Waller M, Elliott T. Telemedicine in the Era of COVID-19. *J allergy Clin Immunol Pract* 2020; **8**: 1489–91.
- 4 Acheson RM. The definition and identification of need for health care. *J Epidemiol Community Health* 1978; **32**: 10–5.
- 5 Remuzzi A, Remuzzi G. COVID-19 and Italy: what next? *Lancet* 2020; **395**: 1225–8.
- 6 Moher D, Liberati A, Tetzlaff J, Altman DG, Group TP. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLOS Med* 2009; **6**: e1000097.
- 7 *** ATTO COMPLETO ***.
https://www.gazzettaufficiale.it/atto/vediMenuHTML?atto.dataPubblicazioneGazzetta=2020-03-09&atto.codiceRedazionale=20A01558&tipoSerie=serie_generale&tipoVigenza=originario (accessed June 20, 2020).
- 8 Magnani C, Azzolina D, Gallo E, Ferrante D, Gregori D. How Large Was the Mortality Increase Directly and Indirectly Caused by the COVID-19 Epidemic? An Analysis on All-Causes Mortality Data in Italy. *Int J Environ Res Public*

- Health* 2020; **17**. DOI:10.3390/ijerph17103452.
- 9 Baldi E, Sechi GM, Mare C, *et al*. Out-of-Hospital Cardiac Arrest during the Covid-19 Outbreak in Italy. *N Engl J Med* 2020; published online April. DOI:10.1056/NEJMc2010418.
 - 10 De Filippo O, D'Ascenzo F, Angelini F, *et al*. Reduced Rate of Hospital Admissions for ACS during Covid-19 Outbreak in Northern Italy. *N Engl J Med* 2020; : NEJMc2009166.
 - 11 Baracchini C, Pieroni A, Viaro F, *et al*. Acute stroke management pathway during Coronavirus-19 pandemic. *Neurol Sci* 2020; **41**: 1003–5.
 - 12 Comelli I, Scioscioli F, Cervellin G. Impact of the COVID-19 epidemic on census, organization and activity of a large urban Emergency Department. *Acta Biomed* 2020; **91**: 45–9.
 - 13 Senni M. COVID-19 experience in Bergamo, Italy. *Eur Heart J* 2020; **41**: 1783–4.
 - 14 Cosentino N, Assanelli E, Merlino L, Mazza M, Bartorelli AL, Marenzi G. An In-hospital Pathway for Acute Coronary Syndrome Patients During the COVID-19 Outbreak: Initial Experience Under Real-World Suboptimal Conditions. *Can J Cardiol* 2020; **36**: 961–4.
 - 15 Stefanini GG, Azzolini E, Condorelli G. Critical Organizational Issues for Cardiologists in the COVID-19 Outbreak: A Frontline Experience from Milan, Italy. *Circulation* 2020; : 1597–9.
 - 16 Agostoni P, Mapelli M, Conte E, *et al*. Cardiac patient care during a pandemic: how to reorganise a heart failure unit at the time of COVID-19. *Eur J Prev Cardiol* 2020; : 2047487320925632.
 - 17 Piepoli MF, Emdin M. A dialogue between the editor-in-chief and a deputy editor of a cardiology journal during the coronavirus outbreak: Take-home messages from the Italian experience. *Eur J Prev Cardiol* 2020; **27**: 790–2.
 - 18 Mazzone P, Peretto G, Radinovic A, *et al*. The COVID-19 challenge to cardiac electrophysiologists: optimizing resources at a referral center. *J Interv Card Electrophysiol an Int J Arrhythm pacing* 2020; : 1–7.
 - 19 Secco GG, Zocchi C, Parisi R, *et al*. Decrease and Delay in Hospitalization for Acute Coronary Syndromes During the 2020 SARS-CoV-2 Pandemic. *Can J Cardiol* 2020; published online May. DOI:10.1016/j.cjca.2020.05.023.
 - 20 Franco F, Alessandro Z, Carlo C, *et al*. Impact of COVID-19 epidemic on

- coronary care unit accesses for acute coronary syndrome in Veneto region, Italy. *Am Heart J* 2020; **226**: 26–8.
- 21 Mauro T, Francesco N, Marco A, Marco M, Domenico F. Unpredictable Fall of Severe Emergent Cardiovascular Diseases Hospital Admissions During the COVID-19 Pandemic: Experience of a Single Large Center in Northern Italy. *J Am Heart Assoc* 2020; **0**: e017122.
 - 22 Cenzato M, DiMeco F, Fontanella M, Locatelli D, Servadei F. Editorial. Neurosurgery in the storm of COVID-19: suggestions from the Lombardy region, Italy (ex malo bonum). *J. Neurosurg.* 2020; : 1–2.
 - 23 Federico M, Alessandro Z, Dario G, *et al.* Urgent Pacemaker Implantation Rates in the Veneto Region of Italy After the COVID-19 Outbreak. *Circ Arrhythmia Electrophysiol* 2020; **13**: e008722.
 - 24 Migliore F, Zorzi A, Gregori D, *et al.* Urgent Pacemaker Implantation Rates in the Veneto Region of Italy After the COVID-19 Outbreak. *Circ. Arrhythm. Electrophysiol.* 2020; **13**: e008722.
 - 25 De Rosa S, Spaccarotella C, Basso C, *et al.* Reduction of hospitalizations for myocardial infarction in Italy in the COVID-19 era. *Eur Heart J* 2020; **41**. DOI:10.1093/eurheartj/ehaa409.
 - 26 Colivicchi F, Di Fusco SA, Magnanti M, Cipriani M, Imperoli G. The Impact of the Coronavirus Disease-2019 Pandemic and Italian Lockdown Measures on Clinical Presentation and Management of Acute Heart Failure. *J. Card. Fail.* 2020; published online May. DOI:10.1016/j.cardfail.2020.05.007.
 - 27 Naccarato M, Scali I, Olivo S, *et al.* Has COVID-19 played an unexpected “stroke” on the chain of survival? *J Neurol Sci* 2020; **414**: 116889.
 - 28 Nguyen TN, Abdalkader M, Jovin TG, *et al.* Mechanical Thrombectomy in the Era of the COVID-19 Pandemic: Emergency Preparedness for Neuroscience Teams: A Guidance Statement from the Society of Vascular and Interventional Neurology. *Stroke* 2020; : 1896–901.
 - 29 Bersano A, Kraemer M, Touzé E, *et al.* Stroke care during the Covid-19 pandemic: Experience from three large European countries. *Eur J Neurol* 2020; **n/a**. DOI:10.1111/ene.14375.
 - 30 Cofano F, Tartara F, Zenga F, Penner F, Lanotte M, Garbossa D. Letter: Back Pain and Accesses to Emergency Departments During COVID-19 Lockdown in

- Italy. *Neurosurgery* 2020; published online May. DOI:10.1093/neuros/nyaa174.
- 31 Markus HS, Brainin M. COVID-19 and stroke—A global World Stroke Organization perspective. *Int J Stroke* 2020; **15**: 361–4.
- 32 Hammad TA, Parikh M, Tashtish N, *et al.* Impact of COVID-19 pandemic on ST-elevation myocardial infarction in a non-COVID-19 epicenter. *Catheter Cardiovasc Interv* 2020; published online June. DOI:10.1002/ccd.28997.
- 33 Bres Bullrich M, Fridman S, Mandzia JL, *et al.* COVID-19: Stroke Admissions, Emergency Department Visits, and Prevention Clinic Referrals. *Can J Neurol Sci Le J Can des Sci Neurol* 2020; : 1–10.
- 34 Patriti A, Eugeni E, Guerra F. What happened to surgical emergencies in the era of COVID-19 outbreak? Considerations of surgeons working in an Italian COVID-19 red zone. *Updates Surg.* 2020; : 1–2.
- 35 Lauro A, Pagano N, Impellizzeri G, Cervellera M, Tonini V. Emergency Endoscopy During the SARS-CoV-2 Pandemic in the North of Italy: Experience from St. Orsola University Hospital-Bologna. *Dig Dis Sci* 2020; **65**: 1559–61.
- 36 Zheng MH, Boni L, Fingerhut A. Minimally Invasive Surgery and the Novel Coronavirus Outbreak: Lessons Learned in China and Italy. *Ann Surg* 2020; **272**: e5–6.
- 37 Leva E, Morandi A, Sartori A, Macchini F, Berrettini A, Manzoni G. Correspondence from Northern Italy about our experience with COVID-19. *J Pediatr Surg* 2020; **55**: 985–6.
- 38 Patriti A, Baiocchi GL, Catena F, Marini P, Catarci M, FACS on behalf of the Associazione Chirurghi Ospedalieri Italiani (ACOI). Emergency general surgery in Italy during the COVID-19 outbreak: first survey from the real life. *World J Emerg Surg* 2020; **15**: 36.
- 39 D'Ovidio V, Lucidi C, Bruno G, Miglioiresi L, Lisi D, Bazuro ME. A snapshot of urgent upper gastrointestinal endoscopy care during the Covid-19 outbreak in Italy. *J Gastroenterol Hepatol* 2020; published online June. DOI:10.1111/jgh.15132.
- 40 Motterle G, Morlacco A, Iafrate M, *et al.* The impact of COVID-19 pandemic on urological emergencies: a single-center experience. *World J Urol* 2020; : 1–5.
- 41 Grandone E, Mastroianno M, Caroli A, Ostuni A. Blood supply and transfusion support in southern Italy: findings during the first four weeks of the SARS-

- CoV-2 pandemic. *Blood Transfus* 2020; **18**: 230–2.
- 42 Mascaretti L, De Angelis V, Berti P. The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic and Transfusion Medicine: reflections from Italy. *Blood Transfus*. 2020; **18**: 77–8.
- 43 Franchini M, Farrugia A, Velati C, *et al*. The impact of the SARS-CoV-2 outbreak on the safety and availability of blood transfusions in Italy. *Vox Sang* 2020; published online April. DOI:10.1111/vox.12928.
- 44 Pata D, Gatto A, Buonsenso D, Chiaretti A. A COVID-19 outbreak's lesson: Best use of the paediatric emergency department. *Acta Paediatr*; **n/a**. DOI:10.1111/apa.15386.
- 45 Cognigni M. An Italian paediatric department at the time of Coronavirus: a resident's point of view. *Arch. Dis. Child*. 2020; published online April. DOI:10.1136/archdischild-2020-319299.
- 46 Lazzerini M, Barbi E, Apicella A, Marchetti F, Cardinale F, Trobia G. Delayed access or provision of care in Italy resulting from fear of COVID-19. *Lancet. Child Adolesc. Heal*. 2020; **4**: e10--e11.
- 47 Giacalone S, Bortoluzzi P, Nazzaro G. Which are the “emergent” dermatologic practices during COVID-19 pandemic? Report from the lockdown in Milan, Italy. *Int J Dermatol*; **n/a**. DOI:10.1111/ijd.15005.
- 48 Tartari F, Guglielmo A, Fuligni F, Pileri A. Changes in emergency service access after spread of COVID-19 across Italy. *J. Eur. Acad. Dermatol. Venereol*. 2020; published online April. DOI:10.1111/jdv.16553.
- 49 Gagliano A, Villani PG, Cò FM, *et al*. 2019-ncov's epidemic in middle province of northern Italy: Impact, logistic & strategy in the first line hospital. *Disaster Med Public Health Prep* 2020; : 1–5.
- 50 Ferrazzi EM, Frigerio L, Cetin I, *et al*. COVID-19 Obstetrics Task Force, Lombardy, Italy: Executive management summary and short report of outcome. *Int J Gynaecol Obstet Off organ Int Fed Gynaecol Obstet* 2020; **149**: 377–8.
- 51 Baggiani A, Briani S, Luchini G, *et al*. Management of healthcare areas for the prevention of COVID-19 emergency in an Italian teaching hospital (Pisa, Tuscany): A hospital renovation plan. *Infect Control Hosp Epidemiol* 2020; : 1–6.
- 52 Carenzo L, Costantini E, Greco M, *et al*. Hospital surge capacity in a tertiary

- emergency referral centre during the COVID-19 outbreak in Italy. *Anaesthesia* 2020; **75**: 928–34.
- 53 Meschi T, Rossi S, Volpi A, *et al.* Reorganization of a large academic hospital to face COVID-19 outbreak: The model of Parma, Emilia-Romagna region, Italy. *Eur. J. Clin. Invest.* 2020; **50**: e13250.
- 54 Mariani NM, Pisani Ceretti A, Fedele V, *et al.* Surgical Strategy During the COVID-19 Pandemic in a University Metropolitan Hospital in Milan, Italy. *World J Surg* 2020; : 1–6.
- 55 Ghio S, Ferlini M, Scelsi L, *et al.* La pandemia COVID-19: Riorganizzazione della Cardiologia in un ospedale della Regione Lombardia. *G Ital Cardiol* 2020; **21**: 358–9.
- 56 Villa E, Saccocci M, Messina A, *et al.* COVID-19 e coronaropatia: Uso selettivo e collaborativo delle risorse durante le crisi sanitarie. *G Ital Cardiol* 2020; **21**: 360–3.
- 57 Chisci E, Masciello F, Michelagnoli S. The Italian USL Toscana Centro model of a vascular hub responding to the COVID-19 emergency. *J Vasc Surg* 2020; **72**: 8–11.
- 58 Zangrillo A, Beretta L, Silvani P, *et al.* Fast reshaping of intensive care unit facilities in a large metropolitan hospital in Milan, Italy: facing the COVID-19 pandemic emergency. *Crit Care Resusc* 2020; published online April.
- 59 Elrod JK, Fortenberry JLJ. The hub-and-spoke organization design revisited: a lifeline for rural hospitals. *BMC Health Serv Res* 2017; **17**: 795.
- 60 Zoia C, Bongetta D, Veiceschi P, *et al.* Neurosurgery during the COVID-19 pandemic: update from Lombardy, northern Italy. *Acta Neurochir (Wien)* 2020; **162**: 1221–2.
- 61 Fontanella MM, Maria L De, Zanin L, *et al.* Neurosurgical Practice During the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Pandemic: A Worldwide Survey. *World Neurosurg* 2020; **2**: 1–9.
- 62 Fontanella MM, Saraceno G, Lei T, *et al.* Neurosurgical activity during COVID-19 pandemic: an expert opinion from China, South Korea, Italy, United States of America, Colombia and United Kingdom. *J Neurosurg Sci* 2020. DOI:10.23736/S0390-5616.20.04994-2.
- 63 Bernucci C, Brembilla C, Veiceschi P. Effects of the COVID-19 Outbreak in Northern Italy: Perspectives from the Bergamo Neurosurgery Department.

- World Neurosurg* 2020; **137**: 465--468.e1.
- 64 Dobran M, Paracino R, Iacoangeli M. Letter to the editor by Dobran Mauro, Paracino Riccardo, and Iacoangeli Maurizio regarding 'Neurosurgery during the COVID-19 pandemic: update from Lombardy, northern Italy.' Zoia C, Bongetta D, Veiceschi P, Cenzato M, Di Meco F, Locatelli D, Boeris D, Fo. *Acta Neurochir. (Wien)*. 2020; **162**: 1223–4.
 - 65 Giorgi PD, Villa F, Gallazzi E, *et al.* The management of emergency spinal surgery during the COVID-19 pandemic in Italy. *Bone Joint J* 2020; **102-B**: 671–6.
 - 66 Levi V, Risso A, Egidi M. Letter□: The Resiliency of the Neurosurgeon in the Midst of COVID-19 Pandemic Storm□: The Italian Experience From the Frontline. 2020; **0**: 2019–20.
 - 67 Castelnovo P, Turri-Zanoni M, Karligkiotis A, *et al.* Skull-base surgery during the COVID-19 pandemic: the Italian Skull Base Society recommendations. *Int Forum Allergy Rhinol* 2020; published online April. DOI:10.1002/alr.22596.
 - 68 Mazzatenta D, Zoli M, Cavallo MA, *et al.* Remodulation of neurosurgical activities in an Italian region (Emilia-Romagna) under COVID- 19 emergency: maintaining the standard of care during the crisis. *J Neurosurg Sci* 2020. DOI:10.23736/s0390-5616.20.05018-3.
 - 69 Franzin A, Spatola G, Giudice L, Migliorati K, Vivaldi O, Giorgi C. Maintaining stereotactic radiosurgical treatments during Covid-19 outbreak: the case of the Gamma Knife Unit in Brescia - Italy. *Br. J. Neurosurg.* 2020; : 1–2.
 - 70 Mangialardi ML, Orrico M, Mangialardi N. Routine in an Italian High-Volume Vascular Surgery Unit during the COVID-19 Era: How the Pandemic Changed the Vascular Daily Practice. *Ann. Vasc. Surg.* 2020; **66**: 6–7.
 - 71 Bonalumi G, di Mauro M, Garatti A, *et al.* The COVID-19 outbreak and its impact on hospitals in Italy: the model of cardiac surgery. *Eur J Cardiothorac Surg* 2020; **57**: 1025–8.
 - 72 Bonalumi G, Di Mauro M, Garatti A, Barili F, Parolari A, Gerosa G. [COVID-19 outbreak and Cardiac Surgery: position paper from the COVID-SICCH Task Force of the Italian Society for Cardiac Surgery]. *G Ital Cardiol (Rome)* 2020; **21**: 396–400.
 - 73 Kurihara H, Bisagni P, Faccincani R, Zago M. COVID-19 outbreak in Northern Italy: Viewpoint of the Milan area surgical community. *J Trauma Acute Care*

- Surg* 2020; **88**: 719–24.
- 74 Di Saverio S, Khan M, Pata F, *et al.* Laparoscopy at all costs? Not now during COVID-19 outbreak and not for acute care surgery and emergency colorectal surgery: A practical algorithm from a hub tertiary teaching hospital in Northern Lombardy, Italy. *J Trauma Acute Care Surg* 2020; **88**. https://journals.lww.com/jtrauma/Fulltext/2020/06000/Laparoscopy_at_all_costs__Not_now_during_COVID_19.2.aspx.
 - 75 Duci M, Antonello LM, Trovalusci E, Tognon C, Gamba P. Pediatric endoscopic procedures during the COVID-19 pandemic: an Italian center experience. *Pediatr Surg Int* 2020; **36**: 853–4.
 - 76 Torzilli G, Viganò L, Galvanin J, *et al.* A Snapshot of Elective Oncological Surgery in Italy During COVID-19 Emergency: Pearls, Pitfalls, and Perspectives. *Ann Surg* 2020; published online May. DOI:10.1097/SLA.0000000000004081.
 - 77 Navarra G, Komaei I, Currò G, *et al.* Bariatric surgery and the COVID-19 pandemic: SICOB recommendations on how to perform surgery during the outbreak and when to resume the activities in phase 2 of lockdown. *Updates Surg* 2020; : 1–10.
 - 78 Repici A, Maselli R, Colombo M, *et al.* Coronavirus (COVID-19) outbreak: what the department of endoscopy should know. *Gastrointest Endosc* 2020; : 1–6.
 - 79 Capanna F, Haydar A, McCarey C, *et al.* Preparing an obstetric unit in the heart of the epidemic strike of COVID-19: quick reorganization tips. *J Matern neonatal Med Off J Eur Assoc Perinat Med Fed Asia Ocean Perinat Soc Int Soc Perinat Obstet* 2020; : 1–7.
 - 80 Giannubilo SR, Giannella L, Delli Carpini G, Carnielli VP, Ciavattini A. Obstetric network reorganization during the COVID-19 pandemic: Suggestions from an Italian regional model. *Eur. J. Obstet. Gynecol. Reprod. Biol.* 2020; **249**: 103–5.
 - 81 Di Saverio S, Pata F, Gallo G, *et al.* Coronavirus pandemic and colorectal surgery: practical advice based on the Italian experience. *Colorectal Dis* 2020; **22**: 625–34.
 - 82 Di Saverio S, Khan M, Pata F, *et al.* Laparoscopy at all costs? Not now during COVID-19 outbreak and not for acute care surgery and emergency colorectal surgery: A practical algorithm from a hub tertiary teaching hospital in Northern

- Lombardy, Italy. *J Trauma Acute Care Surg* 2020; **88**: 715–8.
- 83 Vicini E, Galimberti V, Naninato P, Vento AR, Ribeiro Fontana SK, Veronesi P. COVID-19: The European institute of oncology as a ‘hub’ centre for breast cancer surgery during the pandemic in Milan (Lombardy region, northern Italy) - A screenshot of the first month. *Eur. J. Surg. Oncol. J. Eur. Soc. Surg. Oncol. Br. Assoc. Surg. Oncol.* 2020; **46**: 1180–1.
- 84 Gallo G, La Torre M, Pietroletti R, *et al.* Italian society of colorectal surgery recommendations for good clinical practice in colorectal surgery during the novel coronavirus pandemic. *Tech Coloproctol* 2020; **24**: 501–5.
- 85 Ingenito C, Buonerba L, Ferrara C, *et al.* Coronavirus Disease 2019 Emergency and Cancer in the South of Italy: What’s New for the Oncologist? *Front Med* 2020; **7**: 189.
- 86 Fratino L, Procopio G, Di Maio M, Cinieri S, Leo S, Beretta G. Coronavirus: Older Persons With Cancer in Italy in the COVID-19 Pandemic. *Front Oncol* 2020; **10**: 648.
- 87 Marano L, Marrelli D, Roviello F. Cancer care under the outbreak of COVID-19: A perspective from Italian tertiary referral center for surgical oncology. *Eur. J. Surg. Oncol. J. Eur. Soc. Surg. Oncol. Br. Assoc. Surg. Oncol.* 2020; **46**: 1184–5.
- 88 Lombardi CP, D’Amore A, Grani G, *et al.* Endocrine surgery during COVID-19 pandemic: do we need an update of indications in Italy? *Endocrine* 2020; **68**: 485–8.
- 89 Lambertini M, Toss A, Passaro A, *et al.* Cancer care during the spread of coronavirus disease 2019 (COVID-19) in Italy: Young oncologists’ perspective. *ESMO Open* 2020; **5**. DOI:10.1136/esmoopen-2020-000759.
- 90 Quaglino P, Fava P, Brizio M, *et al.* Metastatic melanoma treatment with checkpoint inhibitors in the COVID-19 era: experience from an Italian Skin Cancer Unit. *J Eur Acad Dermatol Venereol* 2020; published online May. DOI:10.1111/jdv.16586.
- 91 Pietrantonio F, Garassino MC. Caring for Patients With Cancer During the COVID-19 Outbreak in Italy. *JAMA Oncol* 2020; **6**: 821–2.
- 92 Mandato VD, Aguzzoli L. Management of ovarian cancer during the COVID-19 pandemic. *Int J Gynecol Obstet* 2020; **149**: 382–3.
- 93 Perrone A, Palma A, De Iaco P. COVID-19 global pandemic: options for

- management of gynecologic cancers. The experience in surgical management of ovarian cancer in the second highest affected Italian region. *Int J Gynecol Cancer* 2020; **30**: ijgc-2020.
- 94 Allocca M, Fiorino G, Furfaro F, *et al.* Maintaining the Quality Standards of Care for Inflammatory Bowel Disease Patients During the COVID-19 Pandemic. *Clin Gastroenterol Hepatol Off Clin Pract J Am Gastroenterol Assoc* 2020; **18**: 1882–3.
 - 95 Occhipinti V, Pastorelli L. Challenges in the Care of IBD Patients During the CoViD-19 Pandemic: Report From a “Red Zone” Area in Northern Italy. *Inflamm Bowel Dis* 2020; **26**: 793–6.
 - 96 Maida M, Sferrazza S, Savarino E, *et al.* ‘Impact of the COVID-19 pandemic on Gastroenterology Divisions in Italy: a national survey’. *Dig liver Dis Off J Ital Soc Gastroenterol Ital Assoc Study Liver* 2020; published online May. DOI:10.1016/j.dld.2020.05.017.
 - 97 Rossi D. Metronomic oral vinorelbine and lung cancer therapy during the COVID 19 pandemic: A single-center experience. *Lung Cancer* 2020; **145**: 83–4.
 - 98 de Marinis F, Attili I, Morganti S, *et al.* Results of Multilevel Containment Measures to Better Protect Lung Cancer Patients From COVID-19: The IEO Model. *Front Oncol* 2020; **10**: 665.
 - 99 Porzio G, Cortellini A, Bruera E, *et al.* Home Care for Cancer Patients During COVID-19 Pandemic: The Double Triage Protocol. *J Pain Symptom Manage* 2020; **60**: e5-7.
 - 100 De Vincentiis L, Carr RA, Mariani MP, Ferrara G. Cancer diagnostic rates during the 2020 ‘lockdown’, due to COVID-19 pandemic, compared with the 2018-2019: an audit study from cellular pathology. *J Clin Pathol* 2020; published online June. DOI:10.1136/jclinpath-2020-206833.
 - 101 Cuneo A, Scarfo L, Reda G, *et al.* CHRONIC LYMPHOCYTIC LEUKEMIA MANAGEMENT IN ITALY DURING THE COVID-19 PANDEMIC. A CAMPUS CLL REPORT. *Blood* 2020; published online June 19. DOI:10.1182/blood.2020006854.
 - 102 Ferrari A, Zecca M, Rizzari C, *et al.* Children with cancer in the time of COVID-19: An 8-week report from the six pediatric onco-hematology centers in Lombardia, Italy. *Pediatr. Blood Cancer*. 2020; : e28410.

- 103 Bongiovanni A, Mercatali L, Fausti V, Ibrahim T. Comment on 'Reorganisation of medical oncology departments during the novel coronavirus disease-19 pandemic: A nationwide Italian survey' by Alice Indini et al. *Eur. J. Cancer*. 2020; **134**: 3–5.
- 104 Brandes AA, Ardizzoni A, Artioli F, et al. Fighting cancer in coronavirus disease era: organization of work in medical oncology departments in Emilia Romagna region of Italy. *Future Oncol* 2020; published online May. DOI:10.2217/fon-2020-0358.
- 105 Tagliamento M, Spagnolo F, Poggio F, et al. Italian survey on managing immune checkpoint inhibitors in oncology during COVID-19 outbreak. *Eur J Clin Invest* 2020; **n/a**: e13315.
- 106 Mistretta FA, Luzzago S, Molendini LO, et al. A Guide for Oncologic Patient Management during Covid-19 Pandemic: The Initial Experience of an Italian Oncologic Hub with Exemplificative Focus on Uro-Oncologic Patients. *Cancers (Basel)* 2020; **12**. DOI:10.3390/cancers12061513.
- 107 Omarini C, Maur M, Luppi G, et al. Cancer treatment during the coronavirus disease 2019 pandemic: Do not postpone, do it! *Eur J Cancer* 2020; **133**: 29–32.
- 108 Pietrantonio F, Morano F, Nigro M, et al. Systemic Treatment of Patients With Gastrointestinal Cancers During the COVID-19 Outbreak: COVID-19-adapted Recommendations of the National Cancer Institute of Milan. *Clin Colorectal Cancer* 2020. DOI:10.1016/j.clcc.2020.05.004.
- 109 Pellino G, Spinelli A. How coronavirus disease 2019 outbreak is impacting colorectal cancer patients in Italy: A long shadow beyond infection. *Dis Colon Rectum* 2020; **63**: 720–2.
- 110 Marandino L, Di Maio M, Procopio G, Cinieri S, Beretta GD, Necchi A. The Shifting Landscape of Genitourinary Oncology During the COVID-19 Pandemic and how Italian Oncologists Reacted: Results from a National Survey. *Eur. Urol.* 2020; published online April. DOI:10.1016/j.eururo.2020.04.004.
- 111 Indini A, Aschele C, Cavanna L, et al. Reorganisation of medical oncology departments during the novel coronavirus disease-19 pandemic: a nationwide Italian survey. *Eur J Cancer* 2020; **132**: 17–23.
- 112 Silvestris N, Moschetta A, Paradiso A, Delvino A. COVID-19 Pandemic and the Crisis of Health Systems: The Experience of the Apulia Cancer Network and

- of the Comprehensive Cancer Center Istituto Tumori 'Giovanni Paolo II' of Bari. *Int J Environ Res Public Health* 2020; **17**. DOI:10.3390/ijerph17082763.
- 113 Arduino PG, Conrotto D, Broccoletti R. The outbreak of Novel Coronavirus disease (COVID-19) caused a worrying delay in the diagnosis of oral cancer in north-west Italy: The Turin Metropolitan Area experience. *Oral Dis.* 2020; published online April. DOI:10.1111/odi.13362.
- 114 Minucci A, Scambia G, Santonocito C, Concolino P, Urbani A. BRCA testing in a genomic diagnostics referral center during the COVID-19 pandemic. *Mol Biol Rep* 2020; : 1–4.
- 115 Vanni G, Pellicciaro M, Materazzo M, Palombi L, Buonomo OC. Breast Cancer Diagnosis in Coronavirus-Era: Alert From Italy. *Front Oncol* 2020; **10**: 938.
- 116 Mercadante S, Adile C, Ferrera P, Giuliana F. Palliative Care in the Time of COVID-19. *J Pain Symptom Manage* 2020; : 4–5.
- 117 Etkind SN, Bone AE, Lovell N, *et al.* The Role and Response of Palliative Care and Hospice Services in Epidemics and Pandemics: A Rapid Review to Inform Practice During the COVID-19 Pandemic. *J Pain Symptom Manage* 2020; **60**: e31-40.
- 118 Costantini M, Sleeman KE, Peruselli C, Higginson IJ. Response and role of palliative care during the COVID-19 pandemic: A national telephone survey of hospices in Italy. *Palliat Med* 2020; : 269216320920780.
- 119 Lazzarin P, Avagnina I, Divisic A, Agosto C, Giacomelli L, Benini F. Management strategies adopted by a pediatric palliative care network in northern Italy during the COVID-19 pandemic. *Acta Paediatr* 2020; **n/a**. DOI:10.1111/apa.15411.
- 120 Zagra L, Faraldi M, Pregliasco F, *et al.* Changes of clinical activities in an orthopaedic institute in North Italy during the spread of COVID-19 pandemic: a seven-week observational analysis. *Int Orthop* 2020. DOI:10.1007/s00264-020-04590-1.
- 121 Randelli PS, Compagnoni R. Management of orthopaedic and traumatology patients during the Coronavirus disease (COVID-19) pandemic in northern Italy. *Knee Surg Sports Traumatol Arthrosc* 2020; **28**: 1683–9.
- 122 Casiraghi A, Domenicucci M, Cattaneo S, *et al.* Operational strategies of a trauma hub in early coronavirus disease 2019 pandemic. *Int Orthop* 2020. DOI:10.1007/s00264-020-04635-5.

- 123 Placella G, Salvato D, Delmastro E, Bettinelli G, Salini V. CoViD-19 and ortho and trauma surgery: The Italian experience. *Injury* 2020; **51**: 1403–5.
- 124 Di Martino A, Faldini C. Trauma service reorganization in Bologna (Italy) during COVID-19 pandemic. *Injury*. 2020; **51**: 1684.
- 125 Maniscalco P, Poggiali E, Quattrini F, *et al.* The deep impact of novel CoVID-19 infection in an Orthopedics and Traumatology Department: the experience of the Piacenza Hospital. *Acta Biomed* 2020; **91**: 97–105.
- 126 Bettinelli G, Delmastro E, Salvato D, Salini V, Placella G. Orthopaedic patient work fl ow in CoViD-19 pandemic in Italy. *J Orthop* 2020; **22**: 158–9.
- 127 Grassi A, Pizza N, Tedesco D, Zaffagnini S. The COVID-19 outbreak in Italy: perspectives from an orthopaedic hospital. *Int Orthop* 2020; : 1–5.
- 128 Maniscalco P, Poggiali E, Quattrini F, *et al.* Proximal femur fractures in COVID-19 emergency: the experience of two Orthopedics and Traumatology Departments in the first eight weeks of the Italian epidemic. *Acta Biomed* 2020; **91**: 89–96.
- 129 D’Apolito R, Faraldi M, Ottaiano I, Zagra L. Disruption of Arthroplasty Practice in an Orthopedic Center in Northern Italy During the Coronavirus Disease 2019 Pandemic. *J Arthroplasty* 2020; **35**: S6-9.
- 130 Facchin F, Messana F, Sonda R, Faccio D, Tiengo C, Bassetto F. COVID-19: Initial experience of hand surgeons in Northern Italy. *Hand Surg. Rehabil.* 2020; published online May. DOI:10.1016/j.hansur.2020.04.007.
- 131 Scalise A, Torresetti M, Di Benedetto G. Wound Healing Center: Analysis of preventive measures and new indications in a teaching hospital in central Italy during the Covid-19 emergency. *Int Wound J*; **n/a**. DOI:10.1111/iwj.13430.
- 132 Pignatti M, Pinto V, Miralles MEL, Giorgini FA, Cannamela G, Cipriani R. How the COVID-19 pandemic changed the Plastic Surgery activity in a regional referral center in Northern Italy. *J Plast Reconstr Aesthetic Surg* 2020; : 1–9.
- 133 Ranno R, Vestita M, Verrienti P, *et al.* The role of enzymatic debridement in burn care in the COVID-19 pandemic . Commentary by the Italian Society of Burn Surgery (SIUST). *Burns* 2020; : 2019–20.
- 134 Ficarra V, Novara G, Abrate A, *et al.* Urology practice during COVID-19 pandemic. *Minerva Urol Nefrol* 2020; published online March. DOI:10.23736/S0393-2249.20.03846-1.
- 135 Novara G, Bartoletti R, Crestani A, *et al.* Impact of the COVID-19 pandemic on

- urological practice in emergency departments in Italy. *BJU Int* 2020; published online May. DOI:10.1111/bju.15107.
- 136 Simonato A, Giannarini G, Abrate A, *et al.* Pathways for urology patients during the COVID-19 pandemic. *Minerva Urol Nefrol* 2020; published online March. DOI:10.23736/S0393-2249.20.03861-8.
 - 137 Luciani LG, Mattevi D, Giusti G, *et al.* Guess Who's Coming to Dinner: COVID-19 in a COVID-free Unit. *Urology* 2020; published online May. DOI:10.1016/j.urology.2020.05.011.
 - 138 Cini C, Bortot G, Sforza S, *et al.* Paediatric urology practice during COVID-19 pandemic. *J Pediatr Urol* 2020; **16**: 295–6.
 - 139 Rocco B, Sighinolfi MC, Sandri M, *et al.* The dramatic COVID-19 outbreak in Italy is responsible of a huge drop in urological surgical activity: A multicenter observational study. *BJU Int* 2020; **n/a**. DOI:10.1111/bju.15149.
 - 140 Campi RR, Amparore D. Letter to the Editor. *Eur Urol* 2020; : 9–10.
 - 141 Allevi F, Dionisio A, Baciliero U, *et al.* Impact of COVID-19 epidemic on maxillofacial surgery in Italy. *Br J Oral Maxillofac Surg* 2020; published online May. DOI:10.1016/j.bjoms.2020.04.035.
 - 142 De Bernardi F, Turri-Zanoni M, Battaglia P, Castelnovo P. How to Reorganize an Ear, Nose, and Throat Outpatient Service During the COVID-19 Outbreak: Report From Northern Italy. *Laryngoscope* 2020; published online May. DOI:10.1002/lary.28716.
 - 143 Ralli M, Minni A, Candelori F, Cialente F, Greco A, de Vincentiis M. Effects of COVID-19 Pandemic on Otolaryngology Surgery in Italy: The Experience of Our University Hospital. *Otolaryngol Neck Surg* 2020; : 0194599820928970.
 - 144 Veritti D, Sarao V, Bandello F, Lanzetta P. Infection control measures in ophthalmology during the COVID-19 outbreak: A narrative review from an early experience in Italy. *Eur J Ophthalmol* 2020. DOI:10.1177/1120672120927865.
 - 145 Arrigo A, Aragona E, Parodi MB, Loperfido F, Bandello F. Ophthalmology and SARS-CoV-2: Blind toward those who fight blindness? *Eur J Ophthalmol* 2020; : 1120672120929961.
 - 146 Tognetto D, Pastore MR, De Giacinto C, *et al.* Managing ophthalmic practices in a referral emergency COVID-19 hospital in north-east Italy. *Acta Ophthalmol* 2020; **n/a**. DOI:10.1111/aos.14488.

- 147 Lanni V, Iuliano A, Laezza MP, Uccello G, Tranfa F, Strianese D. Oculoplastic management of patients in the Covid-19 era: experience from an Italian tertiary referral center. *Orbit* 2020; : 1–3.
- 148 Parravano M, Borrelli E, Costanzo E, Sacconi R, Varano M, Querques G. Protect Healthcare Workers and Patients from COVID-19: The Experience of Two Tertiary Ophthalmology Care Referral Centers in Italy. *Ophthalmol Ther* 2020; **9**: 231–4.
- 149 Barca I, Cordaro R, Kallaverja E, Ferragina F, Cristofaro MG. Management in oral and maxillofacial surgery during the COVID-19 pandemic: Our experience. *Br J Oral Maxillofac Surg* 2020; : S0266--4356(20)30177--7.
- 150 Galli J, Settimi S, Tricarico L, Almadori G, Paludetti G. Clinical and surgical management of patients with head and neck cancer in a COVID-19 dedicated center in Italy. *Head Neck* 2020; published online June. DOI:10.1002/hed.26263.
- 151 Saibene AM, Allevi F, Biglioli F, Felisati G. Role and Management of a Head and Neck Department during the COVID-19 Outbreak in Lombardy. *Otolaryngol Neck Surg* 2020; **162**: 795–6.
- 152 Riva G, Pizzo C, Fassone E, Pecorari G. Head and neck cancer surgery in COVID-19 pandemic in Northern Italy. *Oral Oncol* 2020; : 104835.
- 153 Pezzulla D, Macchia G, Taccari F, Sticca G, Deodato F. Radiotherapy in Southern Italy at the time of COVID-19: options for radiation oncology units. *Int. J. Gynecol. cancer Off. J. Int. Gynecol. Cancer Soc.* 2020; published online May. DOI:10.1136/ijgc-2020-001523.
- 154 Montesi G, Di Biase S, Chierchini S, *et al.* Radiotherapy during COVID-19 pandemic. How to create a No fly zone: a Northern Italy experience. *Radiol Med* 2020; **125**: 600–3.
- 155 Jereczek-fossa BA, Pepa M, Marvaso G, *et al.* COVID-19 outbreak and cancer radiotherapy disruption in Italy: Survey endorsed by the Italian Association of Radiotherapy and Clinical Oncology (AIRO). 2020.
- 156 Jereczek-Fossa BA, Palazzi MF, Soatti CP, *et al.* COVID-19 Outbreak and Cancer Radiotherapy Disruption in Lombardy, Northern Italy. *Clin. Oncol. (R. Coll. Radiol)*. 2020; **32**: e160–1.
- 157 Filippi AR, Russi E, Magrini SM, Corvò R. Letter from Italy: First practical indications for radiation therapy departments during COVID-19 outbreak. *Int J*

- Radiat Oncol Biol Phys* 2020. DOI:10.1016/j.ijrobp.2020.03.007.
- 158 Meattini I, Franco P, Belgioia L, *et al.* Radiation therapy during the coronavirus disease 2019 (covid-19) pandemic in Italy: A view of the nation's young oncologists. *ESMO Open* 2020; **5**: 2019–21.
 - 159 Alterio D, Volpe S, Marvaso G, *et al.* Head and neck cancer radiotherapy amid COVID-19 pandemic: Report from Milan, Italy. *Head Neck*; **n/a**. DOI:10.1002/hed.26319.
 - 160 Rinaldi CG, Ippolito E, Greco C, Matteucci P, D'Angelillo RM, Ramella S. Radiotherapy for pain relief from bone metastases during Coronavirus (COVID-19) pandemic. *Eur J Pain (United Kingdom)* 2020; : 1211–2.
 - 161 Barra S, Guarnieri A, di Monale E Bastia MB, *et al.* Short fractionation radiotherapy for early prostate cancer in the time of COVID-19: long-term excellent outcomes from a multicenter Italian trial suggest a larger adoption in clinical practice. *Radiol Med* 2020; : 1–5.
 - 162 Krengli M, Ferrara E, Mastroleo F, Brambilla M, Ricardi U. Running a Radiation Oncology Department at the time of coronavirus: an Italian experience. *Adv Radiat Oncol* 2020; published online March. DOI:10.1016/j.adro.2020.03.003.
 - 163 Portaluri M, Tramacere F, Portaluri T, Gianicolo EAL. Southern Italy: How the supply of radiation therapy, patient outcomes, and risk to health care providers have changed during the COVID-19 Pandemic. *Adv Radiat Oncol* 2020; published online April. DOI:10.1016/j.adro.2020.03.016.
 - 164 Valenti M, Gargiulo L, Pavia G, *et al.* Reorganization of a Northern Italy dermatology department during the COVID-19 pandemic: is it temporary or the beginning of a new era in dermatology? *J Dermatolog Treat* 2020; : 1–2.
 - 165 Pacifico A, Ardigò M, Frascione P, Damiani G, Morrone A. Phototherapeutic approach to dermatological patients during the 2019 Coronavirus pandemic: Real-life Data from the Italian Red Zone. *Br J Dermatol* 2020; **n/a**. DOI:10.1111/bjd.19145.
 - 166 Patrizi A, Bardazzi F, Filippi F, Abbenante D, Piraccini BM. The covid-19 outbreak in Italy: preventive and protective measures adopted by the dermatology unit of bologna university hospital. *Dermatol Ther* 2020; : 1–2.
 - 167 Marasca C, Ruggiero A, Annunziata MC, Fabbrocini G, Megna M. Face the COVID-19 emergency: measures applied in an Italian Dermatologic Clinic. *J*

- Eur Acad Dermatology Venereol* 2020; : 0–3.
- 168 Rossi E, Trakatelli M, Giacomelli L, *et al.* The COVID-19 outbreak in dermatologic surgery: resetting clinical priorities. *J Eur Acad Dermatol Venereol* 2020; published online May. DOI:10.1111/jdv.16672.
 - 169 Radi G, Diotallevi F, Campanati A, Offidani A. Global coronavirus pandemic (2019-nCoV): implication for an Italian medium size dermatological clinic of a II level hospital. *J Eur Acad Dermatology Venereol* 2020; **34**: e213–4.
 - 170 Micali G, Musumeci ML, Peris K. The Italian dermatologic community facing COVID-19 pandemic□: recommendation from the Italian society of dermatology and venereology. 2020; **155**: 123–5.
 - 171 Atzori L, Mugheddu C, Addis G, *et al.* Psoriasis health care in the time of the coronavirus pandemic: insights from dedicated centers in sardinia (Italy). *J Eur Acad Dermatology Venereol* 2020. DOI:10.1111/jdv.16473.
 - 172 Gisondi P, Facheris P, Dapavo P, *et al.* The impact of the COVID-19 pandemic on patients with chronic plaque psoriasis being treated with biological therapy: the Northern Italy experience. *Br J Dermatol* 2020; published online April. DOI:10.1111/bjd.19158.
 - 173 COVID-19 and biologics for psoriasis: a high-epidemic area experience - Bergamo, 2 Lombardy, Italy. 2020.
 - 174 Posteraro B, Marchetti S, Romano L, *et al.* Clinical microbiology laboratory adaptation to COVID-19 emergency: experience at a large teaching hospital in Rome, Italy. *Clin Microbiol Infect* 2020; : 2019–21.
 - 175 Manganaro M, Baldovino S, Besso L, *et al.* First considerations on the SARS-CoV-2 epidemic in the Dialysis Units of Piedmont and Aosta Valley, Northern Italy. *J Nephrol* 2020; **33**: 393–5.
 - 176 Brioni E, Leopaldi D, Magnaghi C, *et al.* [Covid-19 in patients on dialysis: infection prevention and control strategies]. *G Ital di Nefrol organo Uff della Soc Ital di Nefrol* 2020; **37**.
 - 177 Rombolà G, Heidempergher M, Pedrini L, *et al.* Practical indications for the prevention and management of SARS-CoV-2 in ambulatory dialysis patients: lessons from the first phase of the epidemics in Lombardy. *J. Nephrol.* 2020; **33**: 193–6.
 - 178 Pascale MM, Bianco G, Ferri L, Agnes S. COVID-19 health restrictions in a transplanted Italian cohort. *Transpl. Int. Off. J. Eur. Soc. Organ Transplant.*

- 2020; published online May. DOI:10.1111/tri.13661.
- 179 De Simone P, Melandro F, Balzano E, *et al.* COVID 19 infection requires strengthening of the chronic care model: the impact on liver transplant practice at a high-volume center in Italy. *Liver Transplant*; **n/a**. DOI:10.1002/lt.25821.
- 180 Umberto M, Luciano DC, Daniel Y, *et al.* The impact of the COVID-19 outbreak on liver transplantation programs in Northern Italy. *Am J Transplant* 2020; **n/a**. DOI:10.1111/ajt.15948.
- 181 Angelico R, Trapani S, Manzia TM, Lombardini L, Tisone G, Cardillo M. The COVID-19 outbreak in Italy: Initial implications for organ transplantation programs. *Am J Transplant* 2020; published online April. DOI:10.1111/ajt.15904.
- 182 Agnes S, Andorno E, Avolio AW, *et al.* Preliminary Analysis of the Impact of COVID-19 Outbreak on Italian Liver Transplant Programs. *Liver Transplant. Off. Publ. Am. Assoc. Study Liver Dis. Int. Liver Transplant. Soc.* 2020; published online May. DOI:10.1002/lt.25790.
- 183 Vistoli F, Furian L, Maggiore U, *et al.* COVID-19 and kidney transplantation: an Italian Survey and Consensus. *J Nephrol* 2020. DOI:10.1007/s40620-020-00755-8.
- 184 Lauterio A, De Carlis R, Belli L, Fumagalli R, De Carlis L. How to guarantee liver transplantation in the north of Italy during the COVID-19 pandemic: A sound transplant protection strategy. *Transpl. Int.* 2020; published online April. DOI:10.1111/tri.13633.
- 185 Cacciola R. Response to 'The COVID-19 outbreak in Italy: Initial implications for organ transplantation programs'. *Am. J. Transplant. Off. J. Am. Soc. Transplant. Am. Soc. Transpl. Surg.* 2020; published online May. DOI:10.1111/ajt.15968.
- 186 Cesari M, Proietti M. Geriatric Medicine in Italy in the Time of COVID-19. *J Nutr Heal Aging* 2020; **24**: 459–60.
- 187 Berardi G, Colasanti M, Levi Sandri GB, *et al.* Continuing our work: transplant surgery and surgical oncology in a tertiary referral COVID-19 center. *Updates Surg* 2020. DOI:10.1007/s13304-020-00825-3.
- 188 Mauro V, Lorenzo M, Paolo C, Sergio H. Treat all COVID 19-positive patients, but do not forget those negative with chronic diseases. *Intern Emerg Med* 2020; : 1–4.

- 189 Iasevoli F, Fornaro M, D'Urso G, *et al.* Psychological distress in patients with serious mental illness during the COVID-19 outbreak and one-month mass quarantine in Italy. *Psychol Med* 2020; : 1–3.
- 190 Costi S, Caporali R, Cimaz R. Dealing with COVID-19 in a Pediatric Rheumatology Unit in Italy. *Pediatr Drugs* 2020; **22**: 263–4.
- 191 Ohannessian R, Duong TA, Odone A. Global Telemedicine Implementation and Integration Within Health Systems to Fight the COVID-19 Pandemic: A Call to Action. *JMIR Public Heal Surveill* 2020; **6**: e18810.
- 192 Perrone G, Zerbo S, Bilotta C, Malta G, Argo A. Telemedicine during Covid-19 pandemic: Advantage or critical issue? *Med Leg J* 2020; : 002581722092692.
- 193 Sossai P, Uguccioni S, Casagrande S. Telemedicine and the 2019 Coronavirus (SARS-CoV-2). *Int J Clin Pract*; **n/a**: e13592.
- 194 Caroppo E, Lega I, Cognetti D, Rotunno V. Community Mental Health Care in the COVID-19 Response: An Italian Example. *Prim care companion CNS Disord* 2020; **22**. DOI:10.4088/PCC.20com02659.
- 195 Gambardella C, Pagliuca R, Pomilla G, Gambardella A. COVID-19 risk contagion: Organization and procedures in a South Italy geriatric oncology ward. *J Geriatr Oncol* 2020; published online May. DOI:10.1016/j.jgo.2020.05.008.
- 196 Starace F, Ferrara M. COVID-19 disease emergency operational instructions for Mental Health Departments issued by the Italian Society of Epidemiological Psychiatry. *Epidemiol Psychiatr Sci* 2020; **29**: e116.
- 197 Omboni S. Telemedicine During The COVID-19 in Italy: A Missed Opportunity? *Telemed J E Health* 2020; **00**: 19–21.
- 198 Volpato S, Landi F, Incalzi RA. A Frail Health Care System for an Old Population: Lesson form the COVID-19 Outbreak in Italy. *J Gerontol A Biol Sci Med Sci* 2020; published online April. DOI:10.1093/gerona/glaa087.
- 199 Bignamini E, Cazzato S, Cutrera R, *et al.* Italian pediatric respiratory society recommendations on pediatric pulmonary function testing during COVID-19 pandemic. *Ital. J. Pediatr.* 2020; **46**: 68.
- 200 Salzano A, D'Assante R, Stagnaro FM, *et al.* Heart failure management during COVID-19 outbreak in Italy. Telemedicine experience from a heart failure university tertiary referral centre. *Eur. J. Heart Fail.* 2020; published online May. DOI:10.1002/ejhf.1911.

- 201 Mureddu GF, Ambrosetti M, Venturini E, *et al.* Cardiac rehabilitation activities during the COVID-19 pandemic in Italy. Position Paper of the AICPR (Italian Association of Clinical Cardiology, Prevention and Rehabilitation). *Monaldi Arch Chest Dis* 2020; **90**. DOI:10.4081/monaldi.2020.1439.
- 202 Scaldaferri F, Pugliese D, Privitera G, *et al.* Impact of COVID-19 pandemic on the daily management of biotechnological therapy in inflammatory bowel disease patients: Reorganisational response in a high-volume Italian inflammatory bowel disease centre. *United Eur Gastroenterol J* 2020; : 1–7.
- 203 Danese S, Ran ZH, Repici A, *et al.* Gastroenterology department operational reorganisation at the time of covid-19 outbreak: An Italian and Chinese experience. *Gut* 2020; : 1–3.
- 204 Siniscalchi M, Zingone F, Savarino EV, D’Odorico A, Ciacci C. COVID-19 pandemic perception in adults with celiac disease: an impulse to implement the use of telemedicine: COVID-19 and CeD. *Dig liver Dis Off J Ital Soc Gastroenterol Ital Assoc Study Liver* 2020; published online May. DOI:10.1016/j.dld.2020.05.014.
- 205 Catassi GN, Vallorani M, Cerioni F, Lionetti E, Catassi C. A negative fallout of COVID-19 lockdown in Italy: life-threatening delay in the diagnosis of celiac disease. *Dig liver Dis Off J Ital Soc Gastroenterol Ital Assoc Study Liver* 2020; published online May. DOI:10.1016/j.dld.2020.05.016.
- 206 Rubin DT, Abreu MT, Rai V, Siegel CA. Management of Patients With Crohn’s Disease and Ulcerative Colitis During the Coronavirus Disease-2019 Pandemic: Results of an International Meeting. *Gastroenterology*. 2020; published online April. DOI:10.1053/j.gastro.2020.04.002.
- 207 Curigliano G. How to Guarantee the Best of Care to Patients with Cancer During the COVID-19 Epidemic: The Italian Experience. *Oncologist* 2020. DOI:10.1634/theoncologist.2020-0267.
- 208 Gebbia V, Piazza D, Valerio MR, Borsellino N, Firenze A. Patients With Cancer and COVID-19: A WhatsApp Messenger-Based Survey of Patients’ Queries, Needs, Fears, and Actions Taken. *JCO Glob Oncol* 2020; **6**: 722–9.
- 209 Buonomo OC, Materazzo M, Pellicciaro M, Caspi J, Piccione E, Vanni G. Tor Vergata University-Hospital in the Beginning of COVID-19-Era: Experience and Recommendation for Breast Cancer Patients. *In Vivo* 2020; **34**: 1661–5.

- 210 Viale G, Licata L, Sica L, *et al.* Personalized Risk-Benefit Ratio Adaptation of Breast Cancer Care at the Epicenter of COVID-19 Outbreak. *Oncologist* 2020; published online May. DOI:10.1634/theoncologist.2020-0316.
- 211 Corsi F, Caruso A, Albasini S, *et al.* Management of breast cancer in an EUSOMA-accredited Breast Unit in Lombardy, Italy, during the COVID-19 pandemic. *Breast J* 2020; **n/a**. DOI:10.1111/tbj.13926.
- 212 Rossi B, Zoccali C, Baldi J, *et al.* Reorganization Tips from a Sarcoma Unit at Time of the COVID-19 Pandemic in Italy: Early Experience from a Regional Referral Oncologic Center. *J Clin Med* 2020; **9**. DOI:10.3390/jcm9061868.
- 213 DOCUMENTO DI INDIRIZZO PER LA VALUTAZIONE E LA GESTIONE DEL RISCHIO DEI PAZIENTI E DEGLI OPERATORI NEI REPARTI DI RADIOTERAPIA ONCOLOGICA IN CORSO DI DIFFUSIONE DEL COVID-19. www.radioterapiaitalia.it. (accessed July 4, 2020).
- 214 Tomelleri A, Sartorelli S, Campochiaro C, Baldissera EM, Dagna L. Impact of COVID-19 pandemic on patients with large-vessel vasculitis in Italy: a monocentric survey. *Ann. Rheum. Dis.* 2020; published online April. DOI:10.1136/annrheumdis-2020-217600.
- 215 Minniti A, Maglione W, Pignataro F, Cappadona C, Caporali R, Del Papa N. Taking care of systemic sclerosis patients during COVID-19 pandemic: rethink the clinical activity. *Clin Rheumatol* 2020; **39**: 2063–5.
- 216 Malipiero G, Paoletti G, Puggioni F, *et al.* An academic allergy unit during COVID-19 pandemic in Italy. *J. Allergy Clin. Immunol.* 2020; published online April. DOI:10.1016/j.jaci.2020.04.003.
- 217 Pulvirenti F, Cinetto F, Milito C, *et al.* Health-Related Quality of Life in Common Variable Immunodeficiency Italian Patients Switched to Remote Assistance During the COVID-19 Pandemic. *J Allergy Clin Immunol Pract* 2020; **8**: 1894-1899.e2.
- 218 Cocci A, Presicce F, Russo GI, Cacciamani G, Cimino S, Minervini A. How sexual medicine is facing the outbreak of COVID-19: experience of Italian urological community and future perspectives. *Int J Impot Res* 2020; : 1–3.
- 219 Rizzo M, Liguori G, Verze P, Palumbo F, Cai T, Palmieri A. How the andrological sector suffered from the dramatic Covid 19 outbreak in Italy: supportive initiatives of the Italian Association of Andrology (SIA). *Int J Impot Res* 2020; : 1–2.

- 220 La Marca A, Niederberger C, Pellicer A, Nelson SM. COVID-19: lessons from the Italian reproductive medical experience. *Fertil. Steril.* 2020; **113**: 920–2.
- 221 Requena A, Cruz M, Vergara V, Prados N, Galliano D, Pellicer A. A picture of the covid-19 impact on IVIRMA fertility treatment clinics in Spain and Italy. *Reprod Biomed Online* 2020; **41**: 1–5.
- 222 De Santis L, Anastasi A, Cimadomo D, *et al.* COVID-19: the perspective of Italian embryologists managing the IVF laboratory in pandemic emergency. *Hum. Reprod.* 2020; **35**: 1004–5.
- 223 Corona G, Baldi E, Isidori AM, *et al.* SARS-CoV-2 infection, male fertility and sperm cryopreservation: a position statement of the Italian Society of Andrology and Sexual Medicine (SIAMS) (Società Italiana di Andrologia e Medicina della Sessualità). *J Endocrinol Invest* 2020; : 1–5.
- 224 Vaiarelli A, Bulletti C, Cimadomo D, *et al.* COVID-19 and ART: the view of the Italian Society of Fertility and Sterility and Reproductive Medicine. 2020.
- 225 Grazi L, Rizzoli P. The Adaptation of Management of Chronic Migraine Patients With Medication Overuse to the Suspension of Treatment Protocols During the COVID-19 Pandemic: Lessons From a Tertiary Headache Center in Milan, Italy. *Headache* 2020; published online April. DOI:10.1111/head.13825.
- 226 Sechi A, Macor D, Valent S, *et al.* Impact of COVID-19 related healthcare crisis on treatments for patients with lysosomal storage disorders, the first Italian experience. *Mol Genet Metab* 2020; **130**: 170–1.
- 227 Dubbioso R, Nobile-Orazio E, Manganelli F, *et al.* Dealing with immune-mediated neuropathies during COVID-19 outbreak: practical recommendations from the task force of the Italian Society of Neurology (SIN), the Italian Society of Clinical Neurophysiology (SINC) and the Italian Peripheral Nervous System . *Neurol. Sci. Off. J. Ital. Neurol. Soc. Ital. Soc. Clin. Neurophysiol.* 2020; **41**: 1345–8.
- 228 Capozzo R, Zoccolella S, Musio M, Barone R, Accogli M, Logroscino G. Telemedicine is a useful tool to deliver care to patients with Amyotrophic Lateral Sclerosis during COVID-19 pandemic: results from Southern Italy. *Amyotroph Lateral Scler Front Degener* 2020; : 1–7.
- 229 Bersano A, Pantoni L. On being a neurologist in Italy at the time of the COVID-19 outbreak. *Neurology* 2020; **94**: 905—906.
- 230 Schirinzi T, Cerroni R, Di Lazzaro G, *et al.* Self-reported needs of patients with

- Parkinson's disease during COVID-19 emergency in Italy. *Neurol Sci Off J Ital Neurol Soc Ital Soc Clin Neurophysiol* 2020; **41**: 1373–5.
- 231 Tornese G, Ceconi V, Monasta L, Carletti C, Faleschini E, Barbi E. Glycemic Control in Type 1 Diabetes Mellitus During COVID-19 Quarantine and the Role of In-Home Physical Activity. *Diabetes Technol Ther* 2020; **22**. DOI:10.1089/dia.2020.0169.
 - 232 Maria B, Federico B, Angelo B. Glycaemic Control Among People with Type 1 Diabetes During Lockdown for the SARS-CoV-2 Outbreak in Italy. *Diabetes Ther* 2020. DOI:10.1007/s13300-020-00829-7.
 - 233 Capaldo B, Annuzzi G, Creanza A, *et al.* Blood Glucose Control During Lockdown for COVID-19: CGM Metrics in Italian Adults With Type 1 Diabetes. *Diabetes Care* 2020. DOI:10.2337/dc20-1127.
 - 234 Brunasso AMG, Massone C. Teledermatologic monitoring for chronic cutaneous autoimmune diseases with smartworking during Covid-19 emergency in a tertiary center in Italy. *Dermatol Ther* 2020; : e13495.
 - 235 Marasca C, Ruggiero A, Megna M, Annunziata MC, Fabbrocini G. Biologics for patients affected by hidradenitis suppurativa in the COVID-19 era: data from a referral center of Southern Italy. *J. Dermatolog. Treat.* 2020; : 1.
 - 236 Villani A, Megna M, Scalvenzi M, Fabbrocini G, Ruggiero A. Teledermatology and chronic skin diseases: real life experience in a Southern Italian Dermatologic Centre. *Dermatol Ther* 2020; **n/a**: e13839.
 - 237 de Girolamo G, Cerveri G, Clerici M, *et al.* Mental Health in the Coronavirus Disease 2019 Emergency-The Italian Response. *JAMA psychiatry* 2020; published online April. DOI:10.1001/jamapsychiatry.2020.1276.
 - 238 D'Agostino A, Demartini B, Cavallotti S, Gambini O. Mental health services in Italy during the COVID-19 outbreak. *The lancet. Psychiatry.* 2020; **7**: 385–7.
 - 239 Percudani M, Corradin M, Moreno M, Indelicato A, Vita A. Mental Health Services in Lombardy during COVID-19 outbreak. *Psychiatry Res* 2020; **288**: 112980.
 - 240 Fagiolini A, Cuomo A, Frank E. COVID-19 Diary From a Psychiatry Department in Italy. *J Clin Psychiatry* 2020; **81**. DOI:10.4088/JCP.20com13357.
 - 241 Tullio V, Perrone G, Bilotta C, Lanzarone A, Argo A. Psychological support and psychotherapy via digital devices in Covid-19 emergency time: Some critical

- issues. *Med Leg J* 2020; : 25817220926942.
- 242 Carpinello B, Tusconi M, di Sciascio G, Zanalda E, di Giannantonio M, Psychiatry EC of the IS of. Mental health services in Italy during the Covid-19 Pandemic. *Psychiatry Clin Neurosci* 2020; : 10.1111/pcn.13082.
- 243 Zucchetti G, Bertolotti M, Fagioli F. How Paediatric Psycho-oncology is changing during the COVID-19 Epidemic in Italy: New approaches. *Psychooncology*; n/a. DOI:10.1002/pon.5444.
- 244 Balduzzi A, Brivio E, Rovelli A, *et al.* Lessons after the early management of the COVID-19 outbreak in a pediatric transplant and hemato-oncology center embedded within a COVID-19 dedicated hospital in Lombardia, Italy. *Estote parati. Bone Marrow Transplant* 2020. DOI:10.1038/s41409-020-0895-4.
- 245 Brunetti-pierri N, Fecarotta S, Staiano A, Strisciuglio P, Parenti G. Ensuring continuity of care for children with inherited metabolic diseases at the time of COVID-19: the experience of a metabolic unit in Italy. *Genet Med* 2020; **0**: 3–5.
- 246 Cardinale F, Ciprandi G, Barberi S, *et al.* Consensus statement of the Italian society of pediatric allergy and immunology for the pragmatic management of children and adolescents with allergic or immunological diseases during the COVID-19 pandemic. *Ital J Pediatr* 2020; **46**: 84.
- 247 Mascagni D, Eberspacher C, Mascagni P, *et al.* From high volume to ‘zero’ proctology: Italian experience in the COVID era. *Int J Colorectal Dis* 2020; : 1–4.
- 248 SAGES and EAES Recommendations Regarding Surgical Response to COVID-19 Crisis - SAGES. <https://www.sages.org/recommendations-surgical-response-covid-19/> (accessed July 4, 2020).
- 249 Usuelli FG, D’Ambrosi R. Being a foot and ankle surgeon in Italy in the era of COVID-19. *Knee Surg. Sports Traumatol. Arthrosc.* 2020; **28**: 1679–82.
- 250 Angileri FF, Sabatino G, Cavallo LM, *et al.* Natura non facit saltus: a phase 2 proposal to manage brain tumors cases from the neuro-oncology section of the Italian Society of Neurosurgery (SINch®). *J Neurosurg Sci* 2020; published online June. DOI:10.23736/S0390-5616.20.05054-7.
- 251 Ciavattini A, Delli Carpini G, Giannella L, *et al.* Expert consensus from the Italian Society for Colposcopy and Cervico-Vaginal Pathology (SICPCV) for colposcopy and outpatient surgery of the lower genital tract during the COVID-

- 19 pandemic. *Int J Gynecol Obstet* 2020; **149**: 269–72.
- 252 Sciarra A, Salciccia S, Maggi M, *et al.* Elective procedures for prostate cancer in the time of Covid-19: a multidisciplinary team experience. *Prostate Cancer Prostatic Dis* 2020; : 1–3.
- 253 Luciani LG, Mattevi D, Cai T, Giusti G, Proietti S, Malossini G. Teleurology in the Time of Covid-19 Pandemic: Here to Stay? *Urology* 2020; **140**: 4–6.
- 254 Negrini S, Kiekens C, Bernetti A, *et al.* Telemedicine from research to practice during the pandemic. ‘Instant paper from the field’ on rehabilitation answers to the Covid-19 emergency. *Eur J Phys Rehabil Med* 2020; published online April. DOI:10.23736/S1973-9087.20.06331-5.
- 255 Boldrini P, Bernetti A, Fiore P. Impact of COVID-19 outbreak on rehabilitation services and Physical and Rehabilitation Medicine (PRM) physicians’ activities in Italy. An official document of the Italian PRM Society (SIMFER). *Eur J Phys Rehabil Med* 2020. DOI:10.23736/S1973-9087.20.06256-5.
- 256 Boldrini P, Kiekens C, Bargellesi S, *et al.* First impact on services and their preparation. ‘Instant paper from the field’ on rehabilitation answers to the Covid-19 emergency. *Eur J Phys Rehabil Med* 2020. DOI:10.23736/S1973-9087.20.06303-0.
- 257 Pedersini P, Corbellini C, Villafañe JH. Italian Physical Therapists’ Response to the Novel COVID-19 Emergency. *Phys Ther* 2020; published online April 13. DOI:10.1093/ptj/pzaa060.
- 258 Iannaccone S, Castellazzi P, Tettamanti A, *et al.* Role of Rehabilitation Department for Adult Covid-19 Patients: the Experience of the San Raffaele Hospital of Milan. *Arch Phys Med Rehabil* 2020. DOI:10.1016/j.apmr.2020.05.015.
- 259 Goulabchand R, Claret P-G, Lattuca B. What if the worst consequences of COVID-19 concerned non-COVID patients? *J Infect Public Health* 2020. DOI:<https://doi.org/10.1016/j.jiph.2020.06.014>.
- 260 Hajdu, Steven D *et al.* “Acute Stroke Management During the COVID-19 Pandemic: Does Confinement Impact Eligibility for Endovascular Therapy?.” *Stroke* vol. 51,8 (2020): 2593-2596. doi:10.1161/STROKEAHA.120.030794
- 261 Di Liberto, Ilenia Alessandra, *et al.* "Impact on hospital admission of ST-elevation myocardial infarction patients during coronavirus disease 2019

pandemic in an Italian Hospital." Journal of Cardiovascular Medicine 21.9 (2020): 722-724.

- 262 Del Pinto, Rita, et al. "Increased cardiovascular death rates in a COVID-19 low prevalence area." The Journal of Clinical Hypertension (2020).
- 263 Giansanti, Daniele. "The Italian Fight Against the COVID-19 Pandemic in the Second Phase: The Renewed Opportunity of Telemedicine." Telemedicine and e-Health (2020).
- 264 Chiesa, Roberto, et al. "Emergency management of the COVID-19 pandemic in a vascular surgery department of a large metropolitan hospital in Italy. Preparation, escalation, de-escalation, and normal activity." Journal of cardiac surgery (2020).

Table 1 – Quantitative data in cardiovascular emergencies.

Data	Ref
- Reduction in hospital admissions for AMI (48.4%) - The AMI case fatality rate during the pandemic increased to 9.7% compared with the 2.8% registered in 2019 (RR 3.6) - Treatment delay time from symptom onset to coronary angiography was increased by 39.2% time from first medical contact to coronary revascularization was increased by 31.5%. - Reduction in hospitalizations for HF (46.8%) and AF (53.4%)	[25]
Increased mortality for ACS (4-10%)	[125]
Decrease in the number of urgent pacemaker implantations (28%).	[146]
Reduction of patients admitted for SECDS (51%)	[147]

Decrease in hospitalization rate (48%). In the STEMI subgroup, door-to-balloon and symptoms-to-balloon were significantly higher (66 + 17 vs 40 + 12 minutes) with a delay from symptoms to wiring for STEMI PCI > 24 hours more frequently in March 2020 (17.8% vs 4.3%, +13,5%)	[19]
The STEMI case fatality rate increased (RR) = 3.3	[25]
In-hospital all-cause mortality for was 17.2% in 2020 and 6.3% in 2019, with an odds ratio of 3.1	[26]
The median arrival time of the emergency medical service was 3 minutes longer in 2020 than in 2019, and the proportion of patients who received cardiopulmonary resuscitation from bystanders was 15.6 % lower.	[9]
The number of patients who have undergone intravenous thrombolysis or bridging therapy (combined intravenous and thrombectomy) is decreased (–□26% and –□30% respectively), while the number of primary thrombectomies is increased by 41%: most of these patients had very serious strokes arriving late, sometimes too late.	[11]

AMI: acute myocardial infarction; HF: heart failure.

Table 2. Management of deferrable conditions and telemedicine during COVID-19 pandemic in Italy.

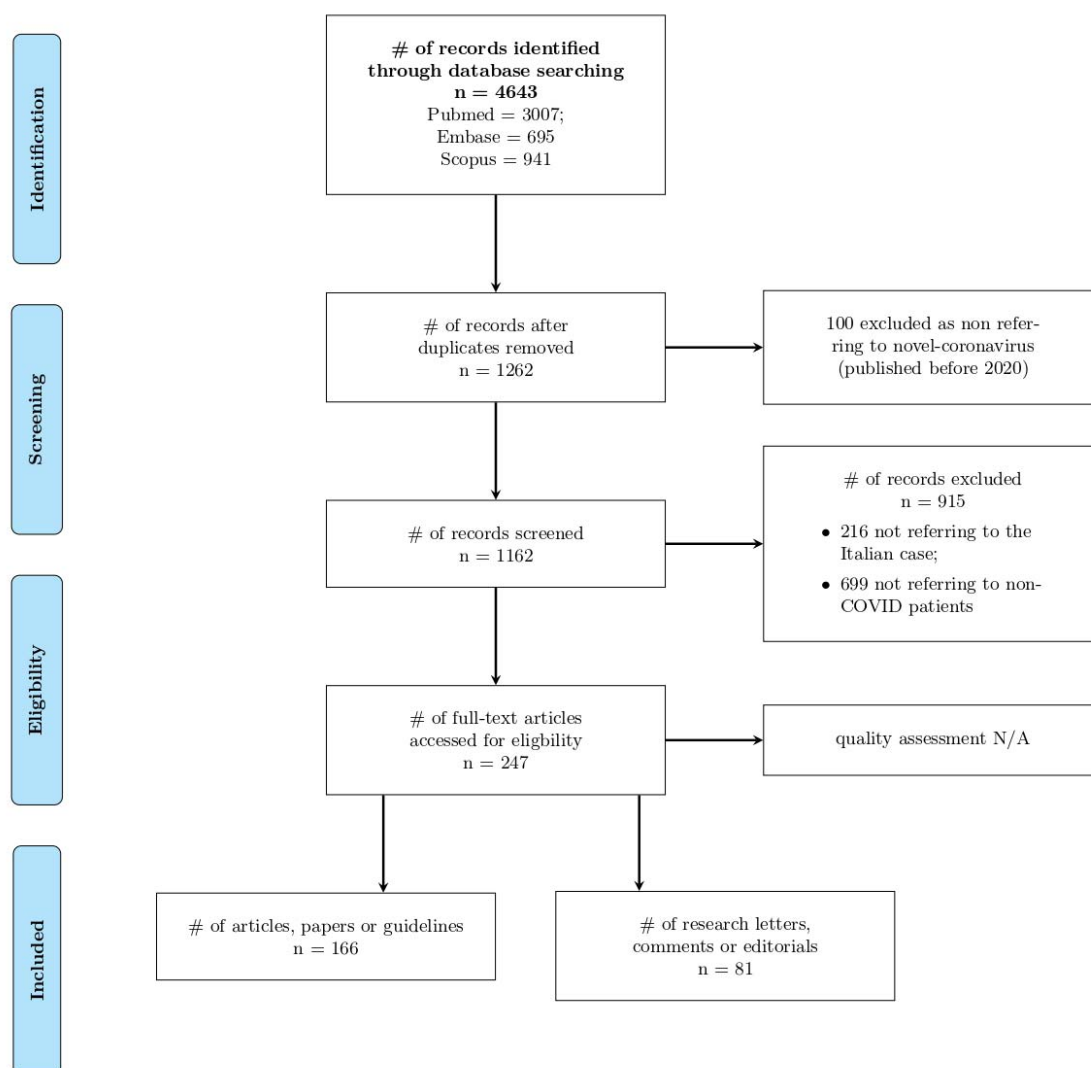
Specialty	Conditions managed with a TM approach	Additional sources of recommendations	Comment
Pneumology ¹⁰⁴	None reported	Italian Pediatric Respiratory Society	For deferrable pneumological conditions, routine tests such as pulmonary functioning test (PFT) were limited to the necessary, namely spirometry
Cardiology ^{105,106}	1) Cardiac Rehabilitation (CR) 2) Heart failure (HF)	Position Paper of the AICPR (Italian Association of Clinical Cardiology, Prevention and Rehabilitation)	1) The creation of a network for home CR for post-surgery and post-acute coronary syndrome patients including telecardiology systems was recommended. 2) Positive impact of telemedicine on HF outcome

Gastroenterology ^{95,202–206}	1) Intestinal Bowel Diseases (IBD) 2) Celiac Disease	International Organization for the Study of IBD	1) Postponing of biological therapy not recommended (risk of IBD relapse). Tapering of chronic corticosteroids suggested. No short-term clinical impact was observed in those who postponed biologics (up to 10%). 2) Positive impact of remote consultation for celiac diseases patients
Oncology ^{207–213}	1) Screening for cancer treatment 2) Breast cancer; bone metastasis; sarcoma	Italian Association of Radiotherapy and Clinical Oncology (AIRO)	1) Case-by-case risk/benefit evaluation for patients with cancer eligible for specific tailored treatment 2) Patients with condition stable enough that services can be delayed for the duration of the COVID-19 pandemic and/or the intervention is nonpriority based on the magnitude of benefit (e.g., no survival gain with no change or reduced QoL). Follow-up visits managed remotely
Immunology and allergology ^{214–217}	1) Orticaria; allergic asthma; vasculitis; systemic sclerosis 2) Primary antibody deficiencies	Italian Society of Rheumatology (SIR)	1) Self-administration at home of some biologics; switch to subcutaneous therapy or local referral for those who could not postpone their treatments 2) Health Related Quality of Life (HRQOL) was similar in patients forced to shift from hospital-based to home-based immunoglobulin treatment and in patients who continued their usual home-based replacement
Reproductive medicine (andrology, medically assisted reproduction therapy, IVF) ^{218–224}	1) Sexual male problems (like Peyronie's disease or erectile dysfunction). 2) In vitro fertilization (IVF)	Italian Society of Andrology (SIA) Position statement of the Italian Society of Andrology and Sexual Medicine (SIAMS)	1) Postponing of new treatments not considered urgent. 2) Maintenance of cryogenic banks to prevent infection of stored tissues
Neurology ^{224–230}	Chronic migraine; immune-mediated neuropathies; amyotrophic Lateral Sclerosis; Parkinson's disease; lysosome storage diseases	Italian Society of Neurology (SIN) Italian Society of Clinical Neurophysiology (SINC)	Patients were remotely treated with both pharmacological and, where useful, behavioral therapies.
Endocrinology ^{231–233}	Diabetes mellitus type I		Maintaining a safe in-home physical activity considered a good strategy. No deterioration of glucose control was observed but an improvement (more stable rhythms of life and more regular meals time) The hybrid closed loop (HCL) system allowed physicians to download detailed data during the tele-consulting through a web-based program.
Dermatology ^{234–236}	Chronic inflammatory skin disease (psoriasis, hidradenitis suppurativa, atopic dermatitis, acne, autoimmune skin conditions)		Automatic renewal of the biologics prescriptions Remote monitoring was effective in preventing unnecessary worsening of severe chronic skin diseases and poor outcomes due to withdrawal of current therapy

Psichiatria ²³⁷⁻²⁴²	Perinatal depression;eating disorders;psychiatry for older people;adult neuropsychiatry;adult autism		Patients benefited from telemedicine activities and remote psychosocial interventions
Pediatrics ²⁴³⁻²⁴⁶	1)Follow-up visits of cancer patients Allergic and immunological diseases;benign haematological diseases;inherited metabolic diseases	Consensus statement of the Italian society of pediatric allergy and immunology for the pragmatic management of children and adolescents with allergic or immunological diseases during the COVID-19 pandemic	1)Access to pediatric onco-haematologic was delayed for patients in continuation therapy and for long-term cancer patients in follow-up after elective chemotherapy. Verbal psychological support and anxiety containment in one-to-one phone calls reinforced by training in relaxation and breathing techniques.
Surgery ^{84,247,248}	Outpatient clinic activity (proctology)	SAGES Recommendation Regarding Surgical Response to COVID-19 Crisis	TM assured continuous assistance to patients who recently underwent surgery. Where possible, postponing surgical interventions while maximizing pharmacological therapy has been the main strategy described in general surgery
Orthopedics ¹⁰⁷	Foot-ankle orthopedic surgery		Taking clinical photos, recording a video of the wound/condition. Photograph or scanning important documents.
Neurosurgery ¹⁰⁸	Brain tumours		Management of brain tumours is deferred after evaluation of clinical symptoms, size and locations, neuroimaging features.
Obstetrics and gynecology ^{109,110}	Pregnant women		Advices provided to patients with suspected infection. The referral to a private obstetrician/gynecologist or a community midwife has been suggested to avoid hospital attendance of pregnant women
Urology ^{111,112}	Prostate cancer		Medical therapies for advanced hormone sensitive or castration resistant prostate cancer continued.
Rehabilitation ¹¹³⁻²⁵⁸	-	Official document of the Italian PRM Society (SIMFER)	Positive impact: satisfaction of patients, families, and professionals

Legend: TM: telemedicine; PFT: pulmonary function testing; CR: cardiac rehabilitation; HF: heart failure; AICPR: Italian Association of Clinical Cardiology, Prevention and Rehabilitation; IBD: intestinal bowel diseases; AIRO: Italian Association of Radiotherapy and Clinical Oncology; QoL:quality of life; SIR: Italian Society of Rheumatology; HRQoL: Health Related Quality of Life; IVF: In vitro fertilization; SIA:Italian Society of Andrology; SIAMS: Society of Andrology and Sexual Medicine; SIN: Italian Society of Neurology; SINC: Italian Society of Clinical Neurophysiology; HCL: hybrid closed loop; SAGES:Society of American Gastrointestinal and Endoscopic Surgeons; PRM:Physical and Rehabilitation Medicine

Figure 1 - Results



Supplementary Material

Table 1. Full search strategy adopted in three different databases.

PubMed	Embase	Scopus
<p>Query1: (COVID-19[TIAB] OR CORONAVIRUS[TIAB]) AND (ITALY[TIAB] OR ITALIAN[TIAB])</p> <p>Query2: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (novel-coronavirus)</p> <p>Query3: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (telemedicine)</p> <p>Query4: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (patient management) AND (COVID-19 OR CORONAVIRUS)</p> <p>Query5: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (Pathology))</p> <p>Query6: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (Hospital)</p> <p>Query7: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (ethics)</p> <p>Query8: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (safety)</p> <p>Query9: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (protection)</p> <p>Query10: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (telehealth)</p> <p>Query11: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (cardiology)</p> <p>Query12: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (internal medicine)</p> <p>Query13: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (psychiatry OR PSYCHIATRIC)</p> <p>Query14: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (endocrinology)</p> <p>Query15: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (haematology)</p> <p>Query16: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (pneumology)</p> <p>Query17: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (neurology)</p> <p>Query18: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (gastroenterology)</p> <p>Query19: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (allergology)</p> <p>Query20: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (immunology)</p>	<p>(coronavirus:ab,ti OR 'covid 19':ab,ti) AND (italy:ab,ti OR italian:ab,ti) AND (telemedicine:ab,ti OR (patient:ab,ti AND management:ab,ti) OR hospital:ab,ti OR ethics:ab,ti OR safety:ab,ti OR protection:ab,ti OR telehealth:ab,ti OR cardiology:ab,ti OR (internal:ab,ti AND medicine:ab,ti) OR psychiatry:ab,ti OR psychiatric:ab,ti OR endocrinology:ab,ti OR haematology:ab,ti OR pneumology:ab,ti OR neurology:ab,ti OR gastroenterology:ab,ti OR allergology:ab,ti OR immunology:ab,ti OR rheumatology:ab,ti OR surgery:ab,ti OR surgical:ab,ti OR urology:ab,ti OR orthopedics:ab,ti OR dermatology:ab,ti OR ophthalmology:ab,ti OR ent:ab,ti OR otolaryngology:ab,ti OR pediatrics:ab,ti OR gynecology:ab,ti OR audiology:ab,ti OR (primary:ab,ti AND care:ab,ti) OR physiatry:ab,ti OR (physical:ab,ti AND medicine:ab,ti) OR rehabilitation:ab,ti OR phoniatrics:ab,ti OR radiotherapy:ab,ti OR (radiation:ab,ti AND oncology:ab,ti) OR radiology:ab,ti OR anesthesia:ab,ti OR (palliative:ab,ti AND care:ab,ti) OR pathology:ab,ti)</p>	<p>TITLE-ABS (covid-19 OR coronavirus OR sars-cov-2) AND TITLE-ABS (italy OR italian) AND</p> <p>TITLE-ABS (telemedicine OR (patient AND management) OR hospital OR ethics OR safety OR protection OR telehealth OR cardiology OR (internal AND medicine) OR psychiatry OR psychiatric OR endocrinology OR haematology OR pneumology OR neurology OR gastroenterology OR allergology OR immunology OR rheumatology OR surgery OR surgical OR urology OR orthopedics OR dermatology OR ophthalmology OR ent OR otolaryngology OR pediatrics OR gynecology OR audiology OR (primary AND care) OR physiatry OR (physical AND medicine) OR rehabilitation OR phoniatrics OR radiotherapy OR (radiation AND oncology) OR radiology OR anesthesia OR (palliative AND care) OR pathology) OR</p> <p>(TITLE-ABS (covid-19 OR coronavirus OR sars-cov-2) AND TITLE-ABS (italy OR italian))</p>

<p>Query21: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (rheumatology)</p> <p>Query22: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (surgery OR surgical)</p> <p>Query23: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (urology)</p> <p>Query24: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (orthopedics)</p> <p>Query25: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (dermatology)</p> <p>Query26: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (ophthalmology)</p> <p>Query27: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (ENT OR Otolaryngology)</p> <p>Query28: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (Pediatrics)</p> <p>Query29: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (Gynecology)</p> <p>Query30: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (Audiology)</p> <p>Query31: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (Primary care)</p> <p>Query32: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (Physiatry OR physical medicine OR rehabilitation)</p> <p>Query33: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (Phoniatrics)</p> <p>Query34: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (Radiotherapy OR Radiation Oncology)</p> <p>Query35: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (Radiology)</p> <p>Query36: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (Anesthesia)</p> <p>Query37: (ITALY[TIAB] OR ITALIAN[TIAB]) AND (coronavirus OR COVID-19) AND (Palliative Care)</p>		
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Table 2. Studies included.

#	pmid	doi	Title	Journal	Authors
1	32241178	10.1177/2047487320918077	A dialogue between the editor-in-chief and a deputy editor of a cardiology journal during the coronavirus outbreak: Take-home messages from the Italian experience.	European journal of preventive cardiology	Piepoli, Massimo F; Emdin, Michele; Piepoli, Massimo F; Emdin, Michele
2	32270359	10.1007/s10072-020-04375-9	Acute stroke management pathway during Coronavirus-19 pandemic.	Neurological sciences : official journal of the Italian Neurological Society and of the Italian Society of Clinical Neurophysiology	Baracchini, Claudio; Pieroni, Alessio; Viaro, Federica; Cianci, Vito; Cattelan, Anna M; Tiberio, Ivo; Munari, Marina; Causin, Francesco; Baracchini, Claudio; Pieroni, Alessio; Viaro, Federica; Cianci, Vito; Cattelan, Anna M; Tiberio, Ivo; Munari, Marina; Causin, Francesco
3	32229501	10.1136/esmoopen-2020-000759	Cancer care during the spread of coronavirus disease 2019 (COVID-19) in Italy: young oncologists' perspective.	ESMO open	Lambertini, Matteo; Toss, Angela; Passaro, Antonio; Criscitiello, Carmen; Cremolini, Chiara; Cardone, Claudia; Loupakis, Fotios; Viscardi, Giuseppe; Meattini, Icro; Dieci, Maria Vittoria; Ferrara, Roberto; Giusti, Raffaele; Maio, Massimo Di
4	32275294	10.1001/jamaoncol.2020.1426	Caring for Patients With Cancer During the COVID-19 Outbreak in Italy.	JAMA oncology	Pietrantonio, Filippo; Garassino, Marina Chiara
5	32233064	10.1111/codi.15056	Coronavirus pandemic and Colorectal surgery: practical advice based on the Italian experience.	Colorectal disease : the official journal of the Association of Coloproctology of Great Britain and Ireland	Di Saverio, Salomone; Pata, Francesco; Gallo, Gaetano; Carrano, Francesco; Scorza, Antonella; Sileri, Pierpaolo; Smart, Neil; Spinelli, Antonino; Pellino, Gianluca
6	32278542	10.1016/j.jpedsurg.2020.03.028	Correspondence from Northern Italy about our experience with COVID-19.	Journal of pediatric surgery	Leva, Ernesto; Morandi, Anna; Sartori, Angelo; Macchini, Francesco; Berrettini, Alfredo; Manzoni, Gianantonio
7	32178769	10.1016/S0140-6736(20)30627-9	COVID-19 and Italy: what next?	Lancet (London, England)	Remuzzi, Andrea; Remuzzi, Giuseppe
8	32237301	10.4088/JCP.20com13357	COVID-19 Diary From a Psychiatry Department in Italy.	The Journal of clinical psychiatry	Fagiolini, Andrea; Cuomo, Alessandro; Frank, Ellen; Fagiolini, Andrea; Cuomo, Alessandro; Frank, Ellen
9	32228737	10.1017/S2045796020000372	COVID-19 disease emergency operational instructions for Mental Health Departments issued by the Italian Society of Epidemiological Psychiatry.	Epidemiology and psychiatric sciences	Starace, Fabrizio; Ferrara, Maria;
10	32207676	10.1017/dmp.2020.51	COVID-19 Epidemic in the Middle Province of Northern Italy: Impact, Logistics, and Strategy in the First Line Hospital.	Disaster medicine and public health preparedness	Gagliano, Annalisa; Villani, Pier Giorgio; Co', Francesca M; Manelli, Anna; Paglia, Stefano; Bisagni, Pietro A G; Perotti, Gabriele M; Storti, Enrico; Lombardo, Massimo
11	32255476	10.1093/eurheartj/ehaa279	COVID-19 experience in Bergamo, Italy.	European heart journal	Senni, Michele
12	32267531	10.1002/ijgo.13162	COVID-19 Obstetrics Task Force, Lombardy, Italy: executive management summary and short report of outcome.	International journal of gynaecology and obstetrics: the official organ of the International Federation of Gynaecology and Obstetrics	Ferrazzi, Enrico M; Frigerio, Luigi; Cetin, Irene; Vergani, Patrizia; Spinillo, Arsenio; Prefumo, Federico; Pellegrini, Edda; Gargantini, Gianluigi
13	32267661	10.1097/TA.0000000000002695	COVID-19 OUTBREAK IN NORTHERN ITALY: VIEWPOINT OF THE MILAN AREA SURGICAL COMMUNITY.	The journal of trauma and acute care surgery	Kurihara, Hayato; Bisagni, Pietro; Faccincani, Roberto; Zago, Mauro
14	32222253	10.1016/j.fertnstert.2020.03.021	COVID-19: lessons from the Italian reproductive medical experience.	Fertility and sterility	La Marca, Antonio; Niederberger, Craig; Pellicer, Antonio; Nelson, Scott M

15	32268352	10.1093/humrep/deaa074	COVID-19: the perspective of Italian embryologists managing the IVF laboratory in pandemic emergency.	Human reproduction (Oxford, England)	De Santis, Lucia; Anastasi, Attilio; Cimadomo, Danilo; Klinger, Francesca Gioia; Licata, Emanuele; Pisaturo, Valerio; Sosa Fernandez, Laura; Scarica, Catello
16	32207994	10.1161/CIRCULATIONAHA.120.047070	Critical Organizational Issues for Cardiologists in the COVID-19 Outbreak: A Frontline Experience From Milan, Italy.	Circulation	Stefanini, Giulio G; Azzolini, Elena; Condorelli, Gianluigi; Stefanini, Giulio G; Azzolini, Elena; Condorelli, Gianluigi
17	32297225	10.1007/s40272-020-00395-2	Dealing with COVID-19 in a Pediatric Rheumatology Unit in Italy.	Paediatric drugs	Costi, Stefania; Caporali, Roberto; Cimaz, Rolando; Costi, Stefania; Caporali, Roberto; Cimaz, Rolando
18	32278365	10.1016/S2352-4642(20)30108-5	Delayed access or provision of care in Italy resulting from fear of COVID-19.	The Lancet. Child & adolescent health	Lazzerini, Marzia; Barbi, Egidio; Apicella, Andrea; Marchetti, Federico; Cardinale, Fabio; Trobia, Gianluca
19	32276261	10.3171/2020.3.JNS20960	Editorial. Neurosurgery in the storm of COVID-19: suggestions from the Lombardy region, Italy (ex malo bonum).	Journal of neurosurgery	Cenzato, Marco; DiMeco, Francesco; Fontanella, Marco; Locatelli, Davide; Servadei, Franco
20	32247797	10.1016/j.wneu.2020.03.179	Effects of the COVID-19 Outbreak in Northern Italy: Perspectives from the Bergamo Neurosurgery Department.	World neurosurgery	Bernucci, Claudio; Brembilla, Carlo; Veiceschi, Pierlorenzo
21	32283102	10.1053/j.gastro.2020.04.003	Endoscopy units and the COVID-19 Outbreak: A Multi-Center Experience from Italy.	Gastroenterology	Repici, Alessandro; Pace, Fabio; Gabbiadini, Roberto; Colombo, Matteo; Hassan, Cesare; Dinelli, Marco; Maselli, Roberta; Spadaccini, Marco; Mutignani, Massimiliano; Gabbriellini, Armando; Signorelli, Clementina; Spada, Cristiano; Leoni, Piera; Fabbri, Carlo; Segato, Sergio; Gaffuri, Nicola; Mangiavillano, Benedetto; Radaelli, Franco; Salerno, Raffaele; Bargiggia, Stefano; Maroni, Luca; Benedetti, Antonio; Occhipinti, Pietro; De Grazia, Federico; Ferraris, Luca; Cengia, Gianpaolo; Greco, Salvatore; Alvisi, Costanza; Scarcelli, Antonella; De Luca, Luca; Cereatti, Fabrizio; Testoni, Pier Alberto; Mingotto, Roberto; Aragona, Giovanni; Manes, Gianpiero; Beretta, Paolo; Amvrosiadis, Georgios; Cennamo, Vincenzo; Lella, Fausto; Missale, Guido; Lagoussis, Pavlos; Triossi, Omero; Giovanardi, Mauro; De Roberto, Giuseppe; Cant., Paolo; Buscarini, Elisabetta; Anderloni, Andrea; Carrara, Silvia; Fugazza, Alessandro; Galtieri, Piera Alessia; Pellegatta, Gaia; Antonelli, Giulio; R..sch, Thomas; Sharma, Prateek
22	32270477	10.1002/ijgo.13158	Expert consensus from the Italian Society for Colposcopy and Cervico-Vaginal Pathology (SICPCV) for colposcopy and outpatient surgery of the lower genital tract during the COVID-19 pandemic.	International journal of gynaecology and obstetrics: the official organ of the International Federation of Gynaecology and Obstetrics	Ciavattini, Andrea; Delli Carpini, Giovanni; Giannella, Luca; De Vincenzo, Rosa; Frega, Antonio; Cattani, Paolo; Boselli, Fausto; Sopracordevole, Francesco; Barbero, Maggiorino
23	32294282	10.1111/jdv.16476	Face the COVID-19 emergency: measures applied in an Italian Dermatologic Clinic.	Journal of the European Academy of Dermatology and Venereology : JEADV	Marasca, C; Ruggiero, A; Annunziata, M C; Fabbrocini, G; Megna, M
24	32187459	10.1056/NEJMp2005492	Facing Covid-19 in Italy - Ethics, Logistics, and Therapeutics on the Epidemic's Front Line.	The New England journal of medicine	Rosenbaum, Lisa
25	32227819		Fast reshaping of intensive care unit facilities in a large metropolitan hospital in Milan, Italy: facing the COVID-19 pandemic emergency	Critical care and resuscitation : journal of the Australasian Academy of Critical Care Medicine	Zangrillo, Alberto; Beretta, Luigi; Silvani, Paolo; Colombo, Sergio; Scandroglio, Anna Mara; Dell...Acqua, Antonio; Fominskiy, Evgeny; Landoni, Giovanni; Monti, Giacomo;

					Azzolini, Maria Luisa; Monaco, Fabrizio; Oriani, Alessandro; Belletti, Alessandro; Sartorelli, Marianna; Pallanch, Ottavia; Saleh, Omar; Sartini, Chiara; Nardelli, Pasquale; Lombardi, Gaetano; Morselli, Federica; Scquizzato, Tommaso; Frontera, Antonio; Ruggeri, Annalisa; Scotti, Raffaella; Assanelli, Andrea; Dagna, Lorenzo; Rovere-Querini, Patrizia; Castagna, Antonella; Scarpellini, Paolo; Di Napoli, Davide; Ambrosio, Alberto; Ciceri, Fabio; Tresoldi, Moreno
26	32277423	10.1007/s40620-020-00732-1	First considerations on the SARS-CoV-2 epidemic in the Dialysis Units of Piedmont and Aosta Valley, Northern Italy.	Journal of nephrology	Manganaro, Marco; Baldovino, Simone
27	32264667	10.23736/S1973-9087.20.06303-0	First impact on services and their preparation. "Instant paper from the field" on rehabilitation answers to the Covid-19 emergency.	European journal of physical and rehabilitation medicine	Boldrini, Paolo; Kiekens, Carlotta; Bargellesi, Stefano; Brianti, Rodolfo; Galeri, Silvia; Lucca, Lucia; Montis, Andrea; Posteraro, Federico; Scarponi, Federico; Straudi, Sofia; Negrini, Stefano
28	32299837	10.1136/gutjnl-2020-321143	Gastroenterology department operational reorganisation at the time of covid-19 outbreak: an Italian and Chinese experience.	Gut	Danese, Silvio; Ran, Zhi Hua; Repici, Alessandro; Tong, Jinlu; Omodei, Paolo; Aghemo, Alessio; Malesci, Alberto
29	32201972	10.1111/jdv.16386	Global coronavirus pandemic (2019-nCoV): Implication for an Italian medium size dermatological clinic of a ii level hospital.	Journal of the European Academy of Dermatology and Venereology : JEADV	Radi, G; Diotallevi, F; Campanati, A; Offidani, A
30	32238336	10.2196/18810	Global Telemedicine Implementation and Integration Within Health Systems to Fight the COVID-19 Pandemic: A Call to Action.	JMIR public health and surveillance	Ohannessian, Robin; Duong, Tu Anh; Odone, Anna
31	32278865	10.1016/j.jaip.2020.04.003	Health-Related-Quality of Life in Common Variable Immunodeficiency Italian patients switched to remote assistance during the COVID-19 pandemic.	The journal of allergy and clinical immunology. In practice	Pulvirenti, Federica; Cinetto, Francesco; Milito, Cinzia; Bonanni, Livia; Pesce, Anna Maria; Leodori, Giorgia; Garzi, Giulia; Miglionico, Marzia; Tabolli, Stefano; Quinti, Isabella
32	32240755	10.1016/j.jpainsymman.2020.03.021	Home care for cancer patients during COVID-19 pandemic: the "double triage" protocol.	Journal of pain and symptom management	Porzio, Giampiero; Cortellini, Alessio; Bruera, Eduardo; Verna, Lucilla; Ravoni, Giulio; Peris, Flaminia; Spinelli, Giuseppe
33	32205796	10.1097/DCR.0000000000001685	How COVID-19 Outbreak Is Impacting Colorectal Cancer Patients in Italy: A Long Shadow Beyond Infection.	Diseases of the colon and rectum	Pellino, Gianluca; Spinelli, Antonino
34	32286520	10.1038/s41443-020-0270-4	How sexual medicine is facing the outbreak of COVID-19: experience of Italian urological community and future perspectives.	International journal of impotence research	Cocci, Andrea; Presicce, Fabrizio; Russo, Giorgio I; Cacciamani, Giovanni; Cimino, Sebastiano; Minervini, Andrea
35	32298029	10.1634/theoncologist.2020-0267	How to Guarantee the Best of Care to Patients with Cancer During the COVID-19 Epidemic: The Italian Experience.	The oncologist	Curigliano, Giuseppe
36	32175719	10.23736/S1973-9087.20.06256-5	Impact of COVID-19 outbreak on rehabilitation services and Physical and Rehabilitation Medicine (PRM) physicians' activities in Italy. An official document of the Italian PRM Society (SIMFER).	European journal of physical and rehabilitation medicine	Boldrini, Paolo; Bernetti, Andrea; Fiore, Pietro
37	32280973	10.1093/ptj/pzaa060	Italian Physical Therapists' Response to the Novel COVID-19 Emergency.	Physical therapy	Pedersini, Paolo; Corbellini, Camilo; Villafa..e, Jorge Hugo

38	32291566	10.1007/s10151-020-02209-6	Italian society of colorectal surgery recommendations for good clinical practice in colorectal surgery during the novel coronavirus pandemic.	Techniques in coloproctology	Gallo, G; La Torre, M; Pietroletti, R; Bianco, F; Altomare, D F; Pucciarelli, S; Gagliardi, G; Perinotti, R;
39	32282750	10.1097/TA.0000000000002727	Laparoscopy at all costs? Not now during COVID-19 and not for acute care surgery and emergency colorectal surgery: a practical algorithm from a Hub Tertiary teaching hospital in Northern Lombardy, Italy.	The journal of trauma and acute care surgery	Di Saverio, Salomone; Khan, Mansoor; Pata, Francesco; Ietto, Giuseppe; De Simone, Belinda; Zani, Elia; Carcano, Giulio
40	32199941	10.1016/j.ijrobp.2020.03.007	Letter from Italy: First practical indications for radiation therapy departments during COVID-19 outbreak.	International journal of radiation oncology, biology, physics	Filippi, Andrea Riccardo; Russi, Elvio; Magrini, Stefano Maria; Corv..., Renzo;
41	32303838	10.1007/s00701-020-04332-7	Letter to the editor by Dobran Mauro, Paracino Riccardo, and Iacoangeli Maurizio regarding "Neurosurgery during the COVID-19 pandemic: update from Lombardy, northern Italy." Zoia C, Bongetta D, Veiceschi P, Cenzato M, Di Meco F, Locatelli D, Boeris D, Fontanella MM. Acta Neurochir (Wien). 2020 Mar 28. doi: 10.1007/s00701-020-04305-w.	Acta neurochirurgica	Dobran, Mauro; Paracino, Riccardo; Iacoangeli, Maurizio
42	32275775	10.1002/ijgo.13167	Management of ovarian cancer during the COVID-19 pandemic.	International journal of gynaecology and obstetrics: the official organ of the International Federation of Gynaecology and Obstetrics	Dario Mandato, Vincenzo; Aguzzoli, Lorenzo; Dario Mandato, Vincenzo; Aguzzoli, Lorenzo
43	32221118	10.1097/SLA.0000000000003924	Minimally Invasive Surgery and the Novel Coronavirus Outbreak: Lessons Learned in China and Italy.	Annals of surgery	Zheng, Min Hua; Boni, Luigi; Fingerhut, Abe; Zheng, Min Hua; Boni, Luigi; Fingerhut, Abe
44	32222820	10.1007/s00701-020-04305-w	Neurosurgery during the COVID-19 pandemic: update from Lombardy, northern Italy.	Acta neurochirurgica	Zoia, Cesare; Bongetta, Daniele; Veiceschi, Pierlorenzo; Cenzato, Marco; Di Meco, Francesco; Locatelli, Davide; Boeris, Davide; Fontanella, Marco M
45	32245844	10.1212/WNL.0000000000009508	On being a neurologist in Italy at the time of the COVID-19 outbreak.	Neurology	Bersano, Anna; Pantoni, Leonardo
46	32225135	10.23736/S0393-2249.20.03861-8	Pathways for urology patients during the COVID-19 pandemic.	Minerva urologica e nefrologica = The Italian journal of urology and nephrology	Simonato, Alchiede; Giannarini, Gianluca; Abrate, Alberto; Bartoletti, Riccardo; Crestani, Alessandro; De Nunzio, Cosimo; Gregori, Andrea; Liguori, Giovanni; Novara, Giacomo; Pavan, Nicola; Trombetta, Carlo; Tubaro, Andrea; Porpiglia, Francesco; Ficarra, Vincenzo
47	32302419	10.1111/bjd.19145	Phototherapeutic approach to dermatological patients during the 2019 Coronavirus pandemic: Real-life Data from the Italian Red Zone.	The British journal of dermatology	Pacifico, A; Ardig., M; Frascione, P; Damiani, G; Morrone, A
48	32207068	10.1007/s40620-020-00727-y	Practical indications for the prevention and management of SARS-CoV-2 in ambulatory dialysis patients: lessons from the first phase of the epidemics in Lombardy.	Journal of nephrology	Rombol..., Giuseppe; Heidempergher, Marco; Pedrini, Luciano; Farina, Marco; Aucella, Filippo; Messa, Piergiorgio; Brunori, Giuliano
49	32223490	10.1080/14767058.2020.1749258	Preparing an obstetric unit in the heart of the epidemic strike of COVID-19: quick reorganization tips.	The journal of maternal-fetal & neonatal medicine : the official journal of the European Association of Perinatal Medicine, the Federation of	Capanna, Federica; Haydar, Ahmad; McCarey, Catherine; Bernini Carri, Enrico; Bartha Rasero, Jose; Tsibizova, Valentina; Helmer, Hanns; Makatsarya, Alexander; Di Renzo, Gian Carlo

				Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstetricians	
50	32294265	10.1111/jdv.16473	Psoriasis health care in the time of the coronavirus pandemic: insights from dedicated centers in sardinia (Italy).	Journal of the European Academy of Dermatology and Venereology : JEADV	Atzori, L; Mugheddu, C; Addis, G; Sanna, S; Satta, R; Ferrelli, C; Atzori, M G; Montesu, M A; Rongioletti, F
51	32295769	10.1136/esmoopen-2020-000779	Radiation therapy during the coronavirus disease 2019 (covid-19) pandemic in Italy: a view of the nation's young oncologists.	ESMO open	Meattini, Icro; Franco, Pierfrancesco; Belgioia, Liliana; Boldrini, Luca; Botticella, Angela; De Santis, Maria Carmen; Marvaso, Giulia; Montesi, Giampaolo; Parisi, Silvana; Triggiani, Luca; Lambertini, Matteo; Livi, Lorenzo
52	32255735	10.1177/0194599820917914	Role and Management of a Head and Neck Department during the COVID-19 Outbreak in Lombardy.	Otolaryngology--head and neck surgery : official journal of American Academy of Otolaryngology-Head and Neck Surgery	Saibene, Alberto Maria; Allevi, Fabiana; Biglioli, Federico; Felisati, Giovanni
53	32292837	10.1016/j.adro.2020.03.003	Running a Radiation Oncology Department at the time of coronavirus: an Italian experience.	Advances in radiation oncology	Krengli, Marco; Ferrara, Eleonora; Mastroleo, Federico; Brambilla, Marco; Ricardi, Umberto
54	32292843	10.1016/j.adro.2020.03.016	Southern Italy: How the supply of radiation therapy, patient outcomes, and risk to health care providers have changed during the COVID-19 Pandemic.	Advances in radiation oncology	Portaluri, Maurizio; Tramacere, Francesco; Portaluri, Tommaso; Gianicolo, Emilio A L
55	32298686	10.1016/j.urology.2020.04.004	TELEUROLOGY IN THE TIME OF COVID-19 PANDEMIC: HERE TO STAY?	Urology	Luciani, L G; Mattevi, D; Cai, T; Giusti, G; Proietti, S; Malossini, G
56	32301984	10.1093/ejcts/ezaa151	The COVID-19 outbreak and its impact on hospitals in Italy: the model of cardiac surgery.	European journal of cardio-thoracic surgery : official journal of the European Association for Cardio-thoracic Surgery	Bonalumi, Giorgia; di Mauro, Michele; Garatti, Andrea; Barili, Fabio; Gerosa, Gino; Parolari, Alessandro
57	32243677	10.1111/ajt.15904	The COVID-19 outbreak in Italy: Initial implications for organ transplantation programs.	American journal of transplantation : official journal of the American Society of Transplantation and the American Society of Transplant Surgeons	Angelico, Roberta; Trapani, Silvia; Manzia, Tommaso Maria; Lombardini, Letizia; Tisone, Giuseppe; Cardillo, Massimo
58	32240543	10.1111/vox.12928	The impact of the SARS-CoV-2 outbreak on the safety and availability of blood transfusions in Italy.	Vox sanguinis	Franchini, Massimo; Farrugia, Albert; Velati, Claudio; Zanetti, Alessandro; Roman., Luisa; Grazzini, Giuliano; Lopez, Nadia; Pati, Ilaria; Marano, Giuseppe; Pupella, Simonetta; Liumbruno, Giancarlo Maria
59	32278097	10.1016/j.jpainsymman.2020.03.029	The role and response of palliative care and hospice services in epidemics and pandemics: a rapid review to inform practice during the COVID-19 pandemic.	Journal of pain and symptom management	Etkind, Simon N; Bone, Anna E; Lovell, Natasha; Cripps, Rachel L; Harding, Richard; Higginson, Irene J; Sleeman, Katherine E
60	32267829	10.2450/2020.0071-20	The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic and Transfusion Medicine: reflections from Italy.	Blood transfusion = Trasfusione del sangue	Mascaretti, Luca; De Angelis, Vincenzo; Berti, Pierluigi
61	32202401	10.23736/S0393-2249.20.03846-1	Urology practice during COVID-19 pandemic.	Minerva urologica e nefrologica = The Italian journal of urology and nephrology	Ficarra, Vincenzo; Novara, Giacomo; Abrate, Alberto; Bartoletti, Riccardo; Crestani, Alessandro; De Nunzio, Cosimo; Giannarini, Gianluca; Gregori, Andrea; Liguori, Giovanni; Mirone, Vincenzo; Pavan, Nicola; Scarpa, Roberto M; Simonato, Alchiede; Trombetta, Carlo; Tubaro, Andrea; Porpiglia, Francesco

62	32310924	10.1714/3343.33135	[COVID-19 and coronary artery disease: selective and collaborative use of resources during public health crisis].	Giornale italiano di cardiologia (2006)	Villa, Emmanuel; Saccocci, Matteo; Messina, Antonio; Maffeo, Diego; Pit., Antonino; Bianchetti, Federico; Cuccia, Claudio; Troise, Giovanni
63	32310923	10.1714/3343.33134	[COVID-19 pandemic: the need to reorganize a Cardiology Department in a hospital of the Lombardy Region, Italy].	Giornale italiano di cardiologia (2006)	Ghio, Stefano; Ferlini, Marco; Scelsi, Laura; Ferrario, Maurizio; Camporotondo, Rita; Vicentini, Alessandro; Magrini, Giulia; Visconti, Luigi Oltrona
64	32319438	10.1701/3347.33179	[Facing Covid-19 in Italy: ethics, logistics, and therapeutics on the epidemic's front line].	Recenti progressi in medicina	Rosenbaum, Lisa
65	32314784	10.1093/gerona/glaa087	A Frail Health Care System for an Old Population: Lesson form the COVID-19 Outbreak in Italy.	The journals of gerontology. Series A, Biological sciences and medical sciences	Volpato, Stefano; Landi, Francesco; Incalzi, Raffaele Antonelli
66	32317114	10.1016/j.jaci.2020.04.003	An academic allergy unit during COVID-19 pandemic in Italy.	The Journal of allergy and clinical immunology	Malipiero, Giacomo; Paoletti, Giovanni; Puggioni, Francesca; Racca, Francesca; Ferri, Sebastian; Marsala, Antonino; Leoncini, Ornella; Porli, Monica; Pieri, Gabriella; Canonica, Giorgio Walter; Heffler, Enrico
67	32307215	10.1016/j.eururo.2020.03.054	Assessing the Burden of Nondeferrable Major Uro-oncologic Surgery to Guide Prioritisation Strategies During the COVID-19 Pandemic: Insights from Three Italian High-volume Referral Centres.	European urology	Campi, Riccardo; Amparore, Daniele; Capitanio, Umberto; Checcucci, Enrico; Salonia, Andrea; Fiori, Cristian; Minervini, Andrea; Briganti, Alberto; Carini, Marco; Montorsi, Francesco; Serni, Sergio; Porpiglia, Francesco
68	32328698	10.1007/s00167-020-06024-2	Being a foot and ankle surgeon in Italy in the era of COVID-19.	Knee surgery, sports traumatology, arthroscopy : official journal of the ESSKA	Usuelli, Federico Giuseppe; D'Ambrosi, Riccardo
69	32312591	10.1016/j.ejso.2020.04.004	Cancer care under the outbreak of COVID-19: A perspective from Italian tertiary referral center for surgical oncology.	European journal of surgical oncology : the journal of the European Society of Surgical Oncology and the British Association of Surgical Oncology	Marano, Luigi; Marrelli, Daniele; Roviello, Franco
70	32314792	10.1093/ibd/izaa084	Challenges in the Care of IBD Patients During the CoViD-19 Pandemic: Report From a "Red Zone" Area in Northern Italy.	Inflammatory bowel diseases	Occhipinti, Vincenzo; Pastorelli, Luca
71	32339340	10.1111/jdv.16553	Changes in emergency service access after spread of COVID19 across Italy.	Journal of the European Academy of Dermatology and Venereology : JEADV	Tartari, F; Guglielmo, A; Fuligni, F; Pileri, A
72	32330569	10.1016/j.cmi.2020.04.016	Clinical microbiology laboratory adaptation to COVID-19 emergency: experience at a large teaching hospital in Rome, Italy.	Clinical microbiology and infection : the official publication of the European Society of Clinical Microbiology and Infectious Diseases	Posteraro, B; Marchetti, S; Romano, L; Santangelo, R; Morandotti, G A; Sanguinetti, M; Cattani, P
73	32327236	10.1016/j.injury.2020.04.012	CoViD-19 and ortho and trauma surgery: The Italian experience.	Injury	Giacomo, Placella; Damiano, Salvato; Elena, Delmastro; Giulia, Bettinelli; Vincenzo, Salini
74	32316337	10.3390/ijerph17082763	COVID-19 Pandemic and the Crisis of Health Systems: The Experience of the Apulia Cancer Network and of the Comprehensive Cancer Center Istituto Tumori "Giovanni Paolo II" of Bari.	International journal of environmental research and public health	Silvestris, Nicola; Moschetta, Antonio; Paradiso, Angelo; Delvino, Antonio
75	32305384	10.1016/j.jvs.2020.04.019	Creation of a vascular surgical Hub responding to the COVID-19 emergency: the italian USL Toscana Centro model.	Journal of vascular surgery	Chisci, Emiliano; Masciello, Fabrizio; Michelagnoli, Stefano

76	32346679	10.1007/s12603-020-1354-z	Editorial: Geriatric medicine in Italy in the time of COVID-19.	The journal of nutrition, health & aging	Cesari, M; Proietti, M
77	32323071	10.1007/s10620-020-06270-x	Emergency Endoscopy During the SARS-CoV-2 Pandemic in the North of Italy: Experience from St. Orsola University Hospital-Bologna.	Digestive diseases and sciences	Lauro, A; Pagano, N; Impellizzeri, G; Cervellera, M; Tonini,
78	32278865	10.1016/j.jaip.2020.04.003	Health-Related Quality of Life in Common Variable Immunodeficiency Italian Patients Switched to Remote Assistance During the COVID-19 Pandemic.	The journal of allergy and clinical immunology. In practice	Pulvirenti, Federica; Cinetto, Francesco; Milito, Cinzia; Bonanni, Livia; Pesce, Anna Maria; Leodori, Giorgia; Garzi, Giulia; Miglionico, Marzia; Tabolli, Stefano; Quinti, Isabella
79	32240755	10.1016/j.jpainsymman.2020.03.021	Home Care for Cancer Patients During COVID-19 Pandemic: The Double Triage Protocol.	Journal of pain and symptom management	Porzio, Giampiero; Cortellini, Alessio; Bruera, Eduardo; Verna, Lucilla; Ravoni, Giulio; Peris, Flaminia; Spinelli, Giuseppe
80	32246838	10.1111/anae.15072	Hospital surge capacity in a tertiary emergency referral centre during the COVID-19 outbreak in Italy.	Anaesthesia	Carenzo, L; Costantini, E; Greco, M; Barra, F L; Rendiniello, V; Mainetti, M; Bui, R; Zanella, A; Grasselli, G; Lagioia, M; Protti, A; Cecconi, M
81	32327741	10.1038/s41443-020-0288-7	How the andrological sector suffered from the dramatic Covid 19 outbreak in Italy: supportive initiatives of the Italian Association of Andrology (SIA).	International journal of impotence research	Rizzo, Michele; Liguori, Giovanni; Verze, Paolo; Palumbo, Fabrizio; Cai, Tommaso; Palmieri, Alessandro
82	32348586	10.1111/tri.13633	How to guarantee liver transplantation in the north of Italy during the COVID-19 pandemic. A sound transplant protection strategy.	Transplant international : official journal of the European Society for Organ Transplantation	Lauterio, Andrea; De Carlis, Riccardo; Belli, Luca; Fumagalli, Roberto; De Carlis, Luciano
83	32345617	10.1136/annrheumdis-2020-217600	Impact of COVID-19 pandemic on patients with large-vessel vasculitis in Italy: a monocentric survey.	Annals of the rheumatic diseases	Tomelleri, Alessandro; Sartorelli, Silvia; Campochiaro, Corrado; Baldissera, Elena Marina; Dagna, Lorenzo
84	32313181	10.1038/s41409-020-0895-4	Lessons after the early management of the COVID-19 outbreak in a pediatric transplant and hemato-oncology center embedded within a COVID-19 dedicated hospital in Lombardia, Italy. Estote parati.	Bone marrow transplantation	Balduzzi, Adriana; Brivio, Erica; Rovelli, Attilio; Rizzari, Carmelo; Gasperini, Serena; Melzi, Maria Luisa; Conter, Valentino; Biondi, Andrea
85	32347128	10.1080/02688697.2020.1758297	Maintaining stereotactic radiosurgical treatments during Covid-19 outbreak: the case of the Gamma Knife Unit in Brescia - Italy.	British journal of neurosurgery	Franzin, A; Spatola, G; Giudice, L; Migliorati, K; Vivaldi, O; Giorgi, C
86	32336306	10.1017/ice.2020.177	Management of healthcare areas for the prevention of COVID-19 emergency in an Italian teaching hospital (Pisa, Tuscany): A hospital renovation plan.	Infection control and hospital epidemiology	Baggiani, Angelo; Biani, Silvia; Luchini, Grazia; Giraldi, Mauro; Martino, Maria Carola; Porretta, Andrea; Totaro, Michele; Privitera, Gaetano
87	32335697	10.1007/s00167-020-06023-3	Management of orthopaedic and traumatology patients during the Coronavirus disease (COVID-19) pandemic in northern Italy.	Knee surgery, sports traumatology, arthroscopy : official journal of the ESSKA	Randelli, Pietro Simone; Compagnoni, Riccardo
88	32347790	10.1161/STROKEAHA.120.030100	Mechanical Thrombectomy in the Era of the COVID-19 Pandemic: Emergency Preparedness for Neuroscience Teams: A Guidance Statement From the Society of Vascular and Interventional Neurology.	Stroke	Nguyen, Thanh N; Abdalkader, Mohamad; Jovin, Tudor G; Nogueira, Raul G; Jadhav, Ashutosh P; Hauszen, Diogo C; Hassan, Ameer E; Novakovic, Roberta; Sheth, Sunil A; Ortega-Gutierrez, Santiago; Panagos, Peter D; Cordina, Steve M; Linfante, Italo; Mansour, Ossama Yassin; Malik, Amer M; Narayanan, Sandra; Masoud, Hesham E; Chou, Sherry Hsiang-Yi; Khatri, Rakesh; Janardhan, Vallabh; Yavagal, Dileep R; Zaidat, Osama O;

					Greer, David M; Liebeskind, David S
89	32352480	10.1001/jamapsychiatry.2020.1276	Mental Health in the Coronavirus Disease 2019 Emergency-The Italian Response.	JAMA psychiatry	de Girolamo, Giovanni; Cerveri, Giancarlo; Clerici, Massimo; Monzani, Emiliano; Spinogatti, Franco; Starace, Fabrizio; Tura, Giambattista; Vita, Antonio
90	32353266	10.1016/S2215-0366(20)30133-4	Mental health services in Italy during the COVID-19 outbreak.	The lancet. Psychiatry	D'Agostino, Armando; Demartini, Benedetta; Cavallotti, Simone; Gambini, Orsola
91	32315881	10.1016/j.psychres.2020.112980	Mental Health Services in Lombardy during COVID-19 outbreak.	Psychiatry research	Percudani, Mauro; Corradin, Matteo; Moreno, Mauro; Indelicato, Annamaria; Vita, Antonio
92	32347685	10.23736/S0390-5616.20.04994-2	Neurosurgical activity during COVID-19 pandemic: an expert opinion from China, South Korea, Italy, United States of America, Colombia and United Kingdom.	Journal of neurosurgical sciences	Fontanella, Marco M; Saraceno, Giorgio; Lei, Ting; Bederson, Joshua B; You, Namkyu; Rubiano, Andres M; Hutchinson, Peter; Wiemeijer-Timmer, Fr.d..rique; Servadei, Franco
93	32348640	10.1056/NEJMc2010418	Out-of-Hospital Cardiac Arrest during the Covid-19 Outbreak in Italy.	The New England journal of medicine	Baldi, Enrico; Sechi, Giuseppe M; Mare, Claudio; Canevari, Fabrizio; Brancaglione, Antonella; Primi, Roberto; Klersy, Catherine; Palo, Alessandra; Contri, Enrico; Ronchi, Vincenza; Beretta, Giorgio; Reali, Francesca; Parogni, Pierpaolo; Facchin, Fabio; Bua, Davide; Rizzi, Ugo; Bussi, Daniele; Ruggeri, Simone; Oltrona Visconti, Luigi; Savastano, Simone
94	32343497	10.1056/NEJMc2009166	Reduced Rate of Hospital Admissions for ACS during Covid-19 Outbreak in Northern Italy.	The New England journal of medicine	De Filippo, Ovidio; D'Ascenzo, Fabrizio; Angelini, Filippo; Bocchino, Pier Paolo; Conrotto, Federico; Saglietto, Andrea; Secco, Gioel Gabrio; Campo, Gianluca; Gallone, Guglielmo; Verardi, Roberto; Gaido, Luca; Iannaccone, Mario; Galvani, Marcello; Ugo, Fabrizio; Barbero, Umberto; Infantino, Vincenzo; Olivotti, Luca; Mennuni, Marco; Gili, Sebastiano; Infusino, Fabio; Vercellino, Matteo; Zucchetti, Ottavio; Casella, Gianni; Giammaria, Massimo; Boccuzzi, Giacomo; Tolomeo, Paolo; Doronzo, Baldassarre; Senatore, Gaetano; Grosso Marra, Walter; Rognoni, Andrea; Trabattini, Daniela; Franchin, Luca; Borin, Andrea; Bruno, Francesco; Galluzzo, Alessandro; Gambino, Alfonso; Nicolino, Annamaria; Truffa Giachet, Alessandra; Sardella, Gennaro; Fedele, Francesco; Monticone, Silvia; Montefusco, Antonio; Omed..., Pierluigi; Pennone, Mauro; Patti, Giuseppe; Mancone, Massimo; De Ferrari, Gaetano M
95	32311643	10.1016/j.ejca.2020.03.024	Reorganisation of medical oncology departments during the novel coronavirus disease-19 pandemic: a nationwide Italian survey.	European journal of cancer (Oxford, England : 1990)	Indini, Alice; Aschele, Carlo; Cavanna, Luigi; Clerico, Mario; Daniele, Bruno; Fiorentini, Giammaria; Fioretto, Luisa; Giordano, Monica; Montesarchio, Vincenzo; Ortega, Cinzia; Pinotti, Graziella; Scanni, Alberto; Zamagni, Claudio; Blasi, Livio; Grossi, Francesco
96	32348711	10.1177/0269216320920780	Response and role of palliative care during the COVID-19 pandemic: A national telephone survey of hospices in Italy.	Palliative medicine	Costantini, Massimo; Sleeman, Katherine E; Peruselli, Carlo; Higginson, Irene J
97	32348025	10.1002/alr.22596	Skull base surgery during the Covid-19 pandemic: The Italian skull base society recommendations.	International forum of allergy & rhinology	Castelnuovo, Paolo; Turri-Zanoni, Mario; Karlgiotis, Apostolos; Battaglia, Paolo; Pozzi, Fabio; Locatelli, Davide; Bernucci, Claudio; Iacoangeli, Maurizio; Krengli,

					Marco; Marchetti, Marcello; Pareschi, Roberto; Pompucci, Angelo; Rabbiosi, Dimitri
98	32324109	10.1089/tmj.2020.0106	Telemedicine During The COVID-19 in Italy: A Missed Opportunity?	Telemedicine journal and e-health : the official journal of the American Telemedicine Association	Omboni, Stefano
99	32329593	10.23736/S1973-9087.20.06331-5	Telemedicine from research to practice during the pandemic. "Instant paper from the field" on rehabilitation answers to the Covid-19 emergency.	European journal of physical and rehabilitation medicine	Negrini, Stefano; Kiekens, Carlote; Bernetti, Andrea; Capecci, Marianna; Ceravolo, Maria Gabriella; Lavezzi, Susanna; Zampolini, Mauro; Boldrini, Paolo; Negrini, Stefano; Kiekens, Carlote; Bernetti, Andrea; Capecci, Marianna; Ceravolo, Maria Gabriella; Lavezzi, Susanna; Zampolini, Mauro; Boldrini, Paolo
100	32298686	10.1016/j.urology.2020.04.004	Teleurology in the Time of Covid-19 Pandemic: Here to Stay?	Urology	Luciani, Lorenzo Giuseppe; Mattevi, Daniele; Cai, Tommaso; Giusti, Guido; Proietti, Silvia; Malossini, Gianni
101	32352569	10.1111/head.13825	The Adaptation of Management of Chronic Migraine Patients With Medication Overuse to the Suspension of Treatment Protocols During the COVID-19 Pandemic: Lessons From a Tertiary Headache Center in Milan, Italy.	Headache	Grazzi, Licia; Rizzoli, Paul
102	32347635	10.1111/dth.13469	The covid-19 outbreak in Italy: preventive and protective measures adopted by the dermatology unit of bologna university hospital.	Dermatologic therapy	Patrizi, Annalisa; Bardazzi, Federico; Filippi, Federica; Abbenante, Diego; Piraccini, Bianca Maria
103	32343839	10.1111/bjd.19158	The impact of COVID-19 pandemic on patients with chronic plaque psoriasis being treated with biologic therapy: the Northern Italy experience.	The British journal of dermatology	Gisondi, P; Facheris, P; Dapavo, P; Piaserico, S; Conti, A; Naldi, L; Cazzaniga, S; Malagoli, P; Costanzo, A
104	32330351	10.1111/ajt.15948	The impact of the COVID-19 outbreak on Liver Transplantation programmes in Northern Italy.	American journal of transplantation : official journal of the American Society of Transplantation and the American Society of Transplant Surgeons	Maggi, Umberto; De Carlis, Luciano; Yiu, Daniel; Colledan, Michele; Regalia, Enrico; Rossi, Giorgio; Angrisani, Marco; Consonni, Dario; Fornoni, Gianluca; Piccolo, Giuseppe; DeFeo, Tullia Maria
105	32323563	10.1302/0301-620X.102B6.BJJ-2020-0537	The management of emergency spinal surgery during the COVID-19 pandemic in Italy.	The bone & joint journal	Giorgi, P D; Villa, F; Gallazzi, E; Debernardi, A; Schir..., G R; Cris..., F M; Talamonti, G; D'Aliberti, G
106	32345523	10.1016/j.eururo.2020.04.004	The Shifting Landscape of Genitourinary Oncology During the COVID-19 Pandemic and how Italian Oncologists Reacted: Results from a National Survey.	European urology	Marandino, Laura; Di Maio, Massimo; Procopio, Giuseppe; Cinieri, Saverio; Beretta, Giordano Domenico; Necchi, Andrea
107	32328880	10.1007/s13304-020-00779-6	What happened to surgical emergencies in the era of COVID-19 outbreak? Considerations of surgeons working in an Italian COVID-19 red zone.	Updates in surgery	Patriti, Alberto; Eugeni, Emilio; Guerra, Francesco
108	32403954	10.1080/09546634.2020.1769828	Biologics for patients affected by Hidradenitis suppurativa in the COVID-19 era: data from a referral centre of Southern Italy.	The Journal of dermatological treatment	Marasca, Claudio; Ruggiero, Angelo; Megna, Matteo; Annunziata, Maria Carmela; Fabbrocini, Gabriella
109	32388698	10.1007/s11033-020-05479-3	BRCA testing in a genomic diagnostics referral center during the COVID-19 pandemic.	Molecular biology reports	Minucci, Angelo; Scambia, Giovanni; Santonocito, Concetta; Concolino, Paola; Urbani, Andrea
110	32413527	10.1016/j.radonc.2020.04.061	COVID-19 outbreak and cancer radiotherapy disruption in Italy: Survey endorsed by the Italian association of radiotherapy and clinical oncology (AIRO).	Radiotherapy and oncology : journal of the European Society for Therapeutic Radiology and Oncology	Jerezek-Fossa, Barbara Alicja; Pepa, Matteo; Marvaso, Giulia; Bruni, Alessio; di Monale E Bastia, Michela Buglione; Catalano, Gianpiero; Filippi, Andrea Riccardo; Franco, Pierfrancesco; Gambacorta, Maria Antonietta; Genovesi, Domenico; lat..., Giuseppe; Magli, Alessandro;

					Marafioti, Luigi; Meattini, Icro; Merlotti, Anna; Mignogna, Marcello; Musio, Daniela; Pacelli, Roberto; Pergolizzi, Stefano; Tombolini, Vincenzo; Trov..., Marco; Ricardi, Umberto; Magrini, Stefano Maria; Corv..., Renzo; Donato, Vittorio
111	32305384	10.1016/j.jvs.2020.04.019	Creation of a vascular surgical hub responding to the COVID-19 emergency: The Italian USL Toscana Centro model.	Journal of vascular surgery	Chisci, Emiliano; Masciello, Fabrizio; Michelagnoli, Stefano
112	32409735	10.1038/s41436-020-0831-4	Ensuring continuity of care for children with inherited metabolic diseases at the time of COVID-19: the experience of a metabolic unit in Italy.	Genetics in medicine : official journal of the American College of Medical Genetics	Brunetti-Pierri, Nicola; Fecarotta, Simona; Staiano, Annamaria; Strisciuglio, Pietro; Parenti, Giancarlo
113	32395187	10.1007/s13300-020-00829-7	Glycaemic Control Among People with Type 1 Diabetes During Lockdown for the SARS-CoV-2 Outbreak in Italy.	Diabetes therapy : research, treatment and education of diabetes and related disorders	Bonora, Benedetta Maria; Boscarì, Federico; Avogaro, Angelo; Bruttomesso, Daniela; Fadini, Gian Paolo
114	32407585	10.1111/bju.15107	Impact of COVID-19 pandemic on the urologic practice in the emergency departments in Italy.	BJU international	Novara, G; Bartoletti, R; Crestani, A; De Nunzio, C; Durante, J; Gregori, A; Liguori, G; Pavan, N; Trombetta, C; Simonato, A; Tubaro, A; Ficarra, V; Porpiglia, F
115	32386848	10.1016/j.ymgme.2020.04.002	Impact of COVID-19 related healthcare crisis on treatments for patients with lysosomal storage disorders, the first Italian experience.	Molecular genetics and metabolism	Sechi, Annalisa; Macor, Daniela; Valent, Serena; Da Riò, Rosalia Maria; Zanatta, Manuela; Spinelli, Alessandro; Bianchi, Katja; Bertossi, Nadia; Dardis, Andrea; Valent, Francesca; Scarpa, Maurizio
116	32386671	10.1016/j.bjoms.2020.04.025	Management in oral and maxillofacial surgery during the COVID-19 pandemic: Our experience.	The British journal of oral & maxillofacial surgery	Barca, Ida; Cordaro, Raffaella; Kallaverja, Elvis; Ferragina, Francesco; Cristofaro, Maria Giulia
117	32402628	10.1016/j.ejogrb.2020.04.062	Obstetric network reorganization during the COVID-19 pandemic: Suggestions from an Italian regional model.	European journal of obstetrics, gynecology, and reproductive biology	Giannubilo, Stefano Raffaele; Giannella, Luca; Delli Carpini, Giovanni; Carnielli, Virgilio P; Ciavattini, Andrea
118	32412811	10.1200/GO.20.00118	Patients With Cancer and COVID-19: A WhatsApp Messenger-Based Survey of Patients' Queries, Needs, Fears, and Actions Taken.	JCO global oncology	Gebbia, Vittorio; Piazza, Dario; Valerio, Maria Rosaria; Borsellino, Nicol.; Firenze, Alberto
119	32412693	10.1634/theoncologist.2020-0316	Personalized risk-benefit ratio adaptation of Breast Cancer care at the epicentre of Covid-19 outbreak.	The oncologist	Viale, Giulia; Licata, Luca; Sica, Lorenzo; Zambelli, Stefania; Zucchinelli, Patrizia; Rognone, Alessia; Aldrighetti, Daniela; Di Micco, Rosa; Zuber, Veronica; Pasetti, Marcella; Di Muzio, Nadia; Rodighiero, Maria Grazia; Panizza, Pietro; Sassi, Isabella; Petrella, Giovanna; Cascinu, Stefano; Gentilini, Oreste Davide; Bianchini, Giampaolo
120	32412631	10.1093/eurheartj/ehaa409	Reduction of hospitalizations for myocardial infarction in Italy in the COVID-19 era.	European heart journal	De Rosa, Salvatore; Spaccarotella, Carmen; Basso, Cristina; Calabr..., Maria Pia; Curcio, Antonio; Filardi, Pasquale Perrone; Mancone, Massimo; Mercurio, Giuseppe; Muscoli, Saverio; Nodari, Savina; Pedrinelli, Roberto; Sinagra, Gianfranco; Indolfi, Ciro
121	32391282	10.3389/fonc.2020.00665	Results of Multilevel Containment Measures to Better Protect Lung Cancer Patients From COVID-19: The IEO Model.	Frontiers in oncology	de Marinis, Filippo; Attili, Ilaria; Morganti, Stefania; Stati, Valeria; Spitaleri, Gianluca; Gianoncelli, Letizia; Del Signore, Ester; Catania, Chiara; Rampinelli, Cristiano; Omodeo Sal..., Emanuela; Spaggiari, Lorenzo; Mastrilli, Fabrizio; Passaro, Antonio

122	32394672	10.23736/S0392-0488.20.06670-5	The Italian dermatologic community facing COVID-19 pandemic: recommendation from the Italian society of dermatology and venereology.	Giornale italiano di dermatologia e venereologia : organo ufficiale, Societa italiana di dermatologia e sifilografia	Micali, Giuseppe; Musumeci, Maria L; Peris, Ketty
123	32306459	10.1111/odi.13362	The outbreak of Novel Coronavirus disease (COVID-19) caused a worrying delay in the diagnosis of oral cancer in north-west Italy: The Turin Metropolitan Area experience.	Oral diseases	Arduino, Paolo G; Conrotto, Davide; Broccoletti, Roberto
124	32386838	10.1016/j.injury.2020.04.033	Trauma service reorganization in Bologna (Italy) during COVID-19 pandemic.	Injury	Di Martino, Alberto; Faldini, Cesare
125	32376346	10.1016/j.cjca.2020.04.011	An In-hospital Pathway for Acute Coronary Syndrome Patients During the COVID-19 Outbreak: Initial Experience Under Real-World Suboptimal Conditions.	The Canadian journal of cardiology	Cosentino, Nicola; Assanelli, Emilio; Merlino, Luca; Mazza, Mario; Bartorelli, Antonio L; Marenzi, Giancarlo
126	32354663	10.1016/j.rbmo.2020.04.003	COVID-19 and ART: the view of the Italian Society of Fertility and Sterility and Reproductive Medicine.	Reproductive biomedicine online	Vaiarelli, Alberto; Bulletti, Carlo; Cimadomo, Danilo; Borini, Andrea; Alviggi, Carlo; Ajossa, Silvia; Anserini, Paola; Gennarelli, Gianluca; Guido, Maurizio; Levi-Setti, Paolo E; Palagiano, Antonio; Palermo, Roberto; Savasi, Valeria; Pellicer, Antonio; Rienzi, Laura; Ubaldi, Filippo M
127	32381511	10.1136/ijgc-2020-001489	Covid-19 global pandemic: options for management of gynecologic cancers. The experience in surgical management of ovarian cancer in the second highest affected Italian region.	International journal of gynecological cancer : official journal of the International Gynecological Cancer Society	Perrone, Anna Myriam; De Palma, Alessandra; De Iaco
128	32354669	10.1016/j.clon.2020.04.007	COVID-19 Outbreak and Cancer Radiotherapy Disruption in Lombardy, Northern Italy.	Clinical oncology (Royal College of Radiologists (Great Britain))	Jereczek-Fossa, B A; Palazzi, M F; Soatti, C P; Cazzaniga, L F; Ivaldi, G B; Pepa, M; Amadori, M; Antognoni, P; Arcangeli, S; Buffoli, A; Beltramo, G; Berlinghieri, S; Bignardi, M; Bracelli, S; Bruschieri, L; Castiglioni, S; Catalano, G; Di Muzio, N; Fallai, C; Fariselli, L; Filippi, A R; Gramaglia, A; Italia, C; Lombardi, F; Magrini, S M; Nava, S; Orlandi, E; Pasinetti, N; Sbicego, E L; Scandolaro, L; Scorsetti, M; Stiglich, F; Tonoli, S; Tortini, R; Valdagni, R; Vavassori, V; Marvaso, G
129	32376511	10.1016/j.hansur.2020.04.007	COVID-19: Initial experience of hand surgeons in Northern Italy.	Hand surgery & rehabilitation	Facchin, Federico; Messina, Francesco; Sonda, Regina; Faccio, Diego; Tiengo, Cesare; Bassetto, Franco
130	32359919	10.1016/j.ejso.2020.04.026	COVID-19: The European institute of oncology as a "centre for breast cancer surgery during the pandemic in Milan (Lombardy region, northern Italy) - A screenshot of the first month.	European journal of surgical oncology : the journal of the European Society of Surgical Oncology and the British Association of Surgical Oncology	Vicini, Elisa; Galimberti, Viviana; Naninato, Paola; Anna Rita, Anna Rita; Ribeiro Fontana, Sabrina Kahler; Veronesi, Paolo
131	32363507	10.1007/s10072-020-04448-9	Dealing with immune-mediated neuropathies during COVID-19 outbreak: practical recommendations from the task force of the Italian Society of Neurology (SIN), the Italian Society of Clinical Neurophysiology (SINC) and the Italian Peripheral Nervous System Association (ASNP).	Neurological sciences : official journal of the Italian Neurological Society and of the Italian Society of Clinical Neurophysiology	Dubbioso, Raffaele; Nobile-Orazio, Eduardo; Manganelli, Fiore; Santoro, Lucio; Briani, Chiara; Cocito, Dario; Tedeschi, Gioacchino; Di Lazzaro, Vincenzo; Fabrizi, Gian Maria
132	32370923	10.1016/j.arth.2020.04.057	Disruption of Arthroplasty Practice in an Orthopedic Center in Northern Italy During the	The Journal of arthroplasty	D'Apolito, Rocco; Faraldi, Martina; Ottaiano, Immacolata; Zagra, Luigi

			Coronavirus Disease 2019 Pandemic.		
133	32384401	10.1097/DCR.0000000000001685	How Coronavirus Disease 2019 Outbreak Is Impacting Colorectal Cancer Patients in Italy: A Long Shadow Beyond Infection.	Diseases of the colon and rectum	Pellino, Gianluca; Spinelli, Antonino
134	32369621	10.1002/lary.28716	How to Reorganize an Ear, Nose, and Throat Outpatient Service During the COVID-19 Outbreak: Report From Northern Italy.	The Laryngoscope	De Bernardi, Francesca; Turri-Zanoni, Mario; Battaglia, Paolo; Castelnovo, Paolo
135	32355982	10.1093/neuros/nyaa174	Letter: Back Pain and Accesses to Emergency Departments During COVID-19 Lockdown in Italy.	Neurosurgery	Cofano, Fabio; Tartara, Fulvio; Zenga, Francesco; Penner, Federica; Lanotte, Michele; Garbossa, Diego
136	32361728	10.1093/neuros/nyaa180	Letter: The Resiliency of the Neurosurgeon in the Midst of COVID-19 Pandemic Storm: The Italian Experience From the Frontline.	Neurosurgery	Levi, Vincenzo; Rizzo, Andrea; Egidi, Marcello
137	32372852	10.1016/j.jor.2020.04.006	Orthopaedic patient workflow in CoVID-19 pandemic in Italy.	Journal of orthopaedics	Bettinelli, Giulia; Delmastro, Elena; Salvato, Damiano; Salini, Vincenzo; Placella, Giacomo
138	32376263	10.1016/j.jpainsymman.2020.04.025	Palliative care in the time of COVID-19.	Journal of pain and symptom management	Mercadante, Sebastiano; Adile, Claudio; Ferrera, Patrizia; Giuliana, Fausto; Terruso, Lidia; Piccione, Tania
139	32378325	10.1002/lt.25790	Preliminary Analysis of the Impact of COVID-19 Outbreak on Italian Liver Transplant Programs.	Liver transplantation : official publication of the American Association for the Study of Liver Diseases and the International Liver Transplantation Society	Agnes, Salvatore; Andorno, Enzo; Avolio, Alfonso W; Baccarani, Umberto; Carraro, Amedeo; Cescon, Matteo; Cillo, Umberto; Colledan, Michele; De Carlis, Luciano; De Simone, Paolo; De Ville De Goyet, Jean; Di Benedetto, Fabrizio; Ettorre, Giuseppe M; Gringeri, Enrico; Gruttadauria, Salvatore; Lupo, Luigi G; Mazzaferro, Vincenzo; Regalia, Enrico; Romagnoli, Renato; Rossi, Giorgio E; Rossi, Massimo; Spada, Marco; Tisone, Giuseppe; Vennarecci, Giovanni; Vivarelli, Marco; Zamboni, Fausto; Boggi, Ugo
140	32367527	10.1111/eci.13250	Reorganization of a large academic hospital to face COVID-19 outbreak: the model of Parma, Emilia-Romagna region, Italy.	European journal of clinical investigation	Meschi, Tiziana; Rossi, Sandra; Volpi, Annalisa; Ferrari, Carlo; Sverzellati, Nicola; Brianti, Ettore; Fabi, Massimo; Nouvenne, Antonio; Ticinesi, Andrea
141	32367645	10.1111/ajt.15968	Response to "The COVID-19 outbreak in Italy: initial implications for organ transplantation programs".	American journal of transplantation : official journal of the American Society of Transplantation and the American Society of Transplant Surgeons	Cacciola, Roberto
142	32363506	10.1007/s10072-020-04442-1	Self-reported needs of patients with Parkinson's disease during COVID-19 emergency in Italy.	Neurological sciences : official journal of the Italian Neurological Society and of the Italian Society of Clinical Neurophysiology	Schirinzi, Tommaso; Cerroni, Rocco; Di Lazzaro, Giulia; Liguori, Claudio; Scalise, Simona; Bovenzi, Roberta; Conti, Matteo; Garasto, Elena; Mercuri, Nicola Biagio; Pierantozzi, Mariangela; Pisani, Antonio; Stefani, Alessandro
143	32381447	10.1016/j.burns.2020.04.009	The role of enzymatic debridement in burn care in the COVID-19 pandemic. Commentary by the Italian Society of Burn Surgery (SIUST).	Burns : journal of the International Society for Burn Injuries	Ranno, Rosario; Vestita, Michelangelo; Verrienti, Pasquale; Melandri, Davide; Perniciaro, Giuseppe; Baruffaldi Preis, Franz Wilhelm; D'Alessio, Roberto; Alessandro, Giovanni; Caleffi, Edoardo; Di Lonardo, Antonio; Palombo, Paolo; Posadinu, Maria Alma; Stella, Maurizio; Azzena, Bruno; Governa, Maurizio; Giudice, Giuseppe
144	32421355	10.1089/dia.2020.0169	Glycemic control in type 1 diabetes mellitus during COVID-19 quarantine and the role of in-home	Diabetes technology & therapeutics	Tornese, Gianluca; Ceconi, Viola; Monasta, Lorenzo; Carletti, Claudia; Faleschini, Elena; Barbi, Egidio

			physical activity.		
145	32426877	10.1111/jdv.16586	Metastatic melanoma treatment with check point inhibitors in the COVID-19 era: experience from an Italian Skin Cancer Unit.	Journal of the European Academy of Dermatology and Venereology : JEADV	Quaglino, Pietro; Fava, Paolo; Brizio, Matteo; Marra, Elena; Rubatto, Marco; Agostini, Andrea; Tonella, Luca; Ribero, Simone; Fierro, Maria Teresa
146	32434373	10.1161/CIRCEP.120.008722	Urgent Pacemaker Implantation Rates in the Veneto Region of Italy after the COVID-19 Outbreak.	Circulation. Arrhythmia and electrophysiology	Migliore, Federico; Zorzi, Alessandro; Gregori, Dario; Del Monte, Alvise; Falzone, Pasquale Valerio; Verlato, Roberto; Siciliano, Mariachiara; Themistoclakis, Sakis; China, Paolo; Marchese, Domenico; Pasquetto, Giampaolo; Ignatiuk, Barabara; Cernetti, Carlo; Giacomini, Enrico; Calzolari, Vittorio; Bilato, Claudio; Dalla Valle, Chiara; Frigo, Gianfranco Mario; Marinaccio, Leonardo; Sacc., Salvatore; Lupo, Antonio; Roncon, Loris; Marcantoni, Lina; Tosi, Alberto; Turiano, Giovanni; Folino, Franco; Perazzolo Marra, Martina; Cacciavillani, Luisa; Illiceto, Sabino
147	32441548	10.1161/JAHA.120.017122	Unpredictable Fall of Severe Emergent Cardiovascular Diseases Hospital Admissions During the COVID-19 Pandemic: Experience of a Single Large Center in Northern Italy.	Journal of the American Heart Association	Toniolo, Mauro; Negri, Francesco; Antonutti, Marco; Mas., Marco; Facchin, Domenico
148	32438878	10.1177/2050640620929133	Impact of COVID-19 pandemic on the daily management of biotechnological therapy in inflammatory bowel disease patients: Reorganisational response in a high-volume Italian inflammatory bowel disease centre.	United European gastroenterology journal	Scaldaferri, Franco; Pugliese, Daniela; Privitera, Giuseppe; Onali, Sara; Lopetuso, Loris Riccardo; Rizzatti, Gianenrico; Settanni, Carlo Romano; Pizzoferrato, Marco; Schiavoni, Elisa; Turchini, Laura; Amatucci, Valeria; Napolitano, Daniele; Bernabei, Tiziana; Mora, Vincenzina; Laterza, Lucrezia; Papa, Alfredo; Guidi, Luisa; Rapaccini, Gian Lodovico; Gasbarrini, Antonio; Armuzzi, Alessandro
149	32437242	10.2217/fon-2020-0358	Fighting cancer in coronavirus disease era: organization of work in medical oncology departments in Emilia Romagna region of Italy.	Future oncology (London, England)	Brandes, Alba A; Ardizzoni, Andrea; Artioli, Fabrizio; Cappuzzo, Federico; Cavanna, Luigi; Frassinetti, Giovanni Luca; Frassoldati, Antonio; Leonardi, Francesco; Longo, Giuseppe; Maestri, Antonio; Tassinari, Davide; Franceschi, Enrico; Nunno, Vincenzo Di; Pinto, Carmine
150	32420924	10.23750/abm.v9i1i2.9565	Impact of the COVID-19 epidemic on census, organization and activity of a large urban Emergency Department.	Acta bio-medica : Atenei Parmensis	Comelli, Ivan; Scioscioli, Francesco; Cervellin, Gianfranco
151	32435648	10.3389/fmed.2020.00189	Coronavirus Disease 2019 Emergency and Cancer in the South of Italy: What's New for the Oncologist?	Frontiers in medicine	Ingenito, Concetta; Buonerba, Luciana; Ferrara, Claudia; Busto, Giuseppina; Libroia, Annamaria; Ragone, Gianluca; Leo, Emilio; Savastano, Beatrice; Ioio, Concetta Dello; De Falco, Ferdinando; Iaccarino, Simona; Tarantino, Luciano; Polverino, Mario; Di Lorenzo, Giuseppe
152	32426285	10.3389/fonc.2020.00648	Coronavirus: Older Persons With Cancer in Italy in the COVID-19 Pandemic.	Frontiers in oncology	Fratino, Lucia; Procopio, Giuseppe; Di Maio, Massimo; Cinieri, Saverio; Leo, Silvana; Beretta, Giordano
153	32429172	10.3390/ijerph17103452	How Large Was the Mortality Increase Directly and Indirectly Caused by the COVID-19 Epidemic? An Analysis on All-Causes Mortality Data in Italy.	International journal of environmental research and public health	Magnani, Corrado; Azzolina, Danila; Gallo, Elisa; Ferrante, Daniela; Gregori, Dario

154	32423496	10.1017/S0033291720001841	Psychological distress in serious mental illness patients during the COVID-19 outbreak and one-month mass quarantine in Italy.	Psychological medicine	Iasevoli, Felice; Fornaro, Michele; D'Urso, Giordano; Galletta, Diana; Casella, Claudia; Paternoster, Mariano; Buccelli, Claudio; de Bartolomeis, Andrea
155	32418297	10.1002/ejp.1589	Radiotherapy for pain relief from bone metastases during Coronavirus (COVID-19) pandemic.	European journal of pain (London, England)	Rinaldi, Carla Germana; Ippolito, Edy; Greco, Carlo; Matteucci, Paolo; D'Angelillo, Rolando Maria; Ramella, Sara
156	32425656	10.1007/s10840-020-00761-7	The COVID-19 challenge to cardiac electrophysiologists: optimizing resources at a referral center.	Journal of interventional cardiac electrophysiology : an international journal of arrhythmias and pacing	Mazzone, Patrizio; Peretto, Giovanni; Radinovic, Andrea; Limite, Luca Rosario; Marzi, Alessandra; Sala, Simone; Cireddu, Manuela; Vegara, Pasquale; Baratto, Francesca; Paglino, Gabriele; D'Angelo, Giuseppe; Cianfanelli, Lorenzo; Altizio, Savino; Lipartiti, Felicia; Frontera, Antonio; Bisceglia, Caterina; Gulletta, Simone; Bella, Paolo Della
157	32415473	10.1007/s11547-020-01217-8	Radiotherapy during COVID-19 pandemic. How to create a No fly zone: a Northern Italy experience.	La Radiologia medica	Montesi, Giampaolo; Di Biase, Saide; Chierchini, Sara; Pavanato, Giovanni; Virdis, Graziella Elia; Contato, Edgardo; Mandoliti, Giovanni; Montesi, Giampaolo; Di Biase, Saide; Chierchini, Sara; Pavanato, Giovanni; Virdis, Graziella Elia; Contato, Edgardo; Mandoliti, Giovanni
158	32417376	10.1016/j.cardfail.2020.05.007	The impact of the COVID-19 pandemic and Italian lockdown measures on clinical presentation and management of acute heart failure.	Journal of cardiac failure	Colivicchi, Furio; Di Fusco, Stefania Angela; Magnanti, Massimo; Cipriani, Manlio; Imperoli, Giuseppe
159	32304737	10.1016/j.cgh.2020.04.028	Maintaining the Quality Standards of Care for Inflammatory Bowel Disease Patients During the COVID-19 Pandemic.	Clinical gastroenterology and hepatology : the official clinical practice journal of the American Gastroenterological Association	Allocca, Mariangela; Fiorino, Gionata; Furfaro, Federica; Gilardi, Daniela; Radice, Simona; D'Amico, Ferdinando; Zilli, Alessandra; Danese, Silvio
160	32425731	10.1016/j.dld.2020.05.014	COVID-19 pandemic perception in adults with celiac disease: an impulse to implement the use of telemedicine: COVID-19 and CeD.	Digestive and liver disease : official journal of the Italian Society of Gastroenterology and the Italian Association for the Study of the Liver	Siniscalchi, Monica; Zingone, Fabiana; Savarino, Edoardo Vincenzo; D'Odorico, Anna; Ciacci, Carolina
161	32425730	10.1016/j.dld.2020.05.016	A negative fallout of COVID-19 lockdown in Italy: life-threatening delay in the diagnosis of celiac disease.	Digestive and liver disease : official journal of the Italian Society of Gastroenterology and the Italian Association for the Study of the Liver	Catassi, Giulia N; Vallorani, Martina; Cerioni, Federica; Lionetti, Elena; Catassi, Carlo
162	32425733	10.1016/j.dld.2020.05.017	"Impact of the COVID-19 pandemic on Gastroenterology Divisions in Italy: a national survey"	Digestive and liver disease : official journal of the Italian Society of Gastroenterology and the Italian Association for the Study of the Liver	Maida, M; Sferrazza, S; Savarino, E; Ricciardiello, L; Repici, A; Morisco, F; Furnari, M; Fuccio, L; Morreale, G C; Vitello, A; Burra, P; Marchi, S; Annibale, B; Benedetti, A; Alvaro, D; Ianaro, G
163	32434108	10.1016/j.ejca.2020.04.034	Cancer treatment during the coronavirus disease 2019 pandemic: Do not postpone, do it!	European journal of cancer (Oxford, England : 1990)	Omarini, Claudia; Maur, Michela; Luppi, Gabriele; Narni, Franco; Luppi, Mario; Dominici, Massimo; Longo, Giuseppe; Piacentini, Federico
164	32425366	10.1016/j.ejca.2020.04.047	Comment on 'Reorganisation of medical oncology departments during the novel coronavirus disease-19 pandemic: a nationwide Italian survey' by Alice Indini et al.	European journal of cancer (Oxford, England : 1990)	Bongiovanni, Alberto; Mercatali, Laura; Fausti, Valentina; Ibrahim, Toni
165	32416370	10.1016/j.jns.2020.116889	Has COVID-19 played an unexpected "stroke" on the chain of survival?	Journal of the neurological sciences	Naccarato, Marcello; Scali, Ilario; Olivo, Sasha; Aj.evi., Milo.; Buoite Stella, Alex; Furlanis, Giovanni; Lugnan,

					Carlo; Caruso, Paola; Peratoner, Alberto; Cominotto, Franco; Manganotti, Paolo
166	32416433	10.1016/j.lungcan.2020.05.001	Metronomic oral vinorelbine and lung cancer therapy during the COVID 19 pandemic: A single-center experience.	Lung cancer (Amsterdam, Netherlands)	Rossi, David
167	32425267	10.1016/j.urology.2020.05.011	GUESS WHO'S COMING TO DINNER: COVID-19 IN A COVID-FREE UNIT.	Urology	Luciani, Lorenzo G; Mattevi, Daniele; Giusti, Guido; Proietti, Silvia; Gallo, Fabrizio; Schenone, Maurizio; Malossini, Gianni
168	32419538	10.1080/09546634.2020.1771255	Reorganization of a Northern Italy dermatology department during the COVID-19 pandemic: is it temporary or the beginning of a new era in dermatology?	The Journal of dermatological treatment	Valenti, M; Gargiulo, L; Pavia, G; Facheris, P; Borroni, R; Narcisi, A; Costanzo, A
169	32440817	10.1007/s00264-020-04617-7	The COVID-19 outbreak in Italy: perspectives from an orthopaedic hospital.	International orthopaedics	Grassi, Alberto; Pizza, Nicola; Tedesco, Dario; Zaffagnini, Stefano
170	32418029	10.1007/s00268-020-05595-y	Surgical Strategy During the COVID-19 Pandemic in a University Metropolitan Hospital in Milan, Italy.	World journal of surgery	Mariani, Nicol.. M; Pisani Ceretti, Andrea; Fedele, Veronica; Barabino, Matteo; Nicastro, Vincenzo; Giovanzana, Marco; Scifo, Giovanna; De Nicola, Enrico; Opocher, Enrico
171	32415472	10.1007/s11547-020-01216-9	Short fractionation radiotherapy for early prostate cancer in the time of COVID-19: long-term excellent outcomes from a multicenter Italian trial suggest a larger adoption in clinical practice.	La Radiologia medica	Barra, Salvina; Guarnieri, Alessia; di Monale E Bastia, Michela Buglione; Marcenaro, Michela; Tornari, Elena; Belgioia, Liliana; Magrini, Stefano Maria; Ricardi, Umberto; Corv..., Renzo
172	32333375	10.1007/s40123-020-00251-z	Protect Healthcare Workers and Patients from COVID-19: The Experience of Two Tertiary Ophthalmology Care Referral Centers in Italy.	Ophthalmology and therapy	Parravano, Mariacristina; Borrelli, Enrico; Costanzo, Eliana; Sacconi, Riccardo; Varano, Monica; Querques, Giuseppe
173	32437916	10.1016/j.avsg.2020.05.002	Routine in an Italian high-volume Vascular Surgery Unit during the COVID-19 era: how the pandemic changed the vascular daily practice.	Annals of vascular surgery	Mangialardi, Maria Lucia; Orrico, Matteo
174	32414539	10.1016/j.bjoms.2020.04.035	Impact of COVID-19 epidemic on maxillofacial surgery in Italy.	The British journal of oral & maxillofacial surgery	Allevi, F; Dionisio, A; Baciliero, U; Balercia, P; Beltrami, G A; Bertossi, D; Bozzetti, A; Califano, L; Cascone, P; Colombo, L; Copelli, C; De Ponte, F S; De Riu, G; Della Monaca, M; Fusetti, S; Gali..., M; Giann..., A B; Longo, F; Mannucci, N; Nocini, P F; Pelo, S; Ramieri, G; Sesenna, E; Solazzo, L; Spinelli, G; Tarsitano, A; Tartaro, G; Valentini, V; Verrina, G; Biglioli, F
175	32425655	10.1038/s41391-020-0240-4	Elective procedures for prostate cancer in the time of Covid-19: a multidisciplinary team experience.	Prostate cancer and prostatic diseases	Sciarra, Alessandro; Salciccia, Stefano; Maggi, Martina; Del Giudice, Francesco; Busetto, Gian Maria; Musio, Daniela; Ciardi, Antonio; Catalano, Carlo; Cortesi, Enrico; Panebianco, Valeria
176	32423298	10.1177/0194599820928970	Effects of COVID-19 Pandemic on Otolaryngology Surgery in Italy: The Experience of Our University Hospital.	Otolaryngology--head and neck surgery : official journal of American Academy of Otolaryngology-Head and Neck Surgery	Ralli, Massimo; Minni, Antonio; Candelori, Francesca; Cialente, Fabrizio; Greco, Antonio; de Vincentiis, Marco
177	32418481	10.1177/1120672120927865	Infection control measures in ophthalmology during the COVID-19 outbreak: A narrative review from an early experience in Italy.	European journal of ophthalmology	Veritti, Daniele; Sarao, Valentina; Bandello, Francesco; Lanzetta, Paolo
178	32425181	10.1714/3359.33320	[COVID-19 outbreak and Cardiac Surgery: position paper from the COVID-SICCH Task Force	Giornale italiano di cardiologia (2006)	Bonalumi, Giorgia; Di Mauro, Michele; Garatti, Andrea; Barili, Fabio; Parolari, Alessandro; Gerosa, Gino

			of the Italian Society for Cardiac Surgery].		
179	32420933	10.23750/abm.v91i2.9635	The deep impact of novel CoVID-19 infection in an Orthopedics and Traumatology Department: the experience of the Piacenza Hospital.	Acta bio-medica : Atenei Parmensis	Maniscalco, Pietro; Poggiali, Erika; Quattrini, Fabrizio; Ciatti, Corrado; Magnacavallo, Andrea; Caprioli, Serena; Vadacca, Giovanni; Michieletti, Emanuele; Cavanna, Luigi; Capelli, Patrizio
180	32420932	10.23750/abm.v91i2.9636	Proximal femur fractures in COVID-19 emergency: the experience of two Orthopedics and Traumatology Departments in the first eight weeks of the Italian epidemic.	Acta bio-medica : Atenei Parmensis	Maniscalco, Pietro; Poggiali, Erika; Quattrini, Fabrizio; Ciatti, Corrado; Magnacavallo, Andrea; Vercelli, Andrea; Domenichini, Marco; Vaienti, Enrico; Pogliacomì, Francesco; Ceccarelli, Francesco
181	32451301	10.1016/j.rbmo.2020.04.015	A picture of the covid-19 impact on IVIRMA fertility treatment clinics in Spain and Italy.	Reproductive biomedicine online	Requena, Antonio; Cruz, Mar..a; Vergara, Vanessa; Prados, Nicol..s; Galliano, Daniela; Pellicer, Antonio
182	32452954	10.1097/SLA.0000000000004081	A Snapshot of Elective Oncological Surgery in Italy During COVID-19 Emergency: Pearls, Pitfalls, and Perspectives.	Annals of surgery	Torzilli, Guido; Vigano, Luca; Galvanin, Jacopo; Castoro, Carlo; Quagliuolo, Vittorio; Spinelli, Antonino; Zerbi, Alessandro; Donadon, Matteo; Montorsi, Marco
183	32449043	10.1007/s00264-020-04590-1	Changes of clinical activities in an orthopaedic institute in North Italy during the spread of COVID-19 pandemic: a seven-week observational analysis.	International orthopaedics	Zagra, Luigi; Faraldi, Martina; Pregliasco, Fabrizio; Vinci, Anna; Lombardi, Giovanni; Ottalano, Immacolata; Accetta, Riccardo; Perazzo, Paolo; D'Apolito, Rocco
184	32452123	10.1002/pbc.28410	Children with cancer in the time of COVID-19: An 8-week report from the six pediatric onco-hematology centers in Lombardia, Italy.	Pediatric blood & cancer	Ferrari, Andrea; Zecca, Marco; Rizzari, Carmelo; Porta, Fulvio; Provenzi, Massimo; Marinoni, Maddalena; Schumacher, Richard Fabian; Luksch, Roberto; Terenziani, Monica; Casanova, Michela; Spreafico, Filippo; Chiaravalli, Stefano; Compagno, Francesca; Bruni, Federica; Piccolo, Chiara; Bettini, Laura; D'Angi., Mariella; Ferrari, Giulia Maria; Biondi, Andrea; Massimino, Maura; Balduzzi, Adriana
185	32470231	10.4088/PCC.20com02659	Community Mental Health Care in the COVID-19 Response: An Italian Example.	The primary care companion for CNS disorders	Caroppo, Emanuele; Lega, Ilaria; Cognetti, Danilo; Rotunno, Vittoria
186	32460385	10.1111/tri.13661	COVID-19 health restrictions in a transplanted Italian cohort.	Transplant international : official journal of the European Society for Organ Transplantation	Pascale, Marco Maria; Bianco, Giuseppe; Ferri, Lorenzo; Agnes, Salvatore
187	32467027	10.1016/j.jgo.2020.05.008	COVID-19 risk contagion: Organization and procedures in a South Italy geriatric oncology ward.	Journal of geriatric oncology	Gambardella, Claudio; Pagliuca, Raffaele; Pomilla, Giuseppe; Gambardella, Antonio
188	32447060	10.1016/j.cjca.2020.05.023	Decrease and Delay in Hospitalization for Acute Coronary Syndromes during the 2020 SARS-CoV-2 Pandemic.	The Canadian journal of cardiology	Secco, Gioel Gabrio; Zocchi, Chiara; Parisi, Rosario; Roveta, Annalisa; Mirabella, Francesca; Vercellino, Matteo; Pistis, Gianfranco; Reale, Maurizio; Maggio, Silvia; Audo, Andrea; Kozel, Daniela; Centini, Giacomo; Maconi, Antonio; Di Mario, Carlo
189	32448333	10.1186/s13017-020-00314-3	Emergency general surgery in Italy during the COVID-19 outbreak: first survey from the real life.	World journal of emergency surgery : WJES	Patriti, Alberto; Baiocchi, Gian Luca; Catena, Fausto; Marini, Pierluigi; Catarci, Marco
190	32468103	10.1007/s00384-020-03622-x	From high volume to "zero" proctology: Italian experience in the COVID era.	International journal of colorectal disease	Mascagni, Domenico; Eberspacher, Chiara; Mascagni, Pietro; Arezzo, Alberto; Selvaggi, Francesco; Sturiale, Alessandro; Milito, Giovanni; Naldini, Gabriele; Mascagni, Domenico; Eberspacher, Chiara; Mascagni, Pietro; Arezzo, Alberto; Selvaggi, Francesco; Sturiale, Alessandro; Milito, Giovanni; Naldini, Gabriele

191	32463534	10.1002/ejhf.1911	Heart failure management during COVID-19 outbreak in Italy. Telemedicine experience from a heart failure university tertiary referral centre.	European journal of heart failure	Salzano, Andrea; D'Assante, Roberta; Stagnaro, Francesca Maria; Valente, Valeria; Crisci, Giulia; Giardino, Federica; Arcopinto, Michele; Bossone, Eduardo; Marra, Alberto Maria; Cittadini, Antonio
192		10.1186/s13052-020-00829-0	Italian pediatric respiratory society recommendations on pediatric pulmonary function testing during COVID-19 pandemic.	Italian journal of pediatrics	Bignamini, Elisabetta; Cazzato, Salvatore; Cutrera, Renato; Ferrante, Giuliana; La Grutta, Stefania; Licari, Amelia; Lombardi, Enrico; Midulla, Fabio; Piacentini, Giorgio; Pifferi, Massimo; Santamaria, Francesca; Tancredi, Giancarlo; Turchetta, Attilio
193	32450718	10.1177/1120672120929961	Ophthalmology and SARS-CoV-2: Blind toward those who fight blindness?	European journal of ophthalmology	Arrigo, Alessandro; Aragona, Emanuela; Parodi, Maurizio Battaglia; Loperfido, Francesco; Bandello, Francesco
194	32448805	10.1136/ijgc-2020-001523	Radiotherapy in Southern Italy at the time of COVID-19: options for radiation oncology units.	International journal of gynecological cancer : official journal of the International Gynecological Cancer Society	Pezzulla, Donato; Macchia, Gabriella; Taccari, Francesco; Sticca, Giovanna; Deodato, Francesco
195	32462316	10.1007/s40618-020-01290-w	SARS-CoV-2 infection, male fertility and sperm cryopreservation: a position statement of the Italian Society of Andrology and Sexual Medicine (SIAMS) (Societ. Italiana di Andrologia e Medicina della Sessualit.).	Journal of endocrinological investigation	Corona, G; Baldi, E; Isidori, A M; Paoli, D; Pallotti, F; De Santis, L; Francavilla, F; La Vignera, S; Selice, R; Caponecchia, L; Pivonello, R; Ferlin, A; Foresta, C; Jannini, E A; Lenzi, A; Maggi, M; Lombardo, F
196	32462423	10.1007/s10067-020-05191-4	Taking care of systemic sclerosis patients during COVID-19 pandemic: rethink the clinical activity.	Clinical rheumatology	Minniti, Antonina; Maglione, Wanda; Pignataro, Francesca; Cappadona, Carmela; Caporali, Roberto; Del Papa, Nicoletta
197	32458588	10.1111/dth.13695	Teledermatologic monitoring for chronic cutaneous autoimmune diseases with smartworking during Covid-19 emergency in a tertiary center in Italy.	Dermatologic therapy	Brunasso, Alexandra Maria Giovanna; Massone, Cesare
198	32455485	10.1111/jdv.16672	The COVID-19 outbreak in dermatologic surgery: resetting clinical priorities.	Journal of the European Academy of Dermatology and Venereology : JEADV	Rossi, Elena; Trakatelli, Myrto; Giacomelli, Luca; Ferrari, Barbara; Francomano, Mariangela; Pellacani, Giovanni; Magnoni, Cristina
199	32447443	10.1007/s00345-020-03264-2	The impact of COVID-19 pandemic on urological emergencies: a single-center experience.	World journal of urology	Motterle, Giovanni; Morlacco, Alessandro; Iafrate, Massimo; Bianco, Marta; Federa, Giuliano; Xhafka, Orest; Zattoni, Filiberto; Prayer-Galett, Tommaso
200	32531948	10.3390/cancers12061513	A Guide for Oncologic Patient Management during Covid-19 Pandemic: The Initial Experience of an Italian Oncologic Hub with Exemplificative Focus on Uro-Oncologic Patients.	Cancers	Mistretta, Francesco A; Luzzago, Stefano; Molendini, Luigi Orlando; Ferro, Matteo; Dossena, Enza; Mastrilli, Fabrizio; Musi, Gennaro; de Cobelli, Ottavio
201	32497317	10.1111/jgh.15132	A snapshot of urgent upper gastrointestinal endoscopy care during the Covid-19 outbreak in Italy.	Journal of gastroenterology and hepatology	D'Ovidio, Valeria; Lucidi, Cristina; Bruno, Giovanni; Miglioresi, Lucia; Lisi, Daniele; Bazuro, Marco Emilio
202	32514743	10.1007/s13304-020-00821-7	Bariatric surgery and the COVID-19 pandemic: SICOB recommendations on how to perform surgery during the outbreak and when to resume the activities in phase 2 of lockdown.	Updates in surgery	Navarra, Giuseppe; Komaei, Iman; Curr., Giuseppe; Angrisani, Luigi; Bellini, Rosario; Cerbone, Maria Rosaria; Di Lorenzo, Nicola; De Luca, Maurizio; Fioletto, Mirto; Gentileschi, Paolo; Musella, Mario; Nannipieri, Monica; Piazza, Luigi; Olmi, Stefano; Pilone, Vincenzo; Raffaelli, Marco; Sarro, Giuliano; Vitiello, Antonio; Zappa, Marco Antonio; Foschi, Diego

203	32540921	10.2337/dc20-1127	Blood Glucose Control During Lockdown for COVID-19: CGM Metrics in Italian Adults With Type 1 Diabetes.	Diabetes care	Capaldo, Brunella; Annuzzi, Giovanni; Creanza, Annalisa; Giglio, Clemente; De Angelis, Raffaele; Lupoli, Roberta; Masulli, Maria; Riccardi, Gabriele; Rivellese, Angela Albarosa; Bozzetto, Lutgarda
204	32453689	10.2450/2020.0107-20	Blood supply and transfusion support in southern Italy: findings during the first four weeks of the SARS-CoV-2 pandemic.	Blood transfusion = Trasfusione del sangue	Grandone, Elvira; Mastroianno, Mario; Caroli, Antonella; Ostuni, Angelo
205	32561524	10.1136/jclinpath-2020-206833	Cancer diagnostic rates during the 2020 'lockdown', due to COVID-19 pandemic, compared with the 2018-2019: an audit study from cellular pathology.	Journal of clinical pathology	De Vincentiis, Ludovica; Carr, Richard A; Mariani, Maria Paola; Ferrara, Gerardo
206	32418489	10.1177/2047487320925632	Cardiac patient care during a pandemic: how to reorganise a heart failure unit at the time of COVID-19.	European journal of preventive cardiology	Agostoni, Piergiuseppe; Mapelli, Massimo; Conte, Edoardo; Baggiano, Andrea; Assanelli, Emilio; Apostolo, Anna; Alimento, Marina; Berna, Giovanni; Guglielmo, Marco; Muratori, Manuela; Susini, Francesca; Palermo, Pietro; Pezzuto, Beatrice; Salvioni, Elisabetta; Sudati, Anna; Vignati, Carlo; Merlino, Luca
207	32548994	10.4081/monaldi.2020.1439	Cardiac rehabilitation activities during the COVID-19 pandemic in Italy. Position Paper of the AICPR (Italian Association of Clinical Cardiology, Prevention and Rehabilitation).	Monaldi archives for chest disease = Archivio Monaldi per le malattie del torace	Mureddu, Gian Francesco; Ambrosetti, Marco; Venturini, Elio; La Rovere, Maria Teresa; Mazza, Antonio; Pedretti, Roberto; Sarullo, Filippo; Fattirulli, Francesco; Faggiano, Pompilio; Giallauria, Francesco; Vigorito, Carlo; Angelino, Elisabetta; Brazzo, Silvia; Ruzzolini, Matteo
208	32559271	10.1182/blood.2020006854	CHRONIC LYMPHOCYTIC LEUKEMIA MANAGEMENT IN ITALY DURING THE COVID-19 PANDEMIC. A CAMPUS CLL REPORT.	Blood	Cuneo, Antonio; Scarfo, Lydia; Reda, Gianluigi; Varettoni, Marzia; Quaglia, Francesca Maria; Marchetti, Monia; De Paoli, Lorenzo; Re, Francesca; Pietrasanta, Daniela; Rigolin, Gian Matteo; Orsucci, Lorella; Ibatici, Adalberto; Gattei, Valter; Mauro, Francesca Romana; Trentin, Livio; Laurenti, Luca; Marasca, Roberto; Fo., Robin
209	32546234	10.1186/s13052-020-00843-2	Consensus statement of the Italian society of pediatric allergy and immunology for the pragmatic management of children and adolescents with allergic or immunological diseases during the COVID-19 pandemic.	Italian journal of pediatrics	Cardinale, Fabio; Ciprandi, Giorgio; Barberi, Salvatore; Bernardini, Roberto; Caffarelli, Carlo; Calvani, Mauro; Cavagni, Giovanni; Galli, Elena; Minasi, Domenico; Del Giudice, Michele Miraglia; Moschese, Viviana; Novembre, Elio; Paravati, Francesco; Peroni, Diego G; Tosca, Maria Angela; Traina, Giovanni; Tripodi, Salvatore; Marseglia, Gian Luigi
210	32500431	10.1007/s13304-020-00825-3	Continuing our work: transplant surgery and surgical oncology in a tertiary referral COVID-19 center.	Updates in surgery	Berardi, Giammauro; Colasanti, Marco; Levi Sandri, Giovanni Battista; Del Basso, Celeste; Ferretti, Stefano; Laurenzi, Andrea; Guglielmo, Nicola; Meniconi, Roberto Luca; Antonini, Mario; D'Offizi, Gianpiero; Ettore, Giuseppe Maria
211	32542881	10.1002/lt.25821	COVID 19 infection requires strengthening of the chronic care model: the impact on liver transplant practice at a high-volume center in Italy.	Liver transplantation : official publication of the American Association for the Study of Liver Diseases and the International Liver Transplantation Society	De Simone, Paolo; Melandro, Fabio; Balzano, Emanuele; Tincani, Giovanni; Catalano, Gabriele; Ghinolfi, Davide; Ducci, Juri; Carrai, Paola; Petruccelli, Stefania; Biancofiore, Giandomenico
212	32495231	10.1007/s40620-020-00755-8	COVID-19 and kidney transplantation: an Italian Survey and Consensus.	Journal of nephrology	Vistoli, Fabio; Furian, Lucrezia; Maggiore, Umberto; Caldara, Rossana; Cantaluppi, Vincenzo; Ferrareso, Mariano; Zaza, Gianluigi; Cardillo, Massimo; Biancofiore,

					Giandomenico; Menichetti, Francesco; Russo, Alessandro; Turillazzi, Emanuela; Di Paolo, Marco; Grandaliano, Giuseppe; Boggi, Ugo
213	32553705	10.1016/j.dld.2020.05.014	COVID-19 pandemic perception in adults with celiac disease: an impulse to implement the use of telemedicine.	Digestive and liver disease : official journal of the Italian Society of Gastroenterology and the Italian Association for the Study of the Liver	Siniscalchi, Monica; Zingone, Fabiana; Savarino, Edoardo Vincenzo; D'Odorico, Anna; Ciacci, Carolina
214	32500518	10.1007/s12020-020-02357-7	Endocrine surgery during COVID-19 pandemic: do we need an update of indications in Italy?	Endocrine	Lombardi, Celestino Pio; D'Amore, Annamaria; Grani, Giorgio; Ramundo, Valeria; Boscherini, Mauro; Gordini, Luca; Marzi, Federica; Tedesco, Silvia; Bocale, Raffaella
215	32557972	10.1002/hed.26319	Head and neck cancer radiotherapy amid COVID-19 pandemic: Report from Milan, Italy.	Head & neck	Alterio, Daniela; Volpe, Stefania; Marvaso, Giulia; Turturici, Irene; Ferrari, Annamaria; Leonardi, Maria Cristina; Lazzari, Roberta; Fiore, Massimo Sarra; Bufi, Giammaria; Cattani, Federica; Arrobio, Camilla; Patti, Filippo; Casbarra, Alessia; Cavallo, Iacopo; Mastrilli, Fabrizio; Orecchia, Roberto; Jereczek-Fossa, Barbara Alicja
216	32505553	10.1016/j.oraloncology.2020.104835	Head and neck cancer surgery in COVID-19 pandemic in Northern Italy.	Oral oncology	Riva, Giuseppe; Pizzo, Claudia; Fassone, Elisabetta; Pecorari, Giancarlo
217	32539199	10.1002/pon.5444	How Paediatric Psycho-oncology is changing during the COVID-19 Epidemic in Italy: New approaches.	Psycho-oncology	Zucchetti, Giulia; Bertolotti, Marina; Fagioli, Franca
218	32499187	10.1016/j.bjps.2020.05.002	How the COVID-19 pandemic changed the Plastic Surgery activity in a regional referral center in Northern Italy.	Journal of plastic, reconstructive & aesthetic surgery : JPRAS	Pignatti, Marco; Pinto, Valentina; Miralles, Maria Elisa Lozano; Giorgini, Federico A; Cannamela, Giacomo; Cipriani, Riccardo
219	32497912	10.1016/j.ahj.2020.04.021	Impact of COVID-19 epidemic on coronary care unit accesses for acute coronary syndrome in Veneto region, Italy.	American heart journal	Franco, Folino; Alessandro, Zorzi; Carlo, Cernetti; Domenico, Marchese; Giampaolo, Pasquetto; Loris, Roncon; Salvatore, Sacc.; Sakis, Themistoclakis; Giovanni, Turiano; Roberto, Verlati; Martina, Perazzolo Marra; Dario, Gregori; Sabino, Iliceto
220	32535890	10.1111/eci.13315	Italian survey on managing immune checkpoint inhibitors in oncology during COVID-19 outbreak.	European journal of clinical investigation	Tagliamento, Marco; Spagnolo, Francesco; Poggio, Francesca; Soldato, Davide; Conte, Benedetta; Ruelle, Tommaso; Barisione, Emanuela; De Maria, Andrea; Del Mastro, Lucia; Di Maio, Massimo; Lambertini, Matteo
221	32475022	10.1111/tbj.13926	Management of breast cancer in an EUSOMA-accredited Breast Unit in Lombardy, Italy, during the COVID-19 pandemic.	The breast journal	Corsi, Fabio; Caruso, Annalisa; Albasini, Sara; Bossi, Daniela; Polizzi, Andrea; Piccotti, Francesca; Truffi, Marta
222	32533863	10.1111/apa.15411	Management strategies adopted by a pediatric palliative care network in northern Italy during the COVID-19 pandemic.	Acta paediatrica (Oslo, Norway : 1992)	Lazzarin, Pierina; Avagnina, Irene; Divisic, Antuan; Agosto, Caterina; Giacomelli, Luca; Benini, Franca
223	32483923	10.1111/aos.14488	Managing ophthalmic practices in a referral emergency COVID-19 hospital in north-east Italy.	Acta ophthalmologica	Tognetto, Daniele; Pastore, Marco Rocco; De Giacinto, Chiara; Cecchini, Paolo; Agolini, Rossella; Giglio, Rosa; Vinciguerra, Alex Lucia
224	32515525	10.1111/pcn.13082	Mental health services in Italy during the Covid-19 Pandemic.	Psychiatry and clinical neurosciences	Carpiniello, Bernardo; Tusconi, Massimo; di Sciascio, Guido; Zanalda, Enrico; di Giannantonio, Massimo
225	32525292	10.23736/S0390-5616.20.05054-7	Natura non facit saltus: a phase 2 proposal to manage brain tumors cases from the neuro-oncology section of the Italian Society of	Journal of neurosurgical sciences	Angileri, Filippo F; Sabatino, Giovanni; Cavallo, Luigi M; Pessina, Federico; Ius, Tamara; De Divitiis, Oreste; Esposito, Felice; Grmod, Gianluca; Raffa, Giovanni;

			Neurosurgery (SINch..).		Spena, Giannantonio; Cardali, Salvatore; Esposito, Vincenzo; German., Antonino; Maiuri, Francesco; Fontanella, Marco; Cenzato, Marco
226	32538229	10.1080/01676830.2020.1775264	Oculoplastic management of patients in the Covid-19 era: experience from an Italian tertiary referral center.	Orbit (Amsterdam, Netherlands)	Lanni, Vittoria; Iuliano, Adriana; Laezza, Maria P; Uccello, Giovanni; Tranfa, Fausto; Strianese, Diego
227	32506141	10.1007/s00264-020-04635-5	Operational strategies of a trauma hub in early coronavirus disease 2019 pandemic.	International orthopaedics	Casiraghi, Alessandro; Domenicucci, Marco; Cattaneo, Stefano; Maggini, Emanuele; Albertini, Fabio; Avanzini, Stefania; Pansi Marini, Manuela; Galante, Claudio; Guizzi, Pierangelo; Milano, Giuseppe
228	32474690	10.1007/s00383-020-04678-0	Pediatric endoscopic procedures during the COVID-19 pandemic: an Italian center experience.	Pediatric surgery international	Duci, Miriam; Antoniello, Luca Maria; Trovalusci, Emanuele; Tognon, Costanza; Gamba, Piergiorgio
229	32490713	10.1177/0025817220926942	Psychological support and psychotherapy via digital devices in Covid-19 emergency time: Some critical issues.	The Medico-legal journal	Tullio, Valeria; Perrone, Giulio; Bilotta, Clio; Lanzarone, Antonietta; Argo, Antonina
230	32525290	10.23736/S0390-5616.20.05018-3	Remodulation of neurosurgical activities in an Italian region (Emilia-Romagna) under COVID- 19 emergency: maintaining the standard of care during the crisis.	Journal of neurosurgical sciences	Mazzatenta, Diego; Zoli, Matteo; Cavallo, Michele A; Ferro, Salvatore; Giombelli, Ermanno; Pavesi, Giacomo; Sturiale, Carmelo; Tosatto, Luigino; Zucchelli, Mino
231	32549298	10.3390/jcm9061868	Reorganization Tips from a Sarcoma Unit at Time of the COVID-19 Pandemic in Italy: Early Experience from a Regional Referral Oncologic Center.	Journal of clinical medicine	Rossi, Barbara; Zoccali, Carmine; Baldi, Jacopo; Scotto di Uccio, Alessandra; Biagini, Roberto; De Luca, Assunta; Petrongari, Maria Grazia; Ferraresi, Virginia
232	32505489	10.1016/j.apmr.2020.05.015	ROLE OF REHABILITATION DEPARTMENT FOR ADULT COVID-19 PATIENTS: THE EXPERIENCE OF THE SAN RAFFAELE HOSPITAL OF MILAN.	Archives of physical medicine and rehabilitation	Iannaccone, Sandro; Castellazzi, Paola; Tettamanti, Andrea; Houdayer, Elise; Brugliera, Luigia; de Blasio, Francesco; Cimino, Paolo; Ripa, Marco; Meloni, Carlo; Alemanno, Federica; Scarpellini, Paolo
233	32492764	10.1111/ene.14375	Stroke care during the Covid-19 pandemic: Experience from three large European countries.	European journal of neurology	Bersano, Anna; Kraemer, Markus; Touz., Emmanuel; Weber, Ralph; Alamowitch, Sonia; Sibon, Igor; Pantoni, Leonardo
234	32513593	10.1016/j.clcc.2020.05.004	Systemic Treatment of Patients With Gastrointestinal Cancers During the COVID-19 Outbreak: COVID-19-adapted Recommendations of the National Cancer Institute of Milan.	Clinical colorectal cancer	Pietrantonio, Filippo; Morano, Federica; Niger, Monica; Corallo, Salvatore; Antista, Maria; Raimondi, Alessandra; Prisciandaro, Michele; Pagani, Filippo; Prinzi, Natalie; Nichetti, Federico; Randon, Giovanni; Torchio, Martina; Corti, Francesca; Ambrosini, Margherita; Palermo, Federica; Palazzo, Michele; Biamonte, Lavinia; Platania, Marco; Sposito, Carlo; Cosimelli, Maurizio; Mazzaferro, Vincenzo; Pusceddu, Sara; Cremolini, Chiara; de Braud, Filippo; Di Bartolomeo, Maria
235	32538507	10.1111/dth.13839	Teledermatology and chronic skin diseases: real life experience in a Southern Italian Dermatologic Centre.	Dermatologic therapy	Villani, Alessia; Megna, Matteo; Scalvenzi, Massimiliano; Fabbrocini, Gabriella; Ruggiero, Angelo
236	32563197	10.1111/ijcp.13592	Telemedicine and the 2019 Coronavirus (SARS-CoV-2).	International journal of clinical practice	Sossai, Paolo; Uguccioni, Silvia; Casagrande, Stefano
237	32490720	10.1177/0025817220926926	Telemedicine during Covid-19 pandemic: Advantage or critical issue?	The Medico-legal journal	Perrone, Giuseppe; Zerbo, Stefania; Bilotta, Clio; Malta, Ginevra; Argo, Antonella; Perrone, Giuseppe; Zerbo, Stefania; Bilotta, Clio; Malta, Ginevra; Argo, Antonella

238	32530314	10.1080/21678421.2020.1773502	Telemedicine is a useful tool to deliver care to patients with Amyotrophic Lateral Sclerosis during COVID-19 pandemic: results from Southern Italy.	Amyotrophic lateral sclerosis & frontotemporal degeneration	Capozzo, Rosa; Zoccolella, Stefano; Musio, Marco; Barone, Roberta; Accogli, Miriam; Logroscino, Giancarlo
239	32558053	10.1111/bju.15149	The dramatic COVID-19 outbreak in Italy is responsible of a huge drop in urological surgical activity: A multicenter observational study.	BJU international	Rocco, B; Sighinolfi, M C; Sandri, M; Altieri, V; Amenta, M; Annino, F; Antonelli, A; Baio, R; Bertolo, R; Bocciardi, A; Borghesi, M; Bove, P; Bozzini, G; Cacciamani, G; Calori, A; Caffarelli, A; Celia, A; Cocci, A; Corsaro, A; Costa, G; Ceruti, C; Cindolo, L; Crivellaro, S; Dalpiaz, O; D'Agostino, D; Dall'Oglio, B; Falabella, R; Falsaperla, M; Finocchiaro, M; Gaboardi, F; Galfano, A; Gallo, F; Grego, F; Leonardo, C; Nucciotti, R; Oderda, M; Pagliarulo, V; Parma, P; Pastore, L; Pini, G; Porreca, A; Pucci, L; Schenone, M; Schiavina, R; Sciorio, C; Spirito, L; Tafuri, A; Terrone, C; Umari, P; Varca, V; Veneziano, D; Verze, P; Volpe, A; Micali, S; Berti, L; Zaramella, S; Minervini, A
240	32503826	10.21873/invivo.11958	Tor Vergata University-Hospital in the Beginning of COVID-19-Era: Experience and Recommendation for Breast Cancer Patients.	In vivo (Athens, Greece)	Buonomo, Oreste Claudio; Materazzo, Marco; Pellicciaro, Marco; Caspi, Jonathan; Piccione, Emilio; Vanni, Gianluca
241	32519136	10.1007/s11739-020-02395-z	Treat all COVID 19-positive patients, but do not forget those negative with chronic diseases.	Internal and emergency medicine	Mauro, Vigan.; Lorenzo, Mantovani; Paolo, Cozzolino; Sergio, Harari
242	32501536	10.1111/ijd.15005	Which are the "emergent" dermatologic practices during COVID-19 pandemic? Report from the lockdown in Milan, Italy.	International journal of dermatology	Giacalone, Serena; Bortoluzzi, Paolo; Nazzaro, Gianluca
243	32558283	10.1111/iwj.13430	Wound Healing Center: Analysis of preventive measures and new indications in a teaching hospital in central Italy during the Covid-19 emergency.	International wound journal	Scalise, Alessandro; Torresetti, Matteo; Di Benedetto, Giovanni
244	L631977560	10.3389/fonc.2020.00938	Breast Cancer Diagnosis in Coronavirus-Era: Alert From Italy	Frontiers in Oncology (2020) 10 Article Number: 938. Date of Publication: 22 May 2020	Vanni G., Pellicciaro M., Materazzo M., Palombi L., Buonomo O.C.
245	L631970696	10.1111/apa.15386	A COVID-19 outbreak's lesson: best use of the pediatric emergency department	Acta paediatrica (Oslo, Norway : 1992) (2020). Date of Publication: 2 Jun 2020	Pata D., Gatto A., Buonsenso D., Chiaretti A.
246		10.2450/2020.0107-20	Blood supply and transfusion support in southern Italy: Findings during the first four weeks of the SARS-CoV-2 pandemic		Grandone E., Mastroianno M., Caroli A., Ostuni A.
247	32281757		Covid-19 in patients on dialysis: infection prevention and control strategies	Giornale italiano di nefrologia : organo ufficiale della Societa italiana di nefrologia	Brioni E., Leopaldi D., Magnaghi C., Franchetti R., Granellini E., Pegoraro M., Gambirasio M.C., Mazzacani P., Parisotto M.T.