

WABIP Newsletter



Volume 08

Issue 03

September 2020

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Editorial

Bronchoscopy during the COVID-19 Pandemic

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It has been almost a year since the detection of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the virus responsible for the pandemic coronavirus disease 2019 (COVID-19). Beyond the personal and social stresses many of us are dealing with during this difficult time, we are also dealing with the strain and changes to our own healthcare systems. For many of us, this includes adapting to the changing guidelines regarding bronchoscopy and pulmonary interventions. We must take into consideration the health of the clinician and healthcare workers in addition to the patient. We consequently felt it would be an appropriate time to focus on this in some areas of this edition of the September newsletter.

The experts from the American Association for Bronchology and Interventional Pulmonology (AABIP) have created and released an official statement on the recommendations for bronchoscopy during the COVID-19 Pandemic. As COVID-19 is feasibly transmitted during bronchoscopy as an aerosol generating procedure, the statement has been created to lower the risks to the operator, support staff and patients in addition to allowing the ability to carry out the necessary and important procedures for several diagnostic and treatment purposes. In summary the suggestions are as follows:

- PPE: the use of an N-95 respirator (or a powered air purifying respirator), face shield, gown and gloves is recommended especially in both suspected and/or confirmed cases of COVID-19 or in asymptomatic patients in an area of confirmed community spread
- In areas where community spread is confirmed and testing is available; a nasopharyngeal specimen should be obtained prior to the procedure

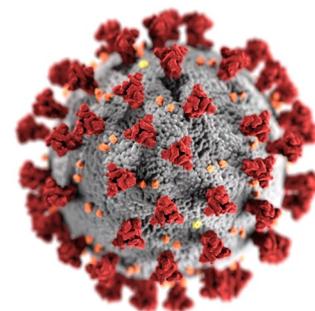
- Lower respiratory specimens should be obtained from endotracheal aspirate or bronchoscopy with bronchoalveolar lavage to confirm COVID-19 in patients with severe or progressive disease that require intubation
- The procedure should be completed in a “timely and safe manner”
- Severity of infection and the procedure indication and duration should be taken into account for cases of routine bronchoscopy in patients recovered from COVID-19

For further recommendations it is suggested to read the article in its entirety: <https://www.sciencedirect.com/science/article/pii/S0012369220308503>

Following these guidelines can help us to do our jobs in the midst of this pandemic all while protecting ourselves and others, achieving our goals and increasing the common good. If the pandemic has taught us anything, it's that we need to think of ourselves as one big unit all trying to fight this virus together.

Editor-in-chief

Kazuhiro Yasufuku



Technology Corner

Single-use Flexible Bronchoscopes



**Dr. Marcus Kennedy MD FRCPI
FCCP,
Consultant Respiratory Physician,
Interventional Pulmonologist,
Cork University Hospital**



**Dr. Sarah Barron MB BCH BAO MRCPI,
Respiratory Registrar, Cork University
Hospital**

Introduction

Many endoscopy companies are either developing or have released single-use flexible bronchoscopes (SUFBs) with several advantages over reusable flexible bronchoscopes (RFBs) including complete sterility, ease-of-access and portability, providing a cheap platform for off-site bronchoscopic training and research. To date, they have primarily been used in an anaesthetic setting where they have proven to perform to an acceptable and cost effective level compared to standard RFBs. The few studies on their use in the pulmonology suite suggest that they are equally efficacious as RFBs in the performance of bronchoalveolar lavage (BAL) whilst their use will undoubtedly extend to more complex interventional procedures with ongoing improvements in handling, channel size, angles of deflection and image quality.

Background

The outbreak of nosocomial infection secondary to contaminated RFBs is a well-documented phenomenon. The most prevalent infectious agents in these scenarios are mycobacteria and *Pseudomonas aeruginosa* (1). Though previously, the majority of these infections were linked to breaches in the reprocessing guidelines, recent evidence showed residual proteins and potentially infectious pathogens on RFBs that were ready for patient use despite complete adherence with reprocessing procedures (2). The disease-causing potential of the organisms in this scenario has not been definitely established but obviously, the risk of transmission is of concern. SUFBs are sterile and thus eliminate this risk entirely. The COVID-19 pandemic has refocused bronchoscopy units on the nosocomial and health care provider infection and the reduced handling required with SUFBs means that health care organisations are recommending their use in cases of suspected or confirmed COVID-19 (3, 4).

One would expect that SUFBs are a more expensive alternative to RFBs, however when the cost of cleaning materials, maintenance of automated endoscope reprocessors (AERs), personal protective equipment (PPE) and wages for reprocessing staff is incorporated with the cost of treating potential infections arising from residual organic material on fully reprocessed RFBs they have in fact, been shown to be more economical (5).

Clinical Applications

SUFBs have been studied in an anaesthetic setting with regard to the placement of endotracheal tubes, use in unanticipated difficult intubations and for bronchial sampling and have been shown to be acceptable compared to RFBs in these settings (3). One study concluded that SUFBs were comparable to RFBs in cell yield and viability in BAL samples from healthy volunteers (6). Data is lacking at present regarding their performance for more advanced procedures such as biopsy and transbronchial needle aspiration (Figure 1).

However SUFBs have a number of characteristics that prove advantageous for certain clinical and non-clinical applications and scenarios (Table 1).

Ease of Mobility

The scope and portable monitor are light and portable and thus reduce staff and time requirement for moving equipment out of bronchoscopy units to other healthcare settings.

Practicality

Having SUFBs readily available reduces the requirement for staff to clean and prepare bronchoscopes which is especially important in out-of-hours, night and weekend bronchoscopy where RFBs may not be readily available. The impact of cleaning staff absence due to for instance COVID-19 outbreak would therefore not impact bronchoscopy list. Full airway inspections are often required but not feasible with current EBUS convex probe bronchoscopes and having access to SUFBs in this scenario precludes the requirement for RFBs to be ready in case they are needed.

Specific Scenarios where Reduced Risk of Cross Infection is Critical

Many hospital protocols require decommissioning of bronchoscopes used in patients with suspected prion disease. Severely immunocompromised patients represent another group where SUFBs may have advantage.

Other Applications

The cost of shipping bronchoscopes and processors to temporary locations is significant. Off site, cadaveric, bench and large animal research are ideal scenarios for SUFBs where researchers and trainers require scopes on a temporary basis.

Whether or not a SUFB will be as efficient as an RFB in more complex procedures such as transbronchial needle aspiration (TBNA) or cryobiopsy has yet to be determined. Many of the companies developing SUFBs are now on third and even fourth generation devices with improvements in handling and angle tip deflection with each generation. Areas of concern regarding more complex procedures might arise from the uniformity of the inner diameter in SUFBs and whether this might compromise more complex procedures. Additionally, previous studies in an anaesthetic setting have suggested that previous SUFBs image quality were not equivalent to RFBs (3) however scope development will in no doubt lead to improvements. Larger trials investigating the reliability of SUFBs in performance of standard biopsy procedures are required.

Conclusion

SUFBs have been on the market now for approximately ten years with research and development improvements being considered with each new generation of device. They have proven to be acceptable for multiple anaesthesiologist-led procedures and in a research setting for BAL. They have several advantages owing to their sterility, easy portability and the potential for immediate access to the technology. As well as this, there is mounting evidence that they are a more economical alternative to RFBs – a pertinent issue when cost analyses can limit access to healthcare resources. However, as with any single-use technology, whether or not they will function to a satisfactory level in more complex procedures where imaging quality and uniformity of materials may have a small but incremental impact on outcomes has yet to be determined.

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Ease of Mobility	Practicality	Specific Scenarios where Reduced Risk of Cross Infection is critical	Other Applications
ICU Bronchoscopy	Out of hours bronchoscopy	Immunocompromised patient	Bronchoscopy Training
Emergency Department/ Ward Bronchoscopy	End of day list-staff are not required to stay and clean scopes	Prion Disease	Veterinary Procedures
Emergency Bronchoscopy outside Healthcare Facility	Weekend bronchoscopy where staff are not available to clean scopes		Large animal or cadaveric research
	Bronchoscope available for airway inspection with EBUS procedures		

Table 1: Clinical and other scenarios where Single Use Flexible Bronchoscopes (SUFBs) have advantages over Reusable Flexible Bronchoscopes (RFBs).

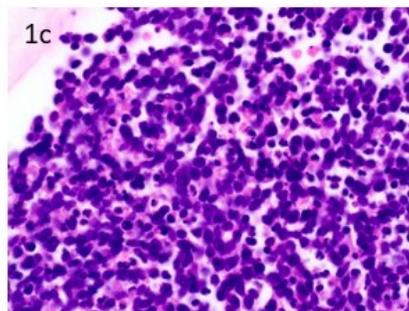
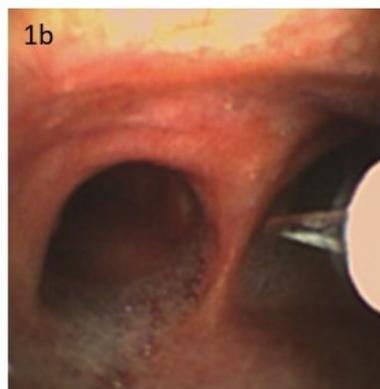


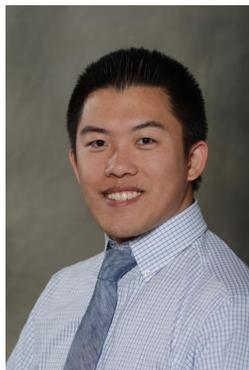
Figure 1: Transbronchial needle aspiration (TBNA) using a single use flexible bronchoscope (SUFB) in a 66 year old male with mediastinal adenopathy

1a. A single-use flexible bronchoscope (The Broncoflex® Agile from Axess Vision (Reproduced with permission))

1b. Endobronchial image of TBNA from station 7 subcarinal node using The Broncoflex® Agile SUFB.

1c. TBNA sample displaying small cell lung cancer (H and E 400x).

Practical tips for performing bronchoscopy for diagnosis and staging lung cancer during the pandemic



Elliot Ho, DO
University of Chicago



Septimiu Murgu MD, FCCP, DAABIP
University of Chicago

Introduction

Bronchoscopy plays a critical diagnostic and therapeutic role in a variety of lung disorders but is considered an aerosolizing procedure and potentially poses a high risk of viral exposure to healthcare workers and other patients in the periprocedural areas. As the COVID-19 pandemic continues to cause significant morbidity and mortality throughout the globe, healthcare providers struggle to balance the philosophy of timely care with that of safety. Efforts are focused on limiting the risk of exposure of SARS-CoV-2 to patients and healthcare workers. While data specific to bronchoscopy during the COVID-19 pandemic is scarce, various professional pulmonary societies have provided guidelines on how to safely perform bronchoscopy amidst a pandemic.

Patient Selection

Professional societies have emphasized the importance of reviewing the need for all bronchoscopic procedures on a case-by-case basis and have outlined recommendations for timing the bronchoscopy based on its acuity (emergent, urgent or non-urgent). Some categorized bronchoscopies in five groups: emergent (same day), urgent (1-2 days), acute (within 2 weeks), subacute (after 2 weeks) and elective (reschedule when possible). We believe that there is no substitute for good clinical judgment and that the prioritization of a procedure has to consider the associated comorbidities, procedure factors (duration, probability of hospitalization/ ICU stay) as well as the disease factors which include the availability and effectiveness of non-bronchoscopic options and the impact of a 2-week or 6-week delay on disease outcome. In these regards, surgeons at the University of Chicago have validated a scoring system accounting for all these variables when prioritizing medically necessary, time sensitive procedures.

Emergent bronchoscopies are easy to define as they warrant interventions within hours. These include but are not limited to processes that cause acute or impending respiratory failure: acute foreign body aspiration, massive hemoptysis without a clear source for embolization, airway stent migration, tracheoesophageal fistula with evidence of ongoing aspiration, persistent air-leak in a patient who is unable to ventilate, and critical central airway obstruction. The challenge is to distinguish between the bronchoscopies that have to be performed within a couple of weeks and those that can be deferred for 4-6 weeks. Diagnosis and staging of lung cancer via bronchoscopy fall within these categories, urgent or non-urgent depending on tumor size, location, nodal involvement and tumor biology. In these regards, published evidence suggest that the risk of upstaging NSCLC significantly increases after delays of approximately 6 weeks. In addition, medical oncologists consider the use of neoadjuvant or first line chemotherapy in newly diagnosed lung cancer as a high priority. In the ESTRO/ASTRO statement, there was a strong consensus (96%) among radiation oncologists not to delay initiation of treatment (by 4-6 weeks) for locally advanced stage IIIA (bulky N2) NSCLC or to delay palliative radiotherapy for NSCLC.

In view of these recommendations, we believe that as far as lung cancer is concerned, diagnostic and staging bronchoscopy should NOT be deferred in the following scenarios:

- Solid or predominantly solid lung nodule suspected of lung cancer >2 cm
- Suspicion for N2/N3 node-positive lung cancer
- Confirm stage II for neoadjuvant chemotherapy
- Confirm stage III for neoadjuvant chemotherapy
- Confirm stage III for definitive chemoradiotherapy for inoperable patients
- Confirm limited stage small cell lung cancer for chemoradiotherapy

- Obtain tissue for diagnosis, NGS/PD-L1 to initiate 1st line therapy for advanced disease
- Confirm symptomatic progression of disease for second line treatment

Patient evaluation prior to bronchoscopy

Guidelines from various societies recommend broad screening for COVID-19 in order to reduce the risk of infection transmission. Patients should be asked about symptoms, contacts, and travel history prior to scheduling and again prior to arrival for planned bronchoscopy. If the patient has increased risk factors or signs and symptoms of active viral infection, the procedure should be delayed if possible.

SARS-CoV-2 RNA testing within 72 hours prior to the procedure is now routinely performed in many institutions. Patients are also instructed to self-isolate between the time of testing and time of procedure. In patients with negative results, bronchoscopy can proceed with enhanced personal protective equipment including either N95 mask or PAPR, face shield/goggles.

Virus prevention measures before and after the procedure include social distancing, video-visits, screening exposed providers, universal masking in the hospital and limitation of visitors.

In patients with positive COVID-19 results, it is recommended to postpone all non-emergent bronchoscopies. The time of rescheduling the bronchoscopy depends on the outcomes of the disease as well as estimated duration of viral shedding. In patients with confirmed COVID-19 infection who recover and need a routine bronchoscopy, the AABIP/CHEST expert panel report suggest the timing of the procedure is customized based on the indication for the procedure, the severity of the COVID-19 infection and time from symptom resolution. It would be reasonable to wait at least 30 days from resolution of symptoms with negative SARS-CoV-2 RNA tests from at least two consecutive nasopharyngeal swab specimens collected ≥ 24 hours apart, but this may not be feasible in patients with suspected lung cancer at high risk for upstaging, disease progression or who need immediate initiation of radiation or systemic therapy.

Personal protective equipment

Frequent hand washing is the single most important intervention and should be performed before and after touching any equipment needed for intubation or bronchoscopy. Personal protective equipment including gowns, masks, eye shields, and gloves should be worn during all bronchoscopic procedures (Figure, bottom panel). Healthcare workers are recommended to maximize their level of protection by using either N95 mask or PAPR when performing an aerosol-generating procedure. The CDC recommends aerosol-generating procedures such as bronchoscopy be performed in negative pressure rooms when feasible. Limiting the personnel in the room to essential healthcare workers may also reduce the risk of viral exposure and transmission.

Bronchoscopy in suspected or confirmed COVID-19 infections

Bronchoscopy should be postponed in patients with highly suspected or confirmed COVID-19 infection unless there is an emergent or urgent indication. Although the sensitivity of BAL is reportedly 93% as compared with the sensitivity of nasopharyngeal swab of 63% in detecting COVID-19 as per a recent study from China, bronchoscopy should not be used routinely to diagnose COVID-19. Upper respiratory specimens such as nasopharyngeal swab should be the first-line testing modality for COVID-19 testing. Lower respiratory tract specimens via ET aspirate or bronchoscopy may be considered in patients with severe progressive respiratory failure after two negative upper respiratory specimens and additional specimen is needed to establish a diagnosis that will lead to a change in clinical management.

In patients with suspected or confirmed COVID-19 who require emergent or urgent bronchoscopy, it is recommended that healthcare workers in the procedure and recovery room use full personal protective equipment and N95 mask or PAPR. Extended use and reuse of N95 mask is not recommended when performing a bronchoscopy in these patients.

Certain technical tips during the bronchoscopy could potentially reduce the risk of aerosolization. These include: performing bronchoscopy via an endotracheal tube, having patients under general anesthesia with neuromuscular blockers to allow for intermittent apnea during the actual suctioning, preoxygenation with 100% FiO₂ and utilization of disposable scopes for simple therapeutic aspirations, BAL or for percutaneous tracheostomy. Disposable bronchoscopes are likely inadequate for complex bronchoscopic procedures and we believe are suboptimal for diagnosis of peripheral lung lesions and not an option for mediastinal staging.

Procedural considerations

In patients who require bronchoscopy, every effort should be made to minimize the time of aerosolization to reduce the risk of transmission. It is recommended that the most experienced operator perform the procedure and personnel be limited to a minimum (Figure, bottom panel). Pertinent to lung cancer diagnosis and staging, at the University of Chicago, we have continued to use the cytopathology team for rapid on-site cytology evaluation to potentially decrease the time of the procedure and to assure sufficient material for molecular studies.

Intubating a patient prior to bronchoscopy offers the advantage over moderate sedation in that it allows for a closed circuit and potentially decreases coughing which has been associated with increased aerosolization. While intubating a patient prior to bronchoscopy, every effort should be made to limit bagging during the pre-oxygenation phase and after the endotracheal tube is placed. Our team has used intubation boxes in the beginning of the pandemic, but now our anesthesia colleagues routinely use only video-laryngoscopy (Figure, top panel). Once intubated, a HEPA filter should be placed between the endotracheal tube and the ventilator circuit to filter out viral particles. Pharmacologic interventions such as paralytics may be considered to decrease coughing.

It is suggested that the number of times removing and reintroducing the bronchoscope into the endotracheal tube be kept to a minimum in order to minimize interruption of an otherwise closed circuit. Although there is no data to support this practice, active suctioning can be used during insertion and removal of the bronchoscope from the endotracheal tube in order to decrease aerosolization.

Conclusion

We have highlighted some lessons learned during the last 6 months and summarized recommendations from various societies on the topics of patient selection, patient screening, and procedural considerations, with the focus on bronchoscopy for diagnosis and staging of lung cancer. In the midst of the pandemic, it has become more important than ever for the bronchoscopist to carefully weigh the need to deliver timely care to patients while lowering the risk of infection transmission to healthcare professionals and other patients. We trust that the data from bronchoscopy studies during COVID-19 will allow physicians to again align the philosophy of safety with that of timely and effective care.

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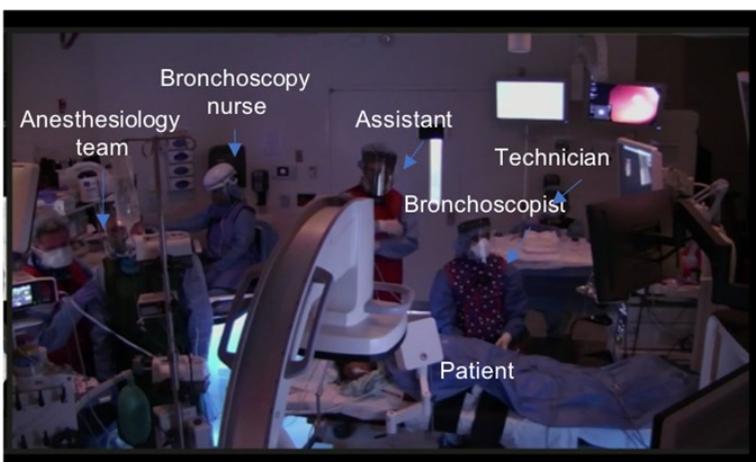
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Figure 1: Room set up during a robotic bronchoscopy during COVID-19.

Top panel: the intubation box and the video-laryngoscope used to minimize aerosolization during the intubation.

Bottom panel: room set up and team wearing gowns, masks, eye shields, gloves and either N95 mask or PAPR.



Humanitarian News

DUTY OF CARE: PROFESSIONAL OBLIGATION OF HUMAN MORAL CHOICE?

Throughout history, several lethal pandemics have challenged humankind. Two major causes of death are recognized: the lethality of the disease itself but also the disruption of basic health care, public health and public safety infrastructures. During the several epidemics lived in the last decades, many ethical issues have been analyzed: the right of governments to restrict some liberties in different forms of lockdown, the allocation of limited resources, the equilibrium between individual rights and the protection of the whole community, the responsibility of the governments in providing adequate resources. However, in many publications from the press or from scholars in ethics or medicine, it seems that the “duty of care” of health care workers (HCW) is out of discussion. It has been argued traditionally that the special commitment of doctors to a high standard of altruism and beneficence (and consequently) to a duty to care even at risk to themselves, is one side of the social contract between the profession and society at large. And that taking risks is just “part of the job”.

However, far from being a subject with high levels of agreement, the definition, the extent, the origins and the very existence of a duty of care is a matter of great controversy amongst practicing doctors and scholars of ethics.

The disposition to work in the case of a potentially lethal infectious disease has been investigated in several studies during previous outbreaks. In a Taiwanese survey performed during the severe acute respiratory syndrome (SARS) epidemic in 2003, 26% of nurses declared they would look for another job or considering resigning because of risk. Other survey, also in Taiwan, showed that 57% of nurses indicated that they were willing to care for patients infected with avian influenza. One study amongst US physicians, showed that only 40% announced that they were willing to put themselves at risk in order to save others’ lives and other in Maryland, demonstrated that nearly half of the local health department workers would not to report to duty during an influenza pandemic. A German study showed that 28% of the respondents HCWs of large tertiary centres agreed that it would be professionally acceptable to abandon their workplace during a pandemic to protect themselves and their families and 19% of healthcare workers at the Nottingham University Hospital NHS Trust in the United Kingdom said they would leave work in the case of a high-lethality infectious disease.

In fact, a working group gathered to identify the key ethical issues of the SARS epidemic in Toronto could not reach consensus on the issue of duty to care, particularly regarding the extent to which healthcare workers are obligated to risk their lives in delivering clinical care.

Used in a vague, ill-defined, authoritative manner, the phrase duty of care might be ethically dangerous. As pointed by Sokol, it could pressure HCWs into working in unacceptably risky conditions while presenting the “illusion of legitimate moral justification” . It has been proposed that the duty to treat definition should be narrow and unambiguous in order to allow to establish with certainty when it does and does not apply. That assignment is not an easy task. Such a definition should take into account the expectations of the different physicians according to their choice about place and type of work, the abstractions of the ethical codes, the expectations of the society (frequently based on many unrealistic assumptions) and, very importantly, the consideration of how to handle the duty when it conflicts with one or more other duties with greater moral force.

Almost every physician assumes a primary ethical duty to place the welfare of their patients above their own interests. But how far does the duty to patient welfare extend? Must physicians assume a serious risk to their own health to ensure that patients receive needed care?

Every country may have particular rules as those dictated by the common law and codes of ethics (sometimes referred to as an instrument of “soft law,” owing to its non-legislative nature). But those regulations are not universal. On the other hand, the moral grounds of a duty to care concern to HCWs all over the world.

One of the assumptions of members of the society and many physicians is that this duty of care “has always existed”. But this concept is wrong. No explicit mention is made about such an obligation in Thucydides or Hippocrates and it is well

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known that Galen fled from Rome during the Antonine plague in the second century A.D., Sydenham from London in the seventeenth, and recognized physicians in Philadelphia and New York during outbreaks of yellow fever in the eighteenth and cholera in the nineteenth centuries.

Many physicians at those times, although not expected to practice in plague areas, chose to stay. But professional duty was not the reason why they did so. During the plagues of the Middle Ages, the civic leaders of the cities used a variety of policies, often in concert or in sequence, to insure minimum levels of palliative treatment for most of the population. Physicians were sometimes forbidden to leave some cities and their hinterlands. But fundamentally, they were offered high fees and prizes to visit patients in the lazeretti (plague hospitals) and to serve in the hospital. The city leaders and physicians saw these combinations of incentives and disincentives to treat patients with plague simply as business propositions. As such, they were regulated by contracts not very different from the commercial instruments used to regulate other commercial activities and that expressed the mutual self-interest of a physician and a city: high salaries, reimbursement for living expenses and the promise of citizenship in exchange to visit plague patients as frequently as necessary. In more modern history we find analogies to events in London during the outbreaks of plague in the seventeenth century and Americans reacted similarly in similar situations. It means that the history of “duty” to care meant many physicians' incomes improved during epidemics. Plague doctors performed the most dangerous tasks, but they were amply rewarded in cash and if they survived, in the more important coin of social and professional status.

On the other hand, during medieval times the duty was no doubt linked with religious obligations, such as the duty of Christian charity, whereas the 19th century physician adhering to the Thomas Percival's Code of Ethics might have been motivated by more secular notions of the “gentleman physician”.

It was not really until the 1800s when the notion of professions as holding a social contract came. The AMA Code of Medical Ethics version of 1847, specified this professional duty to treat in the face of personal danger which was strengthened in 1912 “to say there was an obligation to continue taking care of people who posed a contagious threat, even if you were not being paid to do so,” Even when that Code (very influential but not valid in most of the other countries) contributed to build the image of doctors as a sort of heroic figures in American culture, it is well known that this document evolved to different formats that stressed differently about that particular topic along the years.

This means that the duty to treat cannot be firmly grounded on facts of medical history. So, accepting that “tradition” is not the incontestable argument of a “natural”, intrinsic duty which many authors rely on, but the result of negotiations, religious motivations and fundamentally, different historical contexts, it is mandatory to mention the ethical grounds used as arguments for those convinced of the existence of a duty to care.

The main reasons argued for the existence of a duty to care are (1) an explicit or implicit consent to accept such risks as part of a professional career in medicine; (2) part of the oath or code of ethics that HCWs undertake when they enter the profession; (3) special training and expertise that give physicians a higher responsibility and (4) a social contract with the public in return for receiving benefits such as subsidized training, high income, social prestige and the privilege of professional self-regulation and autonomy.

Although each one of those points may be (and have been) questioned by different ethicists, It is far beyond a short column like this to explore in depth every line of reasoning. Let's mention however that not in all (and probably not in any) professional oath is explicitly told that a physician must face potentially lethal risks. The current generation of physicians has experienced very little exposure to serious occupational risk. Control of infections have made doctors in developed countries believe (with some justification) that they are exempt from the riskier aspects of medicine that had claimed the lives of so many of their predecessors. As the result of that pax antibiotica, being a doctor did not mean at all that one was willing to take personal risks for the benefit of patients. Any doctor entered the profession with a keen appreciation of the hazards. Only during the last decade, reality abruptly changed, vanishing this perception of relative safety. Most of contemporary doctors have pledged to fulfil this singular responsibility of defending the interests of their patients ahead of their own personal interests but not expecting to include facing life threatening risks.

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Some ethics scholars have gone very far in those arguments and so Masur et al wrote that "... physicians and nurses have an obligation to treat sick and potentially infectious patients because they are members of a profession whose primary goal is an ethical calling: caring for the sick. This obligation to serve the sick is constitutive of medicine as a profession and is uniquely what distinguishes physicians, nurses, and other clinicians from other professionals" meaning that avoiding risky patients is a basic betrayal of professional identity. An argument very difficult to be sustained in front of the fact that many doctors probably having chosen specialties because they do not carry special risks have very different expectation than those who have taken those that carry well known risks with them. The argument have also several weaknesses, as in any society many different groups have special skills with special essential goals and are not required to take that level of risk and if they are, they easily reject to comply with those supposed expectations on behalf of their freedom of choice and their right to preserve their own lives (or even properties).

A classic argument is that "a physician is like a firefighter, they cannot excuse themselves from from entering a burning building to search for those trapped inside". You can't be a firefighter if you can't serve the mission; and that mission carries to be prepared to take substantial risks.

The analogy proves to be weak. At entering the profession, firefighters (or policemen or soldiers) know the sort of risk they will face. But additionally, their duty implies to be ready to take certain level of risk, not any level of risk. Even for professions that carry an intrinsic high risk of death, the duty is not applied to risks much higher than the average, known and accepted by a member of the profession. A police officer is not obliged to stop armed thieves in a car robbery that is not implying potentially lethal harm for human lives if he himself is unarmed and for a soldier joining a squad bomb is a volunteer task, not compulsory to be accepted by every member of the Army.

Finally, one cannot deny that the "social contract" between society and doctors is quite eroded, especially in some countries. It has been argued traditionally that the special commitment of doctors to a high standard of altruism and beneficence, and hence to a duty to care even at risk to themselves, is one side of the social contract between the profession and society at large. Contracts offer benefits in exchange for services rendered: the benefits doctors seek in exchange for recognizing a duty to care have been proposed to be self-regulation, or the high status and generous remuneration of the profession. Some authors remark that the selfless service of doctors during epidemics is perhaps not as selfless as it appears: and understand this 'selfless service' as something of a bargaining tool, in which doctors bargain for their status as independent practitioners, self-regulating, and beholden to no outside social body.

But, the conception of a physician as a "privileged citizen" is no more than a caricature of the past. In most of the countries, physicians (and not mentioning nurses and other HCWs) receive much lower salaries or fees than in the recent past and then those received by non-essential professions. The supposed independence of doctors in the regulation of their practice does not exist anymore. The generalization of third-party payers have transformed the majority of practicing doctors in informal employees with no social benefits who do not decide their fees, their hours of practice their working conditions and even their choice of methods of diagnosis and treatments. But most of all, the prestige of the medical profession itself has been corroded (by many factors) and today, doctors are frequently victims of manifestations of disrespect, discrimination and verbal or even physical violence. Doctors feel today that they have endless obligations and virtually no rights, just because of being a physician.

However in spite of the many reasons HCWs have to dispute and even reject that supposed duty of care, most of physicians have willingly accepted to take risk for them and their relatives and stay at the front line. There is little doubt that the vast majority of HCWs performed their jobs admirably. Why? Obviously, the factors playing into ethical decision making are not exhausted by an 'implicit contract' defined by past risk level accepted. A debate about duty to care in the context of an epidemic asks whether it is fair to expect of healthcare workers that they take on a risk of personal injury or death and the burden of psychological stress associated with that risk in order to provide care.

If we can't say that caring for these patients is a basic duty shared by all professionals, it doesn't mean we can say nothing. When we set the language of duty to one side, we can say something different: that the willingness to care for risky patients is a very good and selfless thing, which exemplifies the highest ideals of the profession.

Humanitarian News

Probably the duty to treat is grounded mainly in an empathic response to the patient's medical need and vulnerability. Lacking medical knowledge, the sick stand in a relation of dependency toward those with the power to heal them. As the unique possessors of medical skills, physicians hold an awesome and exclusive power, through their actions and omissions, to profoundly affect the lives of others. This combination of extreme vulnerability and exclusive power in the context of the physician-patient encounter generates a strong duty, a moral responsibility. We may also think that the duty is also grounded on a shared ideal of medicine as a profession dedicated to the good of others, a profession which has always had within it members who have persistently seen themselves as more than merely self-interested tradesmen.

This notion implies a huge difference, the difference between being obliged to do something and making the choice of doing something. A virtuous act is the election of a virtuous man. Not stealing a poor person is an obligation, giving money to someone in need is a personal choice. Physicians can be drawn to ideals even when they're not driven by duties.

But accepting the free intervention of the physicians as a moral agent also shows its own complexities. Some questions like who defines which virtues are required in a physician, which are the limits of that moral duty or how to solve the conflicting duties of a physician's (to himself, to his family and to the whole society) are not so easy to answer.

Virtues are not universal timeless values, but shaped by a historical context. The shape of the professional obligations has been determined over time through negotiation with society. The negotiation is complex because it should be based on the requirement of a common morality. The physician's duty to take risks has been forged in an ongoing dialogue with society at large. Taking that into account, it should be accepted that the fact that virtuous physicians behaved one particular way under conditions existing long ago must not necessarily reflect the concept of virtue today. Many things about medical practice have changed: the complexity of the management of diseases, the position of physicians as only one more cog in the complex machinery of medicine, the institutional framework through which medical care is delivered. But mainly no longer is the society in which the physician functions what it was. There is no doubt that the current environment (and its values) are more egocentric, more hedonistic, less community oriented and definitely more dedicated to the self. Political leaders, ordinary individual and mainly mass media exalt and promote rugged individualism and even demean social action. In that context, taking risks for social benefit does not feel a "natural virtue" and make difficult to claim that the virtues remain unchanged. Acknowledging that the virtues depend on context and are not immutable is what makes Arras suggest the emergence of a historically determined model of the virtuous physician and why he asserts that virtues are "fragile". In a society that does not call for high standards of virtues as empathy, solidarity and privileging the social good (and does not reward those who practice them) in many other essential practices, it may be difficult to ask only the HCWs to behave in such a virtuous way.

Additionally, this duty even virtue-oriented must have limits. A distinct problem is to determine the threshold of "acceptable risk," the dividing line between duty and supererogation. Some hazards clearly fall beyond the ambit of the doctor's duty to treat, but physicians should never be expected to subject themselves to blatantly suicidal risks or to go out of their way to confront danger. Some extremely courageous acts may be deemed to be highly praiseworthy, but no one should induce doctors to behave in that manner and much less blame a physician for not exposing him or herself to such high levels of risk.

While defining acceptable risk in the line of duty may be ambiguous amongst healthcare workers, moral dilemmas also arise for those who feel their obligations as healthcare professionals conflicted with their obligations to others as family members and caregivers. Exalting altruism and heroism have the risk of forgetting that the first duty of a physician during a pandemic is to stay alive and that their delay of treatment to patients in order to take the time to suit up and protect themselves, is not only justifiable but necessary. Identification of duty to care with altruism makes invisible moral conflicts between the various parties to whom a person may owe care, and interferes with the need of healthcare professionals to understand and accept that they must take all possible measures consistent with the social need for a functioning healthcare system to protect themselves in an epidemic. Duty to care should not be understood as the obligation to noble self-sacrifice. Physicians have duties not only to current and future patients but to themselves as well as their families, colleagues, community and society.

Humanitarian News

The processes of planning for pandemic influenza, must include ethical discussion and must be carried out in advance. Otherwise, there is a risk of making unjust and indefensible decisions affecting thousands of people. Physicians have to be protected, as well. They have the same rights as every human being and the duty of the government, policy makers and public in general is to protect them as they are asking them for such exceptional behavior.

Finally, as a professional community we should understand that virtues and superogatory acts are ideals and aspirations. And it means that struggle and failure are compatible with full possession of virtues and aspirations. The possession of a virtue or an aspiration does not require its achievement or enactment on every occasion. Virtues are dispositions revealed in patterns of behaviour over time. We do not have the right to judge whether a person is courageous enough from a single performance. Physicians who avoid caring for a risky patient but who in their other behaviour reveal their altruistic nature should not be judged to lack this virtue.

This discussion should cover a multitude of subjects. We cannot be blind at the fact that many doctors are already saying, that they do not share the traditional vision of the good and that the current culture push physicians to the idea of medicine as a career and not as a potentially self-sacrificial vocation. If some kind of opposition to the traditional duty grows up in the medical profession, it could eventually undermine the claim that a professional duty still exists.

Teaching differently, specifying the limits of the duty of care, writing unambiguous codes, asking for a full understanding of the sort of commitment required at the moment of entering the profession or creating clear contracts by which different doctors may take different levels of commitment and receive different benefits according to that, have all been proposed as potential solutions.

There is no doubt that this issue requires urgent attention from researchers, regulatory bodies, and the public. And that if civil society expects a high level of engagement and a special status of morality from the medical community, it will only be possible if the medical profession regain its prestige and independence and if during periods of crisis a more basic and universal social contract emerges. That broader social contract underlying the duty to care claims for the general public to perform his side of the contract in their role of supporting the healthcare system, to take responsibility of turning their workplaces as 'safe enough' under the circumstances; in adhering the recommendations for protecting themselves and their neighbours and in expressing their sincere support of the health care workers in concrete and human ways. Public must understand that in not doing that, they violate what ought to be a shared commitment to enacting a social value. This pandemic (that for sure will not be the last one) highlights the need for calling for a broader social pact. If the society expects an altruistic behavior from HCWs and a health care system with the ability and the resources to give adequate answers during an emergency, their members should critically reflect about which moral values want to promote in the society and they must promote and support egalitarian access to a strong health care system where the duty of care of the whole system sets the general welfare above financial profit or fiscal restraints.

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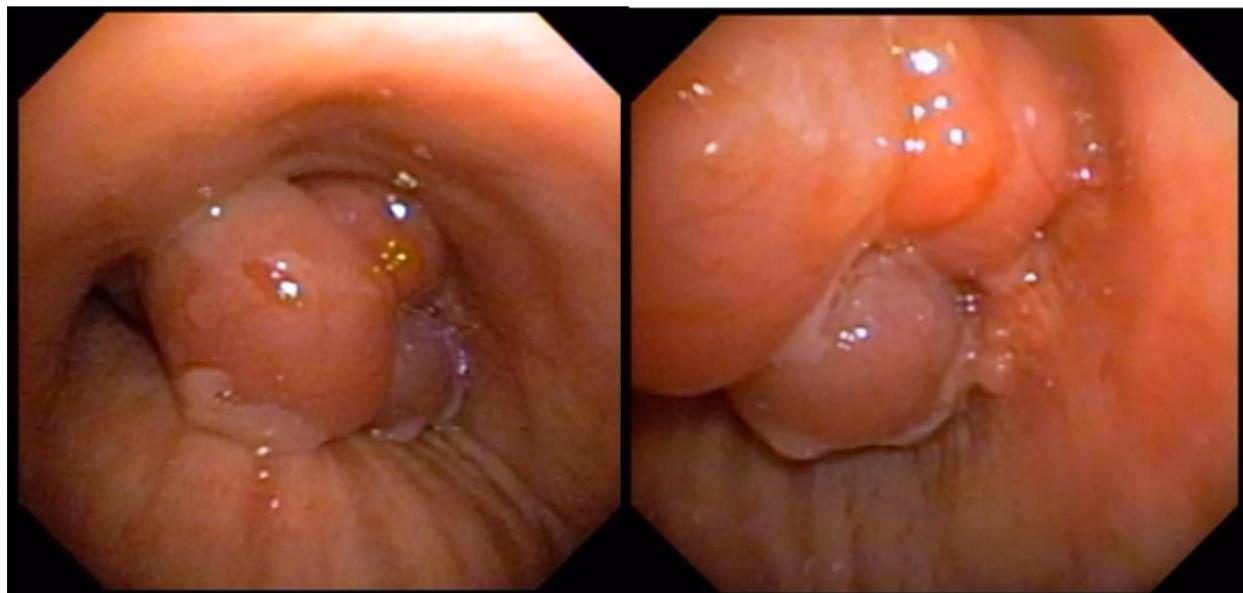
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**The views expressed in this article are those of the author (Silvia Quadrelli) and do not necessarily reflect the official positions of the Executive Board or International Board of Regents of the WABIP.*

Best Image Contest

Best Image Contest 2020 Recipient (3 of 3)



Description: A polypoid lesion on the right lower tracheal wall occluding almost completely the airway. The lesion was resected with polypectomy snare and pathology revealed a WHO Type A thymoma. The patient, an 87-year-old woman, had been submitted to surgical resection of thymoma eleven years early.

Submitters: Liu Estradioto, MD and Rodrigo Bettega de Araújo, MD.

This image is 1 of 3 selected among 100+ submissions to our Best Image Contest held in 2019. Please stay tuned to the next Image Contest, opening later this year!

Find the above image and more at the [WABIP Academy Image Library!](#)



In Memory of Jean-François DUMON, M.D. (1939 - 2020)



It is with an extreme sadness, we have been informed that one of the fathers of interventional bronchoscopy, Dr. Jean-François DUMON, passed away on July 14, 2020.

In such circumstances, it is common to draw the panegyric of the person, and even more when dealing with a prominent medical leader and senior figure. It seems to be inappropriate for Jean-François DUMON because of the universally known link between his name and silicone stents. He was a strong advocate of interventional bronchoscopy through rigid bronchoscopy and endobronchial laser.

He was in particular a visionary for the use of silicone stents to manage endobronchial stenosis or obstruction, based on a strong daily clinical experience, demonstrating several decades ago, against the medical community at the beginning, that this medical device was totally safe and useful for the patients. Jean-François DUMON has brought a revolution in the management of central airway diseases and, in addition, was a dynamic leader both for the national and international organizations dedicated to interventional bronchoscopy as well as for research in this field. For his work he has received numerous international awards, among them the Killian Award of the WABIP being the most prestigious.

The international pulmonology community has lost an instrumental leader and for several people, in particular in our area, a mentor and, humbly, a friend. His footsteps are heavily printed, and may his legacy be to a blessing for the next generations of interventional pulmonologists and for all the patients waiting for new developments.

Our thoughts, these days, go to his family who stood by his side throughout his whole career, and to all the numerous pulmonologists who have been trained or have attended courses in his "laser center" at Sainte Marguerite Hospital, Marseille, to modestly catch a bit of his knowledge in rigid bronchoscopy, laser, and airway stenting.

Philippe ASTOUL, MD, PhD

Hervé DUTAU, MD

Department of Thoracic Oncology, Pleural Diseases and Interventional Pulmonology - Hôpital NORD – Marseille - France

WABIP Awards Recipients 2020 -- We are very pleased to announce the recipients of the 2020 WABIP Awards. Our association humbly recognizes the below persons for their achievements and clinical practices that have long made significant impact on the art and science of bronchology and interventional pulmonology:

The Gustav Killian Centenary Medal



Recipient: Eric Edell, MD

The WABIP-Dumon Award



Recipient: Hervé Dutau, MD

The WABIP Lifetime Achievement Award



Recipient: Hugo Botto, MD

The Distinguished WABIP Regent Award



Recipient: Erik van der Heijden, MD

Descriptions of the Awards may be found at <https://www.wabip.com/awards>

The WABIP Awards are presented bi-annually at our WCBIP. As our coming congress will be held virtually this year, presentations will also be in the same format. We will announce further details via social media and email. Stay tuned!

WCBIP Congress 2020 goes virtual only -- Due to local restrictions in Shanghai, our November 19-22 congress will be a virtual-only event in which we will offer both live streaming and pre-recorded lectures.

We are very excited to move forward with many lecturers around the world contributing to our scientific program. Lectures will include topics ranging from EBUS TBNA, Cryobiopsy, Navigational bronchoscopy, bronchoscopic treatment of obstructive lung disease (emphysema, bronchitis, asthma, Pediatric IP and much more!

Registration fees have been reduced to **\$49 for WABIP members**, and \$69 for non-WABIP members. Further details of the program, format, faculty and more at <http://www.WCBIP.org>

We look forward to your participation in our WCBIP Shanghai Virtual this November.





Editor-in-Chief: Dr. Kazuhiro Yasufuku

Primary Business Address:
Kazuhiro Yasufuku, Editor-in-Chief
WABIP Newsletter
c/o Judy McConnell
200 Elizabeth St, 9N-957
Toronto, ON M5G 2C4 Canada
E-mail: newsletter@wabip.com



**Associate editor:
Dr. Ali Musani**



**Associate editor:
Dr. Septimiu Murgu**

Research

Tracheostomy in COVID-19 patients

Damned if I do, damned if I don't

Like many procedures in medicine and surgery, tracheostomy has been reevaluated in the backdrop off COVID-19 Pandemic. Airway procedures such as tracheostomy and bronchoscopy expose proceduralists and the ancillary staff present in the room to a much higher risk of airborne infections than non-airway procedures. However, tracheostomy's ambiguity of indications and urgent nature should make us pause and think about this procedure's necessity and safety in these unprecedented times.

It is imperative to understand the balance between the need and the risk of performing a tracheostomy in patients with COVID 19 and ventilator-dependent respiratory failure. A concerted effort by CHEST led to the publication of a consensus statement (1) to provide a guide on the issues of preparation, timing, and technique of tracheostomy in COVID 19 patients while minimizing the risk of infection to health care workers (HCW).

I have extracted the following points from the expert panel report with a clear understanding that this is a fluid document that was put together with limited experience and information on COVID 19. Our knowledge of how the COVID 19 spreads and impacts extremely variable hosts due to comorbidities and inherent biological variability are rapidly evolving. I am confident that this document will continue to morph as we gain more knowledge and experience in COVID 19.

The expert panel suggested that:

- 1. Tracheostomy be considered in coronavirus disease 2019 (COVID-19) patients when prolonged mechanical ventilation is anticipated (Strong Consensus).**
- 2. There is insufficient evidence for recommending a specific timing for tracheostomy in COVID-19 related respiratory failure (Consensus).**
- 3. In patients with COVID-19 related respiratory failure, either open surgical tracheostomy (OST) or percutaneous dilatational tracheostomy (PDT) can be performed in patients expected to require prolonged mechanical ventilation (Strong Consensus).**

Remarks: Utilization of techniques which minimize aerosolization is recommended when performing tracheostomy (Strong Consensus).

4. Enhanced personal protective equipment (PPE) be used to mitigate the risk of health care worker related infection during tracheostomy (Strong Consensus).

Remarks: Tracheostomy is an aerosol generating procedure (AGP) and poses an infection risk to HCW involved in the procedure (Strong Consensus).

5. In patients with COVID-19 related respiratory failure, tracheostomy is performed in a negative-pressure room, preferably in the ICU. As an alternative, a negative-pressure room in the OR could be used, with special attention to minimizing transportation-related risk of exposure (Strong Consensus).

Remarks: If negative pressure rooms are unavailable, the procedure could be performed in a normal pressure room equipped with HEPA filters in the presence of a strict door policy (Strong Consensus).

6. Routine RT-PCR testing (nasopharyngeal swab or lower respiratory sample) prior to performing tracheostomy in patients with confirmed COVID-19 related respiratory failure is NOT needed (Strong Consensus).

Remarks: There is insufficient evidence to recommend RT-PCR testing in patients with non-COVID-19 respiratory failure prior to tracheostomy. If such testing is performed, we suggest that a lower respiratory sample (endotracheal aspirate) rather than a nasopharyngeal swab be obtained (Consensus).

7. In patients with COVID-19 related respiratory failure, tracheostomy is performed by a team consisting of the least number of providers with the highest level of experience (Strong Consensus).

Remarks: Authors suggest that prior to the initiation of tracheostomy, a multidisciplinary group of providers including the primary critical care team, palliative care, infectious disease, the procedural and airway team utilize respective expertise to determine the goals of care, patient selection, procedural considerations, as well as workflow to optimize safety of both patient and HCW (Strong Consensus).

8. Patients be maintained with a closed circuit while on mechanical ventilation with a tracheostomy tube and with in-line suction (Strong Consensus).

An extensive detail regarding the rationale and the references behind each recommendation mentioned above can be found in the original statement. I strongly recommend anyone doing tracheostomy to review this statement. Be safe!

Reference:

1. Carla Lamb et al: [Chest](#). 2020 Jun 6. doi: [10.1016/j.chest.2020.05.571](#)

WABIP ACADEMY- WEBCASTS

The WABIP has started a new education project recently: *THE WABIP ACADEMY*. The WABIP Academy will provide free online webcasts with new and hot topics that will interest pulmonologists and interventionalists.

Current webcast topic: **Tissue acquisition for biomarker directed therapy of NSCLC**

Webcast

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Click an icon to begin

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Purpose

General Learning Objectives

Specific Learning Objectives

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Each fictitious clinical case scenario is based on a conglomerate of real patient data. Cases have been modified to avoid any possibility for patient identification and to help meet educational objectives. Any resemblance to real persons, living or deceased, is purely coincidental.

The content for these webcasts has been developed by members of the World Association for Bronchology and Interventional Pulmonology. All content was reviewed by an independent multidisciplinary team of experts. Unless otherwise specified, all content is the property of WABIP.

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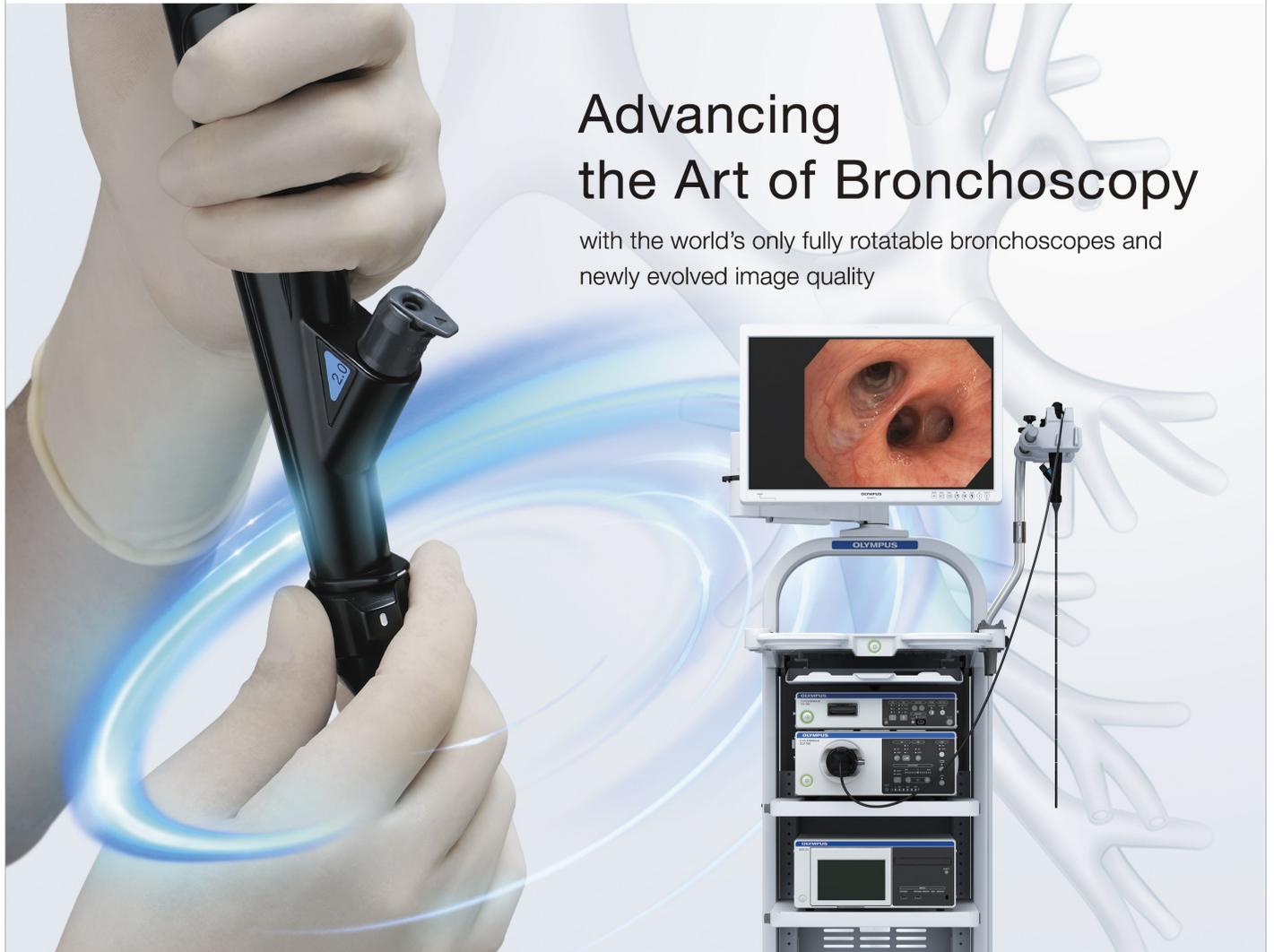
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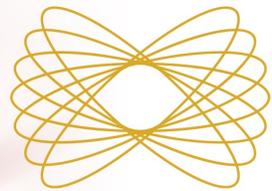
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