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DARRAGH TOLAN: Evening, everybody. Thank you very much for joining us. My name is Darragh Tolan, and I am the vice president of endoscopy for Boston Scientific here in Europe, Middle East, and in Africa. And I'm devices that I'm joined today by Professor Alessandro Repici, who heads up the endoscopy unit in Humanitas Research Hospital in Northern Italy.

As many of you know, Milan has been at the epicenter of all things COVID-19 over a number of weeks now. And Allesandro and his team have been living with this for a long period of time. So we thought we would take this opportunity to reach out to all of you to hear directly about Professor Repici's experience.

Maybe before we get a chance to take a look at your slides, Ale, can you maybe tell us a little bit about the experience. How is life in Milan right now, Ale?

**ALESSANDRO REPICI:** Hi, man. You say it well. First, let me thank Boston for this invitation, for allowing us to share our experience, and also to thank everybody joining this webinar. As you can see, I'm still wearing the mask because I'm still working. I'm in the endoscopy unit. And since [INAUDIBLE], we cannot remove this until we are out of the hospital.

So in general here, the feeling is very, very terrible. Everybody feels devastated. And we have still a huge number of patients coming to the emergency department. And what is going on right now, the GP are telling to the patients until they not have a severe dyspnea to stay home.

So what is happening now that the patients that we receive in the emergency department, they are very sick. They are in advanced stage of the respiratory symptoms with pneumonia. This is why we are intubating more and more in the last 24 hours. And the main issue right now is no shortage of masks. We have a shortage of propofol, the drug that we normally use for keeping the patients sedated. So we have propofol enough only for three or four days. And we are struggling to find propofol because it's almost impossible to find. So all of the drug has been taken by the central health authority trying to distribute to the different hospitals. But if we don't we do not receive supplies of propofol, probably we have to start keeping the patients sedated with the morphine or with opioids, which is terrible.

So it's a very challenging situation right now.

**DARRAGH TOLAN:** Ale, we really appreciate you taking the time to speak to us all this evening. We know exactly how chaotic it is right now and how busy it is in your world. So it's hugely appreciated.

So the flow for today, Ale is going to walk us through a few slides that walk us through his experience on what's happening in Milan and in Italy right now. And then at the back end of the presentation, we will have a chance of a Q&A. So you'll see in here, in the Zoom platform, there's a Q&A box for you to ask any questions. And I'll ask those of Ale once we work our [INAUDIBLE] presentation.

So Ale, over to you.

**ALESSANDRO REPICI:** OK, thank you. Let me share my slides. Just one second.

**DARRAGH TOLAN:** No problem.

**ALESSANDRO REPICI:** OK, it should come. I don't know if you can see that. So you have the slide, Garragh.

**DARRAGH** Yes. Yes, we can see, Ale. We can see.

**TOLAN:**

**ALESSANDRO** OK, great. So again, good afternoon, everybody. Thanks again to Boston for keeping being very innovative and taking care of all of us, and just allowing me to share this unfortunate experience with COVID.

**REPICI:**

And also thanks to all people joining the webinar, because we are finding time in a very difficult situation to get connected. We would love to have the community of endoscopists talking each other and feeling like a community, and sharing experiences.

So just one slide for clarification of definition. So the SARS-CoV-2 is the virus and the COVID-19 is the disease.

This virus gets into our body through different doors, which are nose, mouth, and eyes. It remains attached to cells using a specific receptor. And the name of the receptor is ACE2. Well, we know that this receptor is found in multiple sites of our body, including the gastrointestinal tract.

And the upregulation of this receptors is mediated by interleukin 6. And I put this in the slide because you know there is a lot of discussion about the drugs that can be used to fight the pneumonia, the COVID-related pneumonia just using the anti-interleukin-6 drugs. So the interleukin 6 is an instrumental role in promoting the progression of the disease.

And since the two weeks now, in all hospitals involved in the red zone of Italy, all patients undergoing the testing of the level of interleukin 6. We just understand whether or not they can get some benefit from additional treatment with anti-interleukin drugs.

And so there are reports from China saying that the virus can be detected in stool even after there has been a respiratory clearance. But there is not proof up to now that there can be an oral fecal transmission of the virus. There are a couple of papers mentioning the fact that the stools can contain significant amount of virus. But there is no mention at all up to today that one patient has got infected through the oral fecal route.

So this is a disaster. This is updated to two hours ago. But before starting the webinar, I received the data on Italy. We are easing into 80,000. So by tomorrow, Italy will go over 80,000, and will be the first country in the world in terms of cases of infection.

And you see, it looked like, in the early steps, early February that it was a thing related only to China and probably to Iran and Italy. But as you can see now, it's a pandemic infection. It's everywhere in the Western countries. There is a limited number of infections in Africa, but of course there is the issue for how many people are going to be tested. And the diffusion through Latin America is not that big yet. And we hope it remains like this.

So what about the patients getting the infection? As you can see, the average age-- the mean age, or the median, is about 60 years, even though, day by day, we see more younger patients than in the middle of February. And the death is more prevalent in patients who are older, in the elderly.

If you look at the absolute number of deaths by age group-- this is reporting data from Italian population-- you see this is the time frame between 70 and 90. Here, the patients, they get the infection, they have a significant increased risk of getting a lethal infection, so die because of coronavirus.

And there are many, many more male patients rather than female. So nobody knows exactly why male rather than female, but there is a theory saying that the males, they are much more smoking users, that this probably can contribute to the lung-- they're more predisposed to the infection and inflammation.

So of course in-- these are the graphic showing that the mortality is strictly related, increasing with the age. But also don't forget the comorbidities. So diabetes, cardiovascular disease, renal disease, and being neoplastic patient is an issue. If you are in one of these categories, you get infected with the virus, the risk of mortality is almost twice bigger as the normal, regular population.

And this is the situation of Italy. You see where several red zone, the entire region around Milano, the name is Lombardia, is now red zone everywhere. And also we have some red zone in Veneto and some red zone in an area which is called Le Marche.

So if you look to some epidemiologic data just not reporting the number of infected patients, but the probability of people who got infected in our country, especially in the red zone, the estimation is about-- we are close to 400,000 people infected. How they did this estimation, they look at the numbers of the GP. So each GP in Milano is at least 10 to 20 people being treated at home with the fever and respiratory symptoms. But they are not going to be tested because there is also a shortage of test. And all labs are fully booked. So right now, the policy in the red zone, we are testing only patients coming to the emergency with the severe respiratory symptoms.

All of these patients being treated at home are not considered infected, but probably they are. And also we have a significant number of old people dying at home or dying in residences where they live all together. And they are not still considered as a death related to the COVID but indeed they are.

So what is the present situation in our hospital? So this point today, we have about 220 COVID-positive patients admitted. 2/3 of them, severe pneumonia. So 30% of these 220, they require some form of assisted ventilation. Means a Venturi mask or CPAP. And plus we have 39 patients in ICU. So the emergency is still admitting about 20 patients every day with severe respiratory distress. And we discharged, since February 1, 73 patients with indication for quarantine.

And the mortality-- this is the big problem of Italy. So in general, the mortality in our hospital is 13%. But if you look to the mortality in our hospital in patients admitted to ICU, intubated, is about one in four patients.

And now, since a couple of days, we have a code, which is the blue code. If the patient, in his medical record-- electronic medical record-- there's a blue code. Even though he is worsening in terms of respiratory findings, we should not call the anesthesiologist or intubate them because this has been selected already as a patient that cannot have access to ICU. You can understand how dramatic it is to decide that a patient should not have access to rescue maneuvers like intubation.

But before getting connected, I have looked through medical record of patients admitted. We have several blue codes. So if anybody of this [INAUDIBLE] get in worse condition, such as a worsening of dyspnea and despite CPAP, whatever, we cannot call the anesthesiologist because there is not space enough for them. Of course, there is a scoring system to select these categories of patients. But this is what is going on in Milano right now.

So what about the hospital workers? So the average nationwide rate of hospital personnel infected is about 9%. We are doing a great job right now, up to today, only 2.3% of all people-- we are 4,000 of us working in Humanitas-- got infected.

So what will be the topic for my presentation, the practice, the protective equipment, and what is the impact on physician and nurses. So the first point is there is a lot of people getting scared about endoscopy because there is the question, is endoscopy aerosol-generating procedure?

So I looked through the literature data, and I found that is very interesting today, but wasn't considered interesting until two months ago-- systematic review published in class 1 about eight years ago. This guy did a great job at trying to understand what is the risk of transmission of infection for healthcare people due to aerosol-generating procedure.

And when you look at the selection criteria for aerosol-generating procedure, you can go here. You see there is a number of different procedures. There is the bronchoscopy, or other upper-airway endoscopy. There is no mention of upper-GI endoscopy. Probably upper GI endoscopy should be considered very similar to bronchoscopy or other upper-airway endoscopy.

So I would say that probably this is what we should consider what we do every day, because coughing and retching can happen during every upper endoscopy procedure, generating aerosols and droplets.

There is an interesting paper that's been published in the last year in *GI Endoscopy* looking to the exposure to the endoscopy space during an endoscopy. There is a very nice randomized study, and looking what was the amount of exposure. And this is not in coronavirus time. This is being done in a US institution about 12 months ago.

So they looked at [INAUDIBLE] to the facial shield. And in conclusion, they said this is the first time they are able to quantify the rate of unrecognized exposure. And as a consequence, they say that they recommend the use of universal facial protection during GI upper procedure.

So this is the impact on our daily practice. This is today. So we are performing one of the cases that we have done today. And you see how it's totally changed the dressing code. Also the anesthesiologist. You see the anesthesiologist here is typing the data of the patient on the computer is wearing double mask.

So what's happening in endoscopy? What is recommended? So we canceled, since I would say February 8, all elective procedures, all screening colonoscopy, all follow-up of a previous polyp resection or stent placement, or any other therapeutic procedure, any follow-up of surgery. And also we canceled all pre-surgery procedures, because also elective theaters are being shut down. So all elective procedures in the surgical theaters, they were being postponed.

Of course it's really important in a time of cancellation-- and this is what I suggest to everybody who is preparing in countries where the storm has not come yet-- to develop a communication plan for the patients. You cannot just leave a [INAUDIBLE] calling the patient, probably 80-year-old, and saying, OK, your procedure for next week has been canceled. You have to develop a communication plan, a strategy to make sure that the people, they do understand, that they do understand you're still taking care of them, you're not abandoning them, but there is a serious issue that is not allowing us to just doing the endoscopy for the next couple of weeks.

And also we organize a telephone/email helpline. So we have a dedicated email and dedicated phone number where people can call us, can reach to the endoscopy department, and we are very open to talk to them, to give the suggestion, and to support whatever they need.

So procedures-- so what we're doing now, we are doing only emergency and urgent. So emergency are of course the procedures that are referred by emergency department. And urgent are those patients who are already hospitalized or were admitted to the hospital because of serious issues requiring procedures that cannot be postponed.

Just to give you a picture of what's happening in our endoscopy procedure, we normally do about 15,000 procedures per year, or even 16,000. So this from February 1. We started canceling the procedure up to the last four weeks, where we had a minimum number of upper and lower GI endoscopy. So first week we did just overall. We have several-- we did about five colonoscopies, five upper-GI endoscopies, couple of [INAUDIBLE] because of pancreatic cancer. We're still doing ERCP for jaundice patients.

And this is the practice of today. So this morning, we did ERCP for cholangiocarcinoma. We did the necrosectomy in patient who was septic because of the collection. And we did also a gastric outlet of a section, a GI GEA procedure to allow the patients to have some oral nutrition.

So in general, these are the kind of patients that we are doing every day. So very urgent situation where endoscopy treatment can change the-- I would say the destiny of the patients. Otherwise we are not performing endoscopy.

So what about patient management? If we have a schedule for tomorrow, this afternoon, all of these patients have been called. And we make a sort of triage by phone call. We ask them about respiratory symptoms, fever, or if there is anybody in the family with the symptoms. We do again these questions. We will repeat the triage before they get in in endoscopy. And we measure body temperature to everybody.

No one are complaining, the patients is admitted any longer in the area of endoscopy. And we have a much larger space among patients. So there is big distance between two patients. The recovery room has been reorganized to give more space to them. And once they get in, all of them are asked to wear surgical mask and gloves.

It's important that when you admit the patient in endoscopy, you try to stratify the risk of these patients being carrier or positive for COVID. Of course we know there are a number of asymptomatic carriers that can be very, very dangerous because they can transmit the infection in a situation where you do not use the highest level of protection. So we stratify the patients in low risk, intermediate, and high risk. And we use a dressing code when we perform the procedure, according to the risk.

Of course when you see here, low risk, there is a sentence that probably is useless any longer in Lombardia. Because non-stay in high-risk area during the previous 14 days means that we can consider low-risk now only patients coming from Rome, from Sicily, from southern part of Italy. But all the patients-- there are no patients coming from such distance in these days. Most of our patients are just coming from nearby Milano. So now we have to consider all of them high risk.

And this was a definition of this highest and high risk. I think this definition of risk stratification in the country is changing week by week. So I just suggest to everybody, identify at the national level those area which have big clusters of infection, and try to use these-- I would say-- geographic criteria to stratify high risk versus low risk in your own country.

So if patients categorize low risk, these are the suggested PPE. So standard surgical mask, hair net, goggles, single-use gown, plus gloves. And if you go to the high risk, which means all high-risk patients or intermediate doing the upper-GI procedure, your dressing code has to be reinforced using a respirator and using a water-resistant gown.

So of course there is a specific protocol on how to wear and how to remove these devices that's been described with detail. And one of the main points of the discussion and email that I have received since we have published our paper in *GI Endoscopy* is about partial mask. So everybody is asking me what kind of mask I have to wear in which situation.

So I think it's important the guys involved with the endoscopy, that they understand the difference between the standard surgical mask that we use until two months ago, the FFP2, which is a minimal of 94% filtration percentage and the maximum leakage from inside of 8%, and the FFP3, which is, for the United States, the equivalent of N95, which is considered the safest because its minimal penetration rate of 99% and 2% of leakage.

So of course make sure that you understand that you don't need the FFP3 for all procedures. And also there is a big shortage of FFP3. And make sure that you properly use it. Don't waste these devices. Because if you use it in an inappropriate way, you're taking the mask out from other physician and nurses that may require because they have to treat COVID-positive.

Will never stop saying, please, not everybody are entitled or requires N95. So also when you use N95, it's important that this kind of tight-fitting respirators, they just rely on having the good seal. So this is the mask I wore this morning because I scoped two patients COVID-positive. And it's important you check the mask for its sealed fit. Inspire deeply, and if air is escaping, you feel some air leaking out, you have to wear just the mask. And again, don't use this for all procedures, especially for the low-risk. Because everybody will want to be protected.

But I want to show what's happened. It's very difficult to wear. And after a certain time, when you remove the mask, can you see my face? Can you see the sign? I just removed it one hour ago for short interval. And I wore it again. You see, if you keep these mask for more than two or three hours, you get crazy. But afterwards, you will have the big sign on your skin.

So do not overprotect yourself, because it's not good for yourself. It is not good for your face, for your skin, you are not doing a good job for your patients. Also you are causing a shortage of the devices for other working person hospital person that may require the mask.

So also this is a nice paper that Mike Wallace who is our visionary editor-in-chief with the Gastrointestinal Endoscopy Editorial Board, super-smart guy. He is working like crazy to make sure that the journal publish a lot of papers, allowing people to be educated properly about this risk in the field of digestive endoscopy.

And he prepared it yesterday night, and shared with all the editorial board this document. It is a literature search using Google Scholar, using these terms-- N95, respirators, respiratory virus, health care workers.

So from 20 top-cited papers said they extracted the data from nine selected papers because of the relevance or the impact on the risk of transmission of a viral or bacterial infection to health care workers. And in summary, these are the conclusions. Most studies today suggest a similar efficacy of surgical mask and N95 respirators. So it means that if you properly use the standard surgical mask and the patient is not known COVID-positive, you are still safe. You have to use the respirator only when you're scoping a known positive COVID patient.

Studies suggest that you see this surgical mask, they work well, especially when used in combination with other measures like handwashing all the time and using the gloves. So if you are good with other measures, you are safe using the surgical mask when you are not treating high-risk or COVID-positive patients.

So it's also important that you follow this strict protocol on how to wear and how to remove the PPE. There is these different steps. It has been used for many social spots. You can find this on Twitter, on LinkedIn, on Facebook, on GI Endoscopy website. And this is very important. These drawings have been provided by Gottumukkala Raja, who is the editor-in-chief of Video GI Endoscopy. So they are also going to prepare some additional educational material to make sure that all physicians and all nurses, they follow different steps for wearing and different steps for removing.

So of course COVID patient who is know COVID-positive, that there is COVID infection, it's a completely different story. So you should use a different area of your department, isolated recovery space, isolated from everybody else, dedicated endoscopy room, and negative-pressure room. So this is important suggestion. If, in your endoscopy department, you do not have a negative-pressure room, please discuss internally, and move this procedure for COVID-positive in surgical space. Because all surgical theaters, they have a negative-pressure room.

It's important to guarantee the ventilation and the circulation of the air. So removal of all droplets and reducing the risk of getting the infection just because you're going into the room.

When you organize your own space for doing a COVID-positive, whatever it is, your endoscopy room or the surgical room, you should use just minimal presence of equipment and furniture. Because it's important, at the end of the procedures with the COVID-positive, you just clean and disinfect carefully all the surfaces, all the bedsides and the furniture, the endoscopic equipment, the endoscopy tower, everything. So you have to keep the room with just the minimal amount, so whatever is really required. The equipment which are not essential in the endoscopy room should be removed.

And also our policy is, once we have identified the space for COVID-positive, in one day, in that space, they have access only one nurse and one physician. We don't want to have too many people rotating in the same space for COVID-positive.

So when you use this dressing code, it looks like it's fun in the beginning. You see you have to follow all the steps. And-- sorry.

So I want to tell you what is the disaster. The disaster is like today, myself. After one hour scoping the patient who is COVID-positive, wearing this very heavy equipment-- you can see this one, all of this equipment, they are part of a kit that is [INAUDIBLE] for face for physician doing the procedure. But the problem is, after one hour, you cannot go to the toilet, you cannot drink. Your body doesn't breathe normally. It's very heavy to carry on. Especially if you are doing a complicated procedure-- I need a bleeding patient. I couldn't find the bleeding point. So it took some time.

At the end, you are very anxious. You would like to remove everything immediately because you want to get your body free. So don't make this mistake. We estimate that the most important risk in getting infected for the endoscopies-- or in general for people exposed to COVID-- is when we remove the devices.

So this is the way that you have to use. So push everything out of your body with a dedicated specific movement. And first you remove and work always on the internal part of the gown, on the clean part. And after having done that, you still have skinny gloves, the surgical gloves, you still use to disinfect. And you can do the other steps, just removing the other gown. So you see how it counts.

Oh, sorry. OK, let me go. Sorry.

OK, look to this also. It's important. So from your body to ahead of you. Because this helmet has been exposed to patient's breath, to their droplets. And look how you move out this one. It's very important.

And look at the hands of my fellow. So they are working always in the internal space, in the clean part. OK, you see? Clean part and clean part.

And they just holding the gown on the clean part-- in waste. And the same is for, again, you clean your hands, and now you remove the other devices. So first you have to wear additional gloves. Do you see? Several times you have to repeat this. And you start removing the hair net, the goggles, and the respirators. OK, you see?

OK, what about scope disinfection? So there is no big issue with the transmission of virus. So there is a robust amount of data showing that, in the past, even with SARS infection in China a couple of years ago, and also for [INAUDIBLE] or viral hepatitis, there are many studies showing that when you probably follow the scope disinfection protocol according to the guidelines we follow, the European Society of Gastrointestinal guidelines, which are free to be downloaded by the Journal of Endoscopy site, if you follow all the rules, then the issue of transmission of the virus through the scope is very, very low. I would say almost nil.

Of course what we have done, we organized a meeting with all the workers involved in the process of scope-- different steps of scope disinfection, the manual, and machine, et cetera. And we discussed with them, reinforced the message how much important it is for them to do an excellent job, to follow the rules, to follow the guidelines, to make sure there is no leak in the process that can allow the scope to be sort of device that transmits the virus from one patient to another patient or to physicians and nurses.

So I am almost at the end. So team organization-- first point, team organization may look silly at this time. Because, for example, if I look to my team, we are about 10 physicians. Eight of us have been relocated to other departments to take care of COVID patients [INAUDIBLE].



So I would say what is remaining of your team-- and the same is for nurses-- more than half of my nurses now they are working in ICU. So they are rotating in ICU. Because you know, when you go in the COVID-positive wards, you cannot have a shift of eight hours like regularly happens in whole hospital. Because you cannot tolerate for eight hours that heavy dressing code. Because you cannot go to the bathroom. You cannot drink. You cannot touch your phone.

So we have shifts of four hours. But if somebody doesn't tolerate after three hours or three hours and a half, we need to be ready to rotate. So what we have done internally, we split the team in two clinical workforce. So the two teams, they don't come all together in the hospital. And we alternate. One team just stays in the hospital, and just performs the procedure. And the other one is answering telephone, talking to the patients, calling them if they have issues, and also preparing the schedule for the next day. So we reorganized our staff.

And what we want, we want to avoid everybody get infected in the same day. Because if there is a leak, if there is a problem in endoscopy, and everybody gets infected one day, the other day, there is another team that can take over. Because we don't want everybody in the same time in the same space.

And the other important point, we fixed very strict rules. So everybody in the staff has to work in the same station using individual devices. So they can have just one chair, one laptop, one phone. We are not allowed to share any longer. And also, cafeteria in the hospital is being shut down. And we have the issue with espresso. You know, we are Italian. We love espresso. We can no more. So I organized a little espresso station. But I do not allow to go there in more than one. So there cannot be crowding of people, gathering of people, in front of our little espresso station. Just one. And you have to wait before you go there and you get your espresso.

So do not share. Disinfect your working space on a regular basis. And of course use properly these devices because they are very, very precious.

So what about the risk of infection for patients performing endoscopy? So we are providing a paper that we'll submit to top-ranking journal within tonight. We did a following follow-up of all patients who had been scoped in the month of February. So our research coordinators and research nurses, they are-- some are working from their home. They can get connected to the hospital system.

So they looked into our schedules over the February month, and they called it back, after two weeks from the procedure, all the patients. If you look among about the 1,000 patients, we had just one COVID-positive who became COVID-positive just three weeks after endoscopy. And he was having minimal symptoms, some mild respiratory symptoms. And we suspect this guy got the infection because he was in close contact with an infected person who did not know they were infected.

And the number of patients with a fever or cough is minimal. So I want to reassure everybody. I want to reassure also on the patient side, the risk of getting infected with SARS-CoV-2 virus during endoscopy procedure in a situation where you are following the rules, you are protecting yourself, you are protecting the patient is very, very low.

And also what we have done-- and we tried to understand the impact on endoscopy personnel. So we did a web-based survey. We submitted the paper to *Gastroenterology*. I received an email just a couple of minutes ago, before starting the presentation. They say that they cannot accept the payment in the present form. They are requiring some adjustment. But I am confident that we can get this data published.

So we asked to 43 hospitals in this red zone about how many health care workers who got infected, what was the story, what was the mean age, comorbidities, how many were hospitalized. So we got a response from 43 hospitals, 965 health care personnel. And you see 70% of hospitals, they did not get any case of personnel infected.

So it means, in a safe environment, the risk on the health care personnel to get infected is again low. It's not zero. But we have 70% of our hospital without any single case of personnel infected.

We have two centers, one with the 12 people infected, almost the entire endoscopy team, and another hospital in Piacenza with seven people infected. We tried to understand what was the reason of the infection. In both of the hospitals, probably one of the physicians perform an endoscopy early February to a patient who was not known as COVID-positive.

The physician started having symptoms about three or four days later. He did not recognize the symptoms as a related to COVID. And in early February, we are not wearing all these protective devices. We did not yet adopt the very stringent measures to protect ourself and our patients. So most of these infections came before stringent measures in the adoption of protocols from the hospital.

Anyway, six people-- three physicians and three nurses-- required hospitalization. The average age of its delegation was 8.2 days. All of them had been discharged since today. And no one required, fortunately, ICU.

Of course it took a while to get all these data altogether. But I think it's a good message altogether with the message of patients not being infected that also-- excuse me. [INAUDIBLE].

**DARRAGH**

Thank you. Ale, thank you ever so much for this incredible, 45 minutes. We know exactly how trying this is for

**TOLAN:**

you, for all of your staff, and for your family. And as is always the case, Ale, you are always so giving of your time when it comes to passing on education and training globally.

And right now, in the middle of everything that you're going through, to think that you'd take the time out of your incredibly busy life to spend time with all of us all around the globe is so, so appreciated. So from the bottom of our hearts to you, thank you very, very much, Ale.

**ALESSANDRO**

Thank you. Thank you, Darragh. You see, this is my youngest daughter. I cannot [AUDIO OUT] four weeks. I just saw her twice in four weeks, looking from distance. This was a picture I took the last day I was with her. I said, let's go for ice cream, because I don't know how long we stay in the hospital. And she was laughing. [INAUDIBLE] say don't kidding on that. You coming tomorrow. But this is not true. So--

**DARRAGH**

Yeah. Yeah, I hope she's very safe and sound at home. I know you've got a very strong family that's taking great care of her in your absence, Ale. And in the middle of all that, to think that everything that you're doing for these patients is so, so appreciated by us all.

**TOLAN:**

Ale, if you don't mind, can I ask maybe just a few short questions of clarification in the last few minutes.

**ALESSANDRO**

Yeah.

**REPICI:**

**DARRAGH** Could you give us a little bit of insight into why Lombardia is such a hotbed, why Milan is such a hotbed. And is  
**TOLAN:** there any learnings for other countries from what you've gone through there?

**ALESSANDRO** No, so you know, this has been a big question for everybody in the country. There is no rationale behind this.  
**REPICI:** Nobody knows. All the epidemiologists, all the infectious disease experts, they are trying to understand.

And so we don't know really. It's happening like a storm. I compare the situation-- so I was born in Sicily. I was born exactly in front of the sea. So I love to go sailing or just fishing. Sometimes it happens and the storm comes. You're not prepared. Even though you expect, you do not realize it's coming. It's quicker than you can imagine.

So that was the situation. We were just looking to the situation in China. We felt safe. And we started preparing, but we don't know why here is like a disaster. In southern part of Italy there is a minimal number. Why in Lombardia we have-- in our region we have more death than in China.

So of course I know there is a reason, but I don't really know what it is.

**DARRAGH** OK. Thank you, Ale. Maybe a couple of other very quick ones. A question from a director of nursing in New Jersey.  
**TOLAN:** "I have a high-risk patient with an active GI bleed. Other than scheduling the patient to be first case of the day to limit potential exposure, what else can we do?"

**ALESSANDRO** So, first, as I said before, negative-pressure room. It's very important. If you do not have a negative-pressure  
**REPICI:** room-- so according to our survey, only 20% all endoscopy departments in northern part of Italy they have negative-pressure rooms in their space. So if you do not have it, just move to the surgical space. And the other point is when you scope these patients, of course the dressing code-- safe dressing code. And minimal equipment so you don't need to clean to much stuff. And the room should not be used at least for one hour to allow reventilation and cleaning of the air.

**DARRAGH** OK. OK, very clear. Thank you, Ale. Another one, just to qualify your point earlier on in the presentations. It's from  
**TOLAN:** Susie Greene.

"Sorry, I missed the reasoning behind males being so much more vulnerable. Could you help me understand that, please."

**ALESSANDRO** Can you say again? What is vulnerable.  
**REPICI:**

**DARRAGH** The stat that you had earlier on that was showing that males were more susceptible to COVID-19 than females  
**TOLAN:** later on in life. Is there a rationale for that?

**ALESSANDRO** No. No reason. Not really.  
**REPICI:**

**DARRAGH** OK. A couple of questions in and around PPE-- what classifies an extended period of use for an N95? Should we  
**TOLAN:** be wearing it all day with different patients?

**ALESSANDRO** Yeah, you're right. That's a good point. So there are different companies producing these masks. And each of  
**REPICI:** these has a specific working time, which may range from 4, to 8, 12 hours, no more than that. But of course the changing the FFP3 is a luxury measure that we cannot take.

So the policy here is if you are scoping the patient with COVID-positive, you use this one. When we do, of course, the COVID-positive, we protect this plus we use this. OK?

So the FFP3 is not exposed.

**DARRAGH** OK, clear.

**TOLAN:**

**ALESSANDRO** This is not exposed. And we keep the FFP3 for the entire day, because we don't have others.

**REPICI:**

**DARRAGH** OK, very, very clear. A question around COVID testing, Ale-- "how long does it take for your COVID test to come

**TOLAN:** back in Italy? In the US right now, it takes seven days on average, which is very problematic when you're trying to decide--"

**ALESSANDRO** No, no. It comes-- the longest may be 24 hours, the longest.

**REPICI:**

**DARRAGH** Wow, OK. "Should EGD patients be intubated?"

**TOLAN:**

**ALESSANDRO** No. Definitely, no. Because you know, also, intubations is one of the procedures that generates a lot of aerosol risk. So it's considered probably the procedure with the highest risk of high aerosol generation. So if the patient can be managed safely with propofol or with other drugs according to the local policy, I do not suggest to do that.

**REPICI:**

**DARRAGH** OK. Maybe two final questions, Ale. "Do you have a sense of the percentage of patients that are under 60 years age that are in your ICU?"

**TOLAN:**

**ALESSANDRO** Yeah, so yeah. So yesterday one lady-- the day before yesterday, one lady, 38 years old, died. And she's husband which is a little bit older, couple years older, is still intubated. So we had, in the beginning, very old patients only in ICU. Now the median age is around 64, 62.

**REPICI:**

**DARRAGH** OK, perfect.

**TOLAN:**

**ALESSANDRO** It's not that old.

**REPICI:**

**DARRAGH** OK, that makes sense, Ale. Thank you. And maybe the very final question-- "how long is the virus presence after symptoms have been "resolved?"

**TOLAN:**

**ALESSANDRO** So this is a good point. So once the virus has been-- so once the symptoms are all gone, we test for the first time the patient, I would say, around seven days afterwards, and we re-test them within 14 days. And they remain, for the 14 days, in quarantine. So if they have a place where they can quarantine themselves, it's OK. Otherwise we have several hotels and residences here where we keep them in quarantine.

**REPICI:**

**DARRAGH** OK, very, very clear. Ale, thank you again from all of us. And to all of the doctors and nurses on the webcast today, thank you very much for everything that you do for patients around the world in these incredibly trying times. It's a wonderful service, and it's not lost on all of us in the industry. Ale, take care. All the very best.

**TOLAN:**

**ALESSANDRO** Thank you so much. Bye bye, everybody. Thank you.

**REPICI:**