

An interview with Dr Cesare Massone MD of telederm.org cesare.massone@derma.at

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Discussion about telederm.org, a DermOnline community and teleconsultation service

The last time an Italian caused this much excitement in Vienna, was in the Academy Award winning movie, Amadeus, with a great sound track by The Academy of St Martin in the Field, conducted by Sir Neville Mariner. But, that was fiction, this is not. When I first heard about, and then saw, telederm.org <<http://telederm.org>>, I was surprised. After a few emails back and forth across time zones, Dr Massone, from the Department of Dermatology, Medical University of Graz, Austria, readily agreed to this interview.

Dr Massone, first can you tell me a little about yourself and how you ended up in Graz?

Thank you Bob for your nice comparison with Antonio Salieri, but first of all he was a great composer and conductor, I am only a young physician. Salieri was born in Legnano: actually I come from the East Italian coast, from Genoa, where I graduated in 1997 and arrived in Graz as a fellow in 2001. I choose Graz for improving my knowledge in dermatopathology, especially in the field of cutaneous lymphoma and melanoma. Helmut Kerl, H. Peter Soyer and Lorenzo Cerroni are famous and well-experienced dermatopathologists and the Dermatopathology Section of the Department of Dermatology of Graz is one of the biggest in Europe. I thought that this could have an impact on my studies. After my certification in dermatology in 2002, I simply did not want to leave, and so here I am...

So, where did the idea of telederm.org come from?

The heart and the soul of telederm.org is H. Peter Soyer: he is a pioneer in teledermatology and teledermoscopy. In 2001, he conceived the idea to found a global Online community in dermatology and together with Rainer Hofmann-Wellenhof, a dermatologist, and Gerald Gabler, who did the informatics' work, they created telederm.org. The idea was, and still is, as simple as it is fascinating: to create a user-friendly Web application, whereby physicians create by themselves user-generated content and in addition seek a second opinion for a given dermatological case. In short, our vision is to promote with telederm.org **Open Access Teleconsultation in Dermatology** using the multi-hub facilities of the Internet.

How has telederm.org developed from there?

The first application, a prototype, was launched in May 2002. Remarkably, until today there are still no similar experiences in teledermatology and of course it was not easy to develop the project. Moreover, 2 years ago it was not even clear how to build up the community and how to run it. For example, in the beginning it was thought to divide the users of telederm.org into Clients (who can only send requests) and Experts (who can send and also answer requests), but this generated confusion and moreover criteria for acceptance as Experts were never really established. The discussion forum was organised in a user-unfriendly way and needed a moderator. Therefore, Peter invited

me to join the group. He just gave me a couple of articles on the moderation of Online Discussion Forums and let me do the job. Now, after 2 and more years of work, our ideas are becoming clearer and our Community is increasing constantly. In the last 2 months, we have worked on a new version of the application, that should be much more immediate and finally there will be just Users, no Clients or Experts anymore. A restyling of the Web design is already planned as well as additional facilities.

How is telederm.org supported both logistically and financially?

Telederm.org is currently a non-profit project and a joint venture between the Department of Dermatology, Medical University of Graz, Graz, Austria, and e-derm-consult GmbH (edc), a small start-up company from the Medical University of Graz situated in Graz. H. Peter Soyer, who is currently Professor of Dermatology at the Department of Dermatology in Graz, is also CEO for Medicine of this spin-off company. At this moment, intentionally, no sponsoring is requested from the pharmaceutical industry in order to be independent.

What technology is used to drive telederm.org (software, hardware), and who supports the technology you use?

This time the system is built on Microsoft technology using a Windows server with a SQLServer database and Active Server Pages generating the front-end. The application itself has been developed by edc and exactly fits the demands of

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our customers. We are currently working on a new and extended version using the Dot Net technology. The hardware is a standard dual processor server with RAID technology against drive failures and it is working on a leased line. Using standard technologies and components we think the support will be global in the near future.

How do you scan and store these images?

The idea of **Open Access Teleconsultation in Dermatology** is that users generate the content themselves by providing and sharing with the DermOnline Community their challenging and unusual cases. So, basically every colleague prepares the JPG image files in his/her way and we are just performing a quality check before finally accepting a consultation case. For the discussion cases, most of the images we use belong to the Department of Dermatology, Medical University of Graz. To scan our histopathological images in Graz we have two different systems: a classic Nikon E-1000 microscope with a Nikon DM100 camera (images are stored in .JPG format), or the new robotic Imstar PathfinderTMTM system, composed by a Nikon E400 microscope and a MorphoscanTMTM robotic platform connected to a high resolution digital camera (Hamamatsu C4749-95), that allows high-resolution acquisition in TIFF format.

Can we go back to telederm.org for a moment, who is the primary user and what are the demographics of the users?

Telederm.org users are mainly dermatologists with special interest in the use of the Internet for discussing challenging dermatological cases. Of course, 95% of telederm.org users are dermatologists, but also some general practitioners, pathologists, paediatricians and gynaecologists subscribed to telederm.org. I would divide the typology of our users into two categories: 'active' and 'non-active': we have users that like to enter our discussion forum, to answer the on-line cases, to send cases and stimulate the discussion. In the first 2 years, these active users sent more than 800 requests that have been answered by the community. Then

there are users that visit telederm.org regularly but they do not like to play an active role, they just look at the cases and read the comments (silent participants or lurkers). So, our community, like all other Internet communities, is made up of both typologies, and both are welcome!

How many users use telederm.org?

Till today, more than 400 physicians subscribed to telederm.org, coming from 45 different countries. The number of users and the average log-on number per day are still low due to the fact that we were not very visible to the Web: actually these first 2 years were a challenge and a trial at the same time. Now the experimental phase is almost finished. As I said, we worked a lot in the last few months to prepare the new application and here I like to give you anticipation. We will soon be linked to DermIS, one of the biggest atlases on dermatology on the Web.

What role does telederm.org play in the medical school training of interns and residents and fellows?

Telederm.org offers the possibility to our students to study clinical cases in dermatology, their histopathological counterparts and their management. We teach our students how to use the application and we introduce them to telemedicine in general. I think that using telederm.org is a good and easy way to learn dermatology, especially for those who are familiar with the Internet. Moreover, we use telederm.org for clinical research also. For research projects in dermatopathology for example we developed a special application with a Webscope <<http://telederm.org/research/dermatopath/>>. In another research project, we are studying the clinical use of wireless technology in dermatology, and again telederm.org is the Web application in use. Together with the Graz Hospital IT administration, the telederm.org team is running a project to connect dermatologists and general practitioners of Styria with the Department of Dermatology in Graz integrating the telederm.org application in the already existing information system (MEDOCS) of all Styrian hospitals. Obviously, telederm.org can be used on a daily

basis by our residents and fellows and will be connected with all relevant patient data.

What are you doing in terms of distance education and continuing medical education?

Exactly one year ago, we started with a trial educational programme. We inserted weekly clinical cases correlating the clinical images with the histopathological ones. We strongly encouraged colleagues to discuss these cases in the discussion forum and to give us their personal opinion. In the beginning, the interest was low but after a few months the discussion grew up and now it is quite satisfying. One of our aims is to start in the next few years a well-structured continuing medical education programme on telederm.org under the auspices of the Postgraduate School of the Medical University of Graz.

What about telederm.org consults, if you live in a remote area in Northern Italy or parts of Austria and don't have access to a dermatologist, could I ask for a consult from you and how would that work?

This is a crucial point: let me go into details. According to the current law in Austria and Italy, a physician is not yet allowed to perform an 'e-visit'. A physician has always to be in between the patient and the virtual consultant. This is also the reason why at this moment only physicians are allowed to subscribe to telederm.org. So, if you are a patient, you have now to ask for a teleconsult through your general practitioner, for example. However, despite the actual legal situation in Austria, we are in the process of starting, at the end of the year, a pilot project with an exclusive teleconsultation service for patients in collaboration with <www.netdokter.at/>. We will answer the requests of patients based on clinical images of the affected skin in association with a detailed personal case history and give general comments on diagnosis and treatment.

If you are a physician, it is easy: teleconsulting to telederm.org can be achieved in two completely different ways – a private or a non-private one. In the former, a physician interacts only with the chosen teleconsultant; the latter is the discussion forum. We

have users that regularly send requests to other users, always staying in a private field, and users that use the discussion forum to seek more opinions on difficult cases: for example, in July, a colleague from India sent to the discussion forum clinical pictures of a woman complaining an unusual chemosis and seeking diagnostic and therapeutic advice. Colleagues answered, both in the discussion forum and personally to him; we also involved an ophthalmologist from our University, and just a few days ago this colleague gave us his feedback. The patient improved and he found the advice he got very useful. This is an example of how telemedicine can also be helpful in daily practice.

Do you have the capacity to do live chat on telederm.org, are you doing Grand Rounds?

The current system is not intended to do live chats. It is designed as a store and forward system in an asynchronous manner. Due to our multi-cultural user community, it also would not be easy to find the right 'time' to do so. Actually, our discussion forum is a Grand Round, maybe in an unconventional and more global view.

What would you like telederm.org to do next?

Well, there are still many things to do. First, our application has to be restructured and then we will ask for HON certification. The general design and particularly the usability have to be improved. Then we will start an ambitious project that I would like to mention: this October, the Web site of the newly founded International Society of Teledermatology will be launched and telederm.org will become the DermOnline Community of the Society. Using the platform of the International Society of Teledermatology our vision to promote **Open Access Teleconsultation** in dermatology will soon become a reality. In addition, we are continuing our co-operation projects on teledermatology with China and are initiating a pilot project in Uganda.

David Balch, who recently retired from the Telemedicine Center at Eastern Carolina University, told me

that he thought telemedicine would disappear as we know it, i.e. that it would be so commonplace on the desk-top that we would use it every day or take it for granted. What do you think?

Telemedicine is the future of medicine, that's clear. And in this spirit David Balch is absolutely correct – teledermatology is just dermatology. I do not know if one day in the future there will really be someone like Dr Spock (I think absolutely the first 'teleconsultant'), able to treat his patients directly from the *Enterprise*, this would be the extreme point, but I can only see an exponential growth of telemedicine in general.

Where do you see telederm.org in a year from now? 5 years?, 10 years?

Answering you in numbers, in 1 year I would be really happy to see 1000 users subscribed to telederm.org, in 5 years 5000 and then... Our goal is to develop a free teleconsulting system for dermatology where physicians and health workers from all over the world interact between themselves using the multi-hub facilities of the Internet and exchange experience and expertise. To develop telederm.org to become the first and largest global online community in dermatology is our scope. I think we have to work hard but we are on the right track. We are convinced that teleconsulting in dermatology will grow up more and more and become an everyday reality and other projects similar to telederm.org will be initiated. But I do not have any doubts that telederm.org

will be among the leaders in this field in 10 years.

What would you say to your colleagues around the world about the use of telemedicine and how can we continue to promote it?

Promotion should be done in the traditional way at congresses and meetings just by talking to colleagues. At the next Italian National Congress of Dermatology in Genoa 2005, we will organize a Workshop on Teledermatology in order to make Italian dermatologists more confident with these new facilities. I am personally convinced that colleagues all around the world are discovering sooner rather than later the big opportunity that telemedicine is giving to all of us: learning and teaching, exchange of ideas, courses, communication, new technologies and, in my personal view, an improvement of the entire performance in medicine. In short, telemedicine matters.

What's next for you?

Well, Italian wine is very good and famous, but also the Austrian one reached a good quality in the last few years. Why not go on tasting it?

Dr Massone, Ciao.

Ciao Bob!! and thanks a lot. Un saluto a tutti ed un arrivederci a presto su telederm.org!

Thank you for your time and I wish you continued success in the future.

No problems, it was a pleasure. I wish you the best as well.

NeLH Skin Conditions Specialist Library now online

The new National electronic Library for Health (NeLH) Skin Conditions Specialist Library is now online, giving quality, evidence-based information on skin conditions and their treatment. The Skin Conditions Specialist Library can be found at www.library.nhs.uk/skin. It can also be accessed via the link on the National Library for Health (NLH) home page at www.library.nhs.uk/.

As with the other NeLH Specialist Libraries (which are also available from the NLH home page), the Skin Conditions Specialist Library is intended to bring together information resources to help NHS health professionals make informed, evidence-based decisions, but it is also accessible to patients and the public. The Skin Conditions Specialist Library is based in the Centre of Evidence-Based Dermatology at the University of Nottingham, and has been developed with the involvement of a Stakeholders Group that includes many professional and patient organisations with an interest in skin conditions.