EUROMEDITERRANEAN BIOMEDICAL JOURNAL
2018,13 (03) 009–014
(*FORMERLY: CAPSULA EBURNEA*)

Original article

SURVEY ON THE DEMAND OF SICILIAN PHYSICIANS FOR A SPECIFIC TRAINING ON HUMAN CADAVERS AND ANIMALS.

Dario Saguto[*^], Valerio Gaglio*[*&], Giuseppe Luigi Marco Lanza*[*&], Pasquale Gianluca Albanese*[*^^], Angelo Maria Caponnetto*[*ç], Vincenzo Gaetano Piazza*[*°°], Giacomo Doria*[*°°°], Filippo Sanfilippo[^^^], Salvatore Crimi[##], Amerigo Stamile[###], Giada Li Calzi[°], Francesca Rappa[^], Vito Bongiorno[$$], Francesco Dispenza[#$], Giuseppe Salamone[§§], Antonio Biondi[ç], Alberto Fucarino*[^]*

**These authors contributed equally to the present work.*

[^] *Department of Experimental Biomedicine and Clinical Neuroscience, University of Palermo, Palermo, Italy.*
[^^] *Department of Medical Sciences, Surgical and Advanced Technologies, GF Ingrassia, University of Catania, Ear, Nose and Throat Unit, "G. Rodolico" University Hospital, Catania, Italy.*
[&] *Sciences for health promotion (PROSAMI) Department, University of Palermo, Palermo, Italy*
[ç] *Department of Surgery, University of Catania, Catania, Italy*
[°] *Consultant at Experimental Zoo-prophylactic Institute (IZS) of Sicily, Palermo, Italy*
[°°] *General Surgery Unit, ARNAS Garibaldi of Catania, Catania, Italy.*
[°°°] *U.O. di Pneumology, "G. Rodolico" University Hospital, Catania, Italy.*
[#] *Ear, Nose and Throat Unit, Paolo Giaccone University Hospital, Palermo, Italy*
[$] *Istituto Euro-Mediterraneo di Scienza e Tecnologia, Palermo, Italy*
[##] *Department of Maxillo-Facial Surgery, University of Messina, Italy*
[###] *Department of Clinical and Experimental Medicine, University of Messina, Messina, Italy*
[$$] *Freelancer, specialist in orthopaedics, Palermo, Italy*
[§§] *Department of Surgical, Oncological and Oral Sciences, University of Palermo, Palermo, Italy*
[^^^] *Istituto Mediterraneo per i Trapianti e Terapie ad Alta Specializzazione (ISMETT) – Istituto di Ricovero e Cura a Carattere Scientifico (IRCCS), Palermo, Italy*

* *Corresponding author*: Alberto Fucarino, fucaro1984@gmail.com
DOI: 10.3269/1970-5492.2018.13.3
 ISSN: 2279-7165 - Available on-line at www.embj.org

ARTICLE INFO

Article history:
Received 18 December 2017
Revised 29 January 2018
Accepted 08 February 2018

Keywords:
Health professionals and physicians training, education demand, animal lab, cadaver lab.

ABSTRACT

Currently, surgical training of physicians in Italy has limited possibilities.Surgical training can be performed on dissection of human bodies as well as in animal laboratories, but experience is very poor. We conducted a survey through an anonymous questionnaire in order to evaluate the opinions of post-graduate physicians on their need for experience training on both human and animal bodies during their medical studies. A total of 165 young Sicilian physicians responded to the survey. Only 14 of them (8.5%) declared they had specific training on a live animal, while 46 (27.9%) reported they already attended cadaver labs. Over 70% assigned the maximum score to the utility of such courses as integration of medical academic offer. Our results showed that the majority of the subjects interviewed expressed a need for training using these practices and that it might be necessary to investigate patterns to promote the opportunity for direct practice on human and animal bodies.

1. Introduction

The dissection of human bodies has been used as a teaching tool in anatomy for thousands of years (1). One of the most ancient and greatest examples is the School of Medicine of Alexandria, during the 3rd century B.C., in the ancient Greece (2). The introduction of Christianity across Europe during the Middle Ages coincided with prohibitionism imposed by clerical authorities and it wasn't until the end of the 12th century when the practice of dissection was officially resumed. During this period, different universities were founded across Europe: Paris, Bologna, Padua, Oxford and Montpellier (3) and a new generation of great anatomists who emerged during that period, namely Dubois, Vesalius; even Leonardo da Vinci and Michelangelo Buonarotti were able to take great advantage of direct studies on human cadaveric dissection.

With such an illustrious background, one might expect a large spread of human cadaveric dissections during the centuries to follow. In reality, the number of lessons with direct anatomy teaching by dissection has been gradually falling over time. This phenomenon is probably due to the concomitance of illegal practices and bad reputations linked with the supply of bodies for dissections (4,5) and the progress of technology. Today many university courses provide virtual dissection in a 3-D environment, with an aim to replace cadaver dissection (6).

These last centuries can be defined as a sort of "Dark Era" for the human cadaveric dissections, but the scientific community has recently re-evaluated their importance in teaching different disciplines of medicine (7). Researchers focused their attention not only on the increased reports of misadventures with patients caused by a lack of knowledge of anatomy, but also on the evidence of how experience with a direct human cadaveric dissection procedure can improve knowledge of anatomy in students at various levels; both for undergraduates and doctors alike who receive training in specializations where surgical anatomy represents an essential aspect (8).

In light of this reassessment, many universities have reintroduced anatomical surgical training with courses focused on the direct dissection of human bodies. The diffusion of these courses is assuming a greater capillarity and may be even more crucial for specializations that cannot find a proper substitute in a respective animal model(i.e. microsurgery, surgery of the hand, orthopedic, oral surgery, endoscopy, motor rehabilitation, plastic surgery).

On the other hand, in recent years experimental studies on live animals, as i.e. imaging and endoscopic procedures, have increased (9) and, more recently, awareness of the importance of integrative, non-invasive or minimally invasive surgical training on live animals (10).

Nowadays in Italy, despite the forementioned difficulties, there are few examples of courses on human cadaveric dissections, and even fewer on live animals. With such a background, we decided to perform a survey among a sample of Sicilian medical professionals, with the aim of exploring and documenting the potential for specific training needed on both the cadaver and live-animal level.

2. Materials and Methods

An anonymous structured questionnaire (provided in Appendix 1) was designed to collect: a) information on characteristics of physicians recruited in the survey (age, gender, current geographical area of work and/or education, education level, current position or role), and b) answers to questions dealing with items related to training experiences and training need on live animals or cadavers.

Questions included both dichotomous (Yes; No) and ordinal scale (1= minimum score; 5= maximum score) answers. The questionnaire together with a presentation letter of the survey aims were uploaded on a Google Forms platform (11). Between the 10th and 25th of January 2018, a questionnaire was then administered to Sicilian physicians under forty years of age via medical association networks by using both e-mail and thematic social media. We included both residents and specialists with any surgical specialty, including forensic and/or human pathology.

Anonymity of respondents was preserved, while unicity of each respondent was assured by checking tax code duplications and by verifying every single data entry through the detection of its Internet access Protocol. Data and answers collected by the questionnaire were extracted and imported on a password-protected Excel 5.0 to perform descriptive statistics. Results are presented in absolute and relative frequency.

3. Results

We recruited a sample of 165 Sicilian physicians, aged under forty years old (mean age 31.1; S.D.: ±5.3) (Table 1).

The majority of respondents were males (n=89; 53.9%), currently working in public hospitals or private structures and ambulatories, or training in universities in western (49.7%) or eastern (50.3%) Sicily.

Of all the respondents, only 117 (71%) had graduated, while the remaining reported a higher qualification (23.6% post-graduation diploma, 4.8% a Philosophiae Doctor and 0.6% a Master degree). According to their position held at the time, the majority of the interviewed physicians were residents (61%), followed by hospital specialists (15.8%), freelancers without specialization (10.3%), specialist freelancers (9.1%), while 3.6% of the respondents declared an academic position.

	N=165
Age in years (mean; S.D.)	31,1±5.3
Gender	**n (%)**
Male	89 (53.9%)
Female	76 (46.1%)
Current geographical area of work and/or education	**n (%)**
Agrigento	7 (4.2%)
Caltanissetta	2 (1.2%)
Catania	61 (37.0%)
Enna	1 (0.6%)
Messina	17 (10.3%)
Palermo	71 (43.0%)
Ragusa	2 (1.2%)
Siracusa	2 (1.2%)
Trapani	2 (1.2%)
Western Sicily	82 (49.7%)
Eastern Sicily	83 (50.3%)
Education level	**n (%)**
Graduation	117 (70.9%)
Post-graduation diploma	39 (23.6%)
Master	1 (0.6%)
Philosophiae Doctor	8 (4.8%)
Current position	**n (%)**
Resident	101 (61.2%)
Freelancer without specialization	17 (10.3%)
Hospital specialist	26 (15.8%)
Specialist freelancer	15 (9.1%)
Academic	6 (3.6%)

Table 1 - Sociodemographics and occupational characteristics of the Sicilian physicians recruited in the survey (n=165).

Results of the answers provided by respondents are presented in the Table 2. Only fourteen physicians out of the 165 responders to the questionnaire (8.5%) declared they had a specific endoscopic training on a live animal, while 46 respondents (27.9%) reported to have already attended cadaver labs to get specific training.

Reasons of limitations in attending this specific training were reported by the remaining physicians and can be summarized mostly in unawares or unavailability of similar training initiatives both during academic or professional education, followed by very high fees fixed to access private courses(results not shown).

More than 70% of the physicians assigned the maximum score to indicate both the utility of these courses to integrate the medical educational academic offer, and the importance to continuously integrate professional education with specific endoscopic training on live animals (Table 2). The positive agreement was even higher when indicating both the utility to integrate the medical educational academic offer (83.6%) and the importance to continuously integrate medical professional education (83.0%) with cadaver lab-specific training (Table 2).

Question	**Answer**	
	Yes, n (%)	**No, n (%)**
Have you ever attended any specific endoscopic training on live animal?	14 (8.5%)	151 (91.5%)

Question	**Answer**
Indicate how much is useful (1= minimum; 5= maximum), on your opinion, to integrate academic medical educational offer with a specific endoscopic training on live animals.	**n (%)**
1	8 (4.8%)
2	2 (1.2%)
3	16 (9.7%)
4	23 (13.9%)
5	116 (70.4%)
Indicate how much is important (1= minimum; 5= maximum), on your opinion, to continuously integrate your professional education with a specific endoscopic training on live animals.	**n (%)**
1	11 (6.7%)
2	1 (0.6%)
3	17 (10.3%)
4	15 (9.1%)
5	121 (73.3%)

Question	**Answer**	
	Yes, n (%)	**No, n (%)**
Have you ever heard about cadaver labs taken in place in Sicily?	27 (16.4%)	138 (83.6%)
Have you ever attended any cadaver lab specific training?	46 (27.9%)	119 (72.1%)

Question	**Answer**
Indicate how much is useful (1= minimum; 5= maximum), on your opinion, to integrate academic medical educational offer with cadaver lab specific training.	**n (%)**
1	1 (0.6%)
2	3 (1.8%)
3	6 (3.7%)
4	17 (10.3%)
5	138 (83.6%)
Indicate how much is important (1= minimum; 5= maximum), on your opinion, to continuously integrate your professional training with specific with cadaver labs.	**n (%)**
1	2 (1.2%)
2	3 (1.8%)
3	6 (3.7%)
4	17 (10.3%)
5	137 (83.0%)

Question	**Answer**	
	Yes, n (%)	**No, n (%)**
Indicate if are there any procedure or technique you would like to be trained in on live animals or cadavers.	124 (75.2%)	41 (24.8%)

Table 2 - Answers to the survey of the Sicilian physicians recruited (n=165).

Lastly, 124 (75.2%) of respondents expressed the need to indicate a procedure or technique to be trained onlive animal or cadaver labs (Table 2). Particularly, robotic surgery, endoscopic, laparoscopic and arthroscopic procedures, neuro-imaging and digital 3-D simulations, were more frequently indicated (results not shown).

4. Discussion

This study presents the results of an anonymous survey conducted on a sample of Sicilian medical professionals under the age of forty years old, with the aim to document the potential of a specific training demand for practice on cadavers and live animals. In fact, the questionnaire contained questions not only about dissections or operative procedures on cadavers, but it focused its attention also on the possibility to pursue specific medical procedures, i.e. endoscopy or minimally invasive, on live animal models.

We found that the minority of the sampled physicians already attended a cadaver and/or live animal lab, while the majority of respondents never participated in such educational courses with cadavers or at live animals facilities. Our respondents highlighted the need to integrate the medical educational offer both at the academic level (during the undergraduate period and in the years of specialty degree) and in the following years. These findings support our initial hypothesis on the importance to continuously integrate medical professional education in Italy with specific training using both live animals and cadavers.

Although the execution of surgical procedures performed on animals can present some gaps, the “animal model” remains a very valuable tool to enhance self-confidence and ability to perform certain surgical procedures, in turn possibly increasing patient’s safety. For example, endoscopy and vascular surgery are among the disciplines that rely most on animal models to improve the ability of their students. Not by chance, in the recent years the number of living labs across Europe have increased (12). Within these infrastructures is the conception to support researches in experimental surgery (laparoscopy, endoscopy, arthroscopy)both for veterinary health and for human health, also the didactic component could be valorized.

The use of the animal model in surgical training to complete the model based on cadavers could play a fundamental role in the change of teaching methods, introducing innovative and transferable concepts to the entire scientific community. Toward these ends, we have deeply analysed the answers provided in the survey by some specialized endoscopists declaring their participation in courses on live animals and we have found out a dichotomy: they appeared enthusiastic about the possibility to work directly on a live organism, but at the same time they underlined a critical issue related to the different anatomy of the animals used for the procedure. Despite this, the mentioned respondents highlighted the possibility of increasing not only the practical skills but also the familiarization with the surgical instruments.

It has been postulated that junior doctors in training at Italian Universities often have an incomplete knowledge due to the reduced number of surgical procedures performed during the specialisation program. We should keep in mind the different needs of students.

For some of them, the practice on live animals could be sufficient and useful to increase the necessary skills for their profession, while other classes have an indispensable necessity of exercising directly on the human bodies.

Importantly, Italian medical students highlighted how practicing on a real cadaver is totally different from what they would have ever expected studying in books and atlas (13). Nevertheless, the number of universities implementing education and training on cadavers in Italy (i.e. University of Bologna, University of Padua) remains limited, and well-below the needs of Italian medical students. There are also few courses dedicated to health professionals organized by private associations, sometimes in cooperation with foreign partners or universities. Unfortunately, physicians who want to take such courses have to face considerable costs, including registration fee, (possibly long) travel and other expenses.

Moreover, the large restrictions on study and research on the human body in Italy, according to an ambiguous legislation, have to be taken into account. The law regulating the use of unclaimed bodies for studies and research purposes is based on a decree enacted on the first decades of the 20thcentury (Art. 32 of the Royal Decree n.1592 of 1933) and never repealed. It establishes the obligation for all human bodies from hospitals to be subjected to diagnostic verification. The bodies that are not requested by relatives up to the 6thdegree of kinship, are reserved for teaching and scientific investigations. In antithesis with such decree, the Italian Penal Code (art. 413) punishes anyone who dissects a human body or parts of it, for scientific or educational purposes with up to six months imprisonment.

The current Mortuary Police Regulation, whose Chapter VI norms the “Release of Cadavers for study purposes”, is based on these legislative bases. It specifically mentions the university anatomical rooms and the human bodies destined for them, as well as the possibility for not well-defined "scholars" of having the anatomical pieces available for a certain time (14).

Of interest, in May 2013, the National Council of Bioethics has expressed a positive opinion about post-mortem body donation for study and research purposes: “Despite the study of anatomy and also the training in surgery which now utilize advanced technologies such as virtual or increased reality, we should consider how direct experience on the cadaver is irreplaceable and that the anatomical dissection plays a key role on the training of students and specialists and in the updating of specialists”(15).

As the survey was restricted to a young target of physicians, despite the several limitations related to the cross-sectional design of the study and to the small sample size, we are confident we obtained a useful picture of the present and future training demand for a specific training in surgical, forensic and pathological dissections on cadavers and live animals, the last ones with regard to endoscopic and minimally invasive procedures. The results of our survey should encourage political authorities, universities and other institutions to develop inter-institutional and multidisciplinary collaborations in order to respond to the specific education and training needs of health professionals, as previously documented in other health sectors with regard to innovative tools applied to medicine (16-19) and to specific health demands yet to be satisfied (20-23).

Future studies on the topic explored by the present survey should be emphasised to medical students and residents, as was already done in many other medical fields (24-29), paying attention to the role that the participation to anatomic dissections on human bodies could play as well as the attendance of demonstrations in applying specific procedures on live animals.

References

1. Ghosh SK. Human cadaveric dissection: a historical account from ancient Greece to the modern era. Anatomy & Cell Biology. 2015;48(3):153-169. doi:10.5115/acb.2015.48.3.153.
2. Serageldin I. Ancient Alexandria and the dawn of medical science. Glob Cardiol Sci Pract 2013;2013:395-404 doi:10.5339/gcsp.2013.47
3. Siraisi NG. Medieval and early Renaissance medicine: an introduction to knowledge and practice. Chicago, IL: The University of Chicago Press; 1990.
4. Park K. Secrets of women: gender, generation, and the origins of human dissection. New York: Zone Books; 2006. p.15.
5. Sappol M. A traffic of dead bodies: anatomy and embodied social identity in nineteenth-century America. Princeton, NJ: Princeton University Press; 2002. p.102.
6. Doubleday EG. The virtual anatomy laboratory: Usability testing to improve an online learning resource for anatomy education. Anat Sci Educ. 2011 Nov-Dec;4(6):318-26. doi: 10.1002/ase.252. Epub 2011 Aug 9.
7. Rizzolo LJ. Human dissection: an approach to interweaving the traditional and humanistic goals of medical education. Anat Rec 2002;269:242-8.
8. Bergman EM, Verheijen IW, Scherpbier AJ, Van der Vleuten CP, De Bruin AB. Influences on anatomical knowledge: The complete arguments. Clin Anat 2014;27:296-303
9. Robinson AG, Metten S, Guiton G, Berek J. Using fresh tissue dissection to teach human anatomy in the clinical years. Acad Med. 2004 Jul;79(7):711-6.
10. Società Italiana Endoscopia Digestiva (SIED) 2017. Available athttp://www.sied.it/pagine/195/scuola+di+formazione+sied Accessed Feb 3, 2018.
11. Google Forms by Google LLC 2018, CA, USA. Available at https://www.google.com/forms/about/ (Accessed Jan 9, 2018)
12. European Network of Living Labs (ENoLL) 2018. Available at http://www.openlivinglabs.eu/node/1429 (Accessed Jan 8, 2018)
13. Busardò FP, Capitummino R, Liguoro L, Seidita E, Slama F, Pollara P, Inzerauto M, Ravì N, Tomasino C, Scorsone A, Tomasello G, Carini F, Pomara C. Brachial plexus: considerations after a cadaveric study. EuroMediterranean Biomedical Journal2017,12 (27) 130–134
14. Osculati A, Guzzetti L, Tavani M. Corpse and body parts use for scientific and didactic aims. Italian legislation synopsis and comparison to some foreign regulation. Riv. it. medicina legale (dal 2012 Riv. it. medicina legale e dir. sanitario), fasc.2, 2010, pag. 251.
15. Donazione del corpo post mortem a fini di studio e ricerca. Parere del Comitato Nazionale per la Bioetica 19/05/2013.
16. Mazzucco W, Ricciardi W, Boccia S. Addressing the gap between genetics knowledge and clinical practice: a pilot study to implement genetics education among physicians in Italy. Italian Journal of Public Health. 2012 vol 9 n.4.
17. Michelazzo MB, Pastorino R, Mazzucco W, Boccia S. Distance learning training in genetics and genomics testing for Italian health professionals: results of a pre and post-test evaluation. Epidemiology, Biostatistics and Public Health, Vol 12, No 12 (2015).
18. Simone B, Mazzucco W, Gualano MR, Agodi A, Coviello D, et al. . The policy of public health genomics in Italy. Health Policy. 2013 May;110(2-3):214-9.
19. Mazzucco W, Pastorino R, Lagerberg T, Colotto M, D'Andrea E, Marotta C, Marzuillo C, Villari P, Federici A, Ricciardi W, Boccia S. Current state of genomic policies in healthcare among European Union member states: results of a survey of chief medical officers. Eur J Public Health. 2016 Sep 29.
20. Tramuto F, Mazzucco W, Maida CM, Affronti A, Affronti M, Montalto G, Vitale F. Serological pattern of Hepatitis B, C, and HIV infections among immigrants in Sicily: epidemiological aspects and implication on public health. J Community Health. 2012 Jun;37(3):547-53.
21. Mazzucco W, Lacca G, Cusimano R, Provenzani A, Costa A, Di Noto AM, Massenti MF, Leto-Barone MS, Lorenzo GD, Vitale F. Prevalence of sensitization to Anisakis simplex among professionally exposed populations in Sicily. Arch Environ Occup Health. 2012;67(2):91-7. doi: 10.1080/19338244.2011.578683.
22. Bonaventure A, Harewood R, Stiller CA, Gatta G, Clavel J, Stefan DC, et al. CONCORD Working Group, in Worldwide comparison of survival from childhood leukaemia for 1995-2009, by subtype, age, and sex (CONCORD-2): a population-based study of individual data for 89 828 children from 198 registries in 53 countries. Lancet Haematol. 2017 May;4(5):e202-e217.
23. Matz M, Coleman MP, Sant M, Chirlaque MD, Visser O, Gore M, Allemani C; CONCORD Working Group. Worldwide comparison of ovarian cancer survival: Histological group and stage at diagnosis (CONCORD-2). Gynecologic Oncology Volume 144, Issue 2, 1 February 2017, Pages 396-404.
24. Cerame G, Meli V, Vitale F, Firenze A, Viviano E, Mazzucco W, Romano N.A study to evaluate the lifestyle of medical students in Palermo (Italy). Ig Sanita Pubbl. 2008 Jul-Aug;64(4):473-88.
25. Costantino C, Mazzucco W, Azzolini E, Baldini C, Bergomi M, Biafiore AD, et al.. Influenza vaccination coverage among medical residents: an Italian multicentre survey. Hum Vaccin Immunother. 2014 Mar 6;10(5).
26. Costantino C, Amodio E, Calamusa G, Vitale F, Mazzucco W. Could university training and a proactive attitude of coworkers be associated with influenza vaccination compliance? A multicentre survey among Italian medical residents. BMC Medical Education (2016) 16:38.
27. Costantino C, Maringhini G, Albeggiani V, Monte C, Lo Cascio N, Mazzucco W. Perceived need for an international elective experience among Italian medical residents. EuroMediterranean Biomedical Journal2013, 8(3):10-15.
28. Mazzucco W, Marotta C, de Waure C, Marin G, Fasoletti D, Colicchio A, Luppi D, et al.. Motivational aspects and level of satisfaction of Italian junior doctors with regard to knowledge and skills acquired attending specific general practice training courses. A national web survey. EuroMediterranean Biomedical Journal 2017,12 (17) 77–86.

29. Ianuale C, Leoncini E, Mazzucco W, Marzuillo C, Villari P, Ricciardi W, Boccia S. Public Health Genomics education in post-graduate schools of hygiene and preventive medicine: a cross-sectional survey. BMC Med Educ 2014 Oct 10;14:213..

Appendix 1 - Questionnaire

Introduction to the survey

Gentili Colleghi,

l'Associazione Italiana Giovani Medici (SIGM) - Sicilia e l'Associazione Italiana Medici (AIM) - Sicilia, in risposta alle sollecitazioni ed alle disponibilità provenienti dall'Istituto Zooprofilattico Sperimentale della Sicilia (IZSS) e dal Dipartimento BIONEC dell'Università degli studi di Palermo, si sono fatte promotrici di una survey finalizzata a documentare il fabbisogno formativo dei medici siciliani. Nel particolare, è stato predisposto un breve questionario on line destinato ai medici abilitati ed in formazione specialistica, nonchè a profili specialistici senior, dell'area chirurgica per rilevare sia le esperienze formative fatte, oltre che un eventuale specifico interesse, in tema di formazione su cadavere (cadaver lab) e su animali vivi (animal lab), questi ultimi per la pratica di procedure endoscopiche.

Vi chiediamo la vostra cortese collaborazione dedicando pochissimi minuti del vostro tempo prezioso per rispondere alle domande del questionario, nonché per diffondere l'iniziativa tra gli altri colleghi.

Il questionario è assolutamente anonimo ed i dati sensibili saranno trattati e conservati secondo le norme sulla tutela della privacy ai sensi dell'art.7 del D.Lgs. 196/2003.

Il Comitato Scientifico

Part A – General Information

Enter initials of your first and last name followed by date of birth (eg: Mario Rossi, July 19, 1980)

Sex (Male/Female)

Hometown

_____

Current place of work or training

_____

E-mail _____

Current task

_____

Part B – Questions on live animal lab

1) Do you know the Sicilian Zooprofilactic Experimental Institute?

2) Have you ever attended a specific endoscopic training on a live animal?

2.1 If NO, why? (Too expensive, I do not have time, I did not know, other)

2.2 If YES:

2.2.1) Indicate how many courses you have attended in the last three years

2.2.2) Indicate at which center you attended the last course

2.2.3) How many days did it last?

2.2.4) Did the organizers provide for accommodation?

2.2.4.1) If YES, indicates what kind of support did you have (information, affiliated hotels, etc.)

2.2.5) What did you like most about the course?

2.2.6) What did you like least about the course?

3) Indicate how useful it is (1= minimum score; 5= maximum score), in your opinion, to integrate an academic medical educational offer with a specific endoscopic training on live animals.

4) Indicate how important it is (1= minimum score; 5= maximum score), in your opinion, to continuously integrate your professional education with a specific endoscopic training on live animals.

5) Why do you consider it important?

Part C – Questions on cadaver lab

1) Have you ever heard of cadaver labs taken in place in Sicily?

2) Have you ever attended any cadaver lab specific training?

2.1 If NO, why? (Too expensive, I do not have time, I did not know, other)

2.2 If YES:

2.2.1) Indicate how many courses you have attended in the last three years

2.2.2) Indicate at which center you attended the last course

2.2.3) How many days did it last?

2.2.4) Did the organizers provide for accommodation?

2.2.4.1) If YES, indicates what kind of support did you have (information, affiliated hotels, etc.)

2.2.5) What did you like most about the course?

2.2.6) What did you like least about the course?

3) Indicate how useful it is (1= minimum score; 5= maximum score), in your opinion, to integrate an academic medical educational offer with cadaver lab specific training

4) Indicate how important it is (1= minimum score; 5= maximum score), in your opinion, to continuously integrate your professional training with specific cadaver labs

5) Why do you consider it important?

6) Indicate if are there any surgical procedures or techniques you would like to be trained in on live animals or cadavers.

6.1 If YES, report which one/s:

_____