

Invitation to an ESHRE-SIGA Course on

BASIC SEMEN ANALYSIS

November 13-17, 2017

A joint ESHRE-SIGA¹ – NAFA² – SAF³ – ANOVA⁴ course

General information	2
(aim, contents, speakers, languages, fee, accommodation)	
WHO and ESHRE laboratory manual methods	3
Reading suggestions	4
Preliminary schedule	5
Application form	6

DEADLINE

We need your **final and binding application** by **September 30**

Admission to the course is on the *first come – first serve* basis

Order of procedures:

1. Binding application (e-mail is preferred – see last page)
2. Confirmation by e-mail from us – you are accepted!
3. Invoice sent from us to invoicing address
4. Confirmation of payment shown at course start (if not confirmed by e-mail from us)

Course Co-ordinator

Lars Björndahl

ANOVA, Karolinska University Hospital
Norra Stationsgatan 69, 4 tr

E-mail: lars.bjorndahl@ki.se

¹ European Society of Human Reproduction and Embryology, Special Interestgroup in Andrology, www.eshre.com

² Nordic Association for Andrology (www.facebook.com/NAFAweb/)

³ Svensk Andrologisk Förening (www.svenskandrologi.se)

⁴ ANOVA – Andrology, Sexual Medicine, Transgender Medicine, Karolinska University Hospital and Karolinska Institutet, Stockholm, Sweden (former Centre for Andrology and Sexual Medicine)

General Information

The aim of the course is to provide a basis for improved standards of basic semen analysis. It is a strong recommendation that each laboratory is represented both by a person with medical responsibility and by a person with responsibility for the practical laboratory work.

The course complies with the ESHRE syllabus for basic semen assessment courses and is organised by ANOVA at the Karolinska University Hospital in collaboration with the ESHRE Special Interest Group in Andrology, the Nordic Association for Andrology and the Swedish Society of Andrology (Svensk Andrologisk Förening).

Course languages: English and Swedish: Seminars are presented in English, Swedish participants can get all printed course material, practical tutoring, and written examination in Swedish.

Teachers: Speakers and Tutors: Lars Björndahl, MD PhD, Rebecka Holmberg, PhD, BMA, Kristina Magnusson, BMA.

Contents: (Day 0) *registration and introductory lectures* in the afternoon. Day 1-4 there are practical sessions training the basic techniques. In the afternoons results are discussed in conjunction with the rationale for the specific techniques recommended in the WHO laboratory manual (2010), as further specified by the ESHRE Special Interestgroup in Andrology (SIGA). On Day 1 the practical session is called *Pre-test*, where all participants examine two samples each. In the two following days, all participants will *practice the methods* (first sperm count, sperm motility, and then sperm morphology and sperm vitality). The results from these practical sessions will be used for discussions about assessment techniques and quality control in the andrology laboratory. There may also be a practical demonstration on the detection of sperm antibodies. At the end of the course there will be **a written examination**, as well as **a practical examination**. All participants passing both practical and theoretical examination will receive a certificate from ESHRE.

Maximum number of participants: due to limited availability of microscopes, the maximum number of participants will be 10.

Course fee: (€1.00 equals approximately SEK 9)

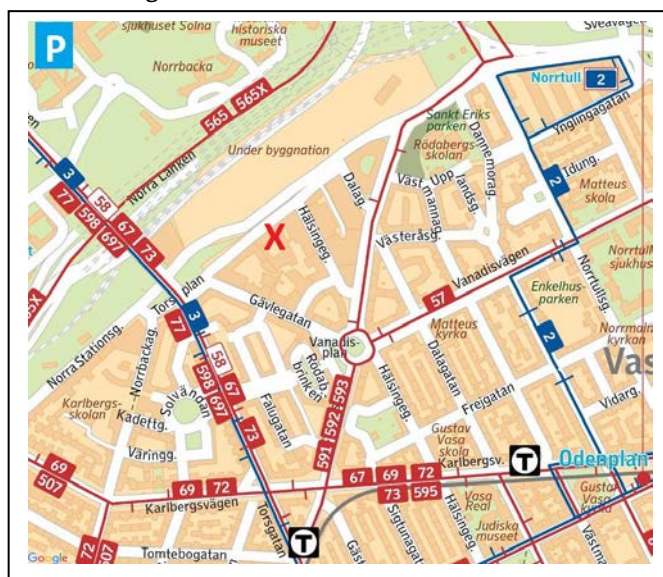
Members of ESHRE/NAFA/SAF: 9 500 SEK including Swedish VAT

Non Members: 9 900 SEK including Swedish VAT

Fee includes lectures, printed handouts of presentations, practical exercises, lab coats, meals and breaks. The WHO laboratory manual and other books are not included.

The course will be at **the new centre ANOVA** located close to the Karolinska University Hospital and the Karolinska Institutet, but not in the hospital or campus area: Norra Stationsgatan 69.

Accommodation: Participants must make their own reservations. ANOVA is located in central Stockholm, with hotels within walking distance as well as easily reached by city buses or the Stockholm Metro ("Tunnelbana": stations Odenplan or S:t Eriksplan). Closest bus stop is Torsplan where also airport coaches ("Flygbuss") stop both from and to the Stockholm International Airport Arlanda (www.flygbussarna.se)



A checklist according to the ESHRE syllabus

Citation of the ESHRE-SIGA recommendations or the Practical Guide to Basic Laboratory Andrology (Cambridge University Press, 2010) as a source for semen analysis methods in a publication or accreditation document requires that a laboratory has implemented the methods and that semen analyses are performed in compliance with these recommendations. The following checklist is provided to allow supervisors to establish that their laboratory is in compliance with these guidelines.

1. Do you perform a duplicate four-category* differential sperm motility count on warm preparations?
2. Do you use a positive displacement pipette to take the initial semen aliquot for dilution and (duplicate) counting using a haemocytometer?
3. Do you verify that there is a maximum variation between the duplicate sperm motility counts and between the counts on the two sides of a haemocytometer for sperm concentration?
4. Do you perform a differential multiparametric (recording abnormalities in four different regions of the abnormal spermatozoa) assessment of sperm morphology on a permanent, stained preparation using the classification of Tygerberg Strict Criteria (consistent with the WHO)?**
5. Do you determine the proportion of live spermatozoa using a vital stain if there are more than 50-60% immotile spermatozoa in a sample?***
6. Do you determine the concentration of leukocytes in semen using either a cytochemical or an immunocytochemical method?

If the answer to any of these questions is "no" then the deviation from the ESHRE-SIGA recommendations or the Practical Guide to Basic Laboratory Andrology must be explained and described precisely in the laboratory's own Procedures Manual. Also when reporting scientific data (papers or abstracts) deviations from the recommended methods should be specified.

The ESHRE-SIGA recommendations are based on the NAFA-ESHRE Manual (ESHRE Monographs #2, 2002) which has been developed into the Practical Guide to Basic Laboratory Andrology. *Essentially the recommendations are based on WHO recommendations (2010) with a few exceptions where the ESHRE-SIGA recommends standards that are (a) slightly higher and adapted to the needs of modern ART laboratories or (b) achieve the same level of quality but with less demands on work load in the laboratory.* Laboratories complying with ESHRE-SIGA recommendations therefore also comply with the essence of the WHO manual. The main differences related to the checklist are as follows:

* WHO 2010 only requires a 3-category count, not allowing differentiating between slow and fast progressive spermatozoa.

** WHO 2010 has multiparametric assessment as optional, but also the basic assessment of sperm morphology requires knowledge about abnormalities in all regions of the spermatozoa. Therefore ESHRE-SIGA recommends multiparametric assessment which allows the calculation of the TZI.

*** WHO 2010 sets the limit for vitality assessment to less than 40% progressive sperm, which is illogical since non-progressive spermatozoa are live. The vitality test is for differentiating between immotile and dead sperm from immotile and live sperm.

Reading Suggestions

As mentioned above, all participants are expected to at least be familiar with the *WHO laboratory manual for the Examination and processing of human semen*¹ (ISBN 978 92 4 154778 9; World Health Organization, 2010). A more direct, hands-on manual was developed as a collaboration between the Nordic Association for Andrology, NAFA, and ESHRE and published as ESHRE Monograph #2, 2002: *Manual on Basic Semen Analysis*²). An updated and expanded version of this manual has been published: *A Practical Guide to Basic Laboratory Andrology*³ (Cambridge University Press 2010: ISBN-13 978-0-521-73590-2)

The above mentioned differences between the WHO manual and recommendations from the ESHRE SIGA have been published in *Human Reproduction*:

Barratt CL, Björndahl L, Menkveld R, Mortimer D. ESHRE special interest group for andrology basic semen analysis course: a continued focus on accuracy, quality, efficiency and clinical relevance. *Hum Reprod.* 2011;26:3207-12.

Recently a checklist for authors of scientific manuscripts and for reviewers and editors of scientific journals was published: The intention is to make it easier to plan, write, review and evaluate manuscripts involving results of semen analysis:

Björndahl L, Barratt CL, Mortimer D, Jouannet P. 'How to count sperm properly': checklist for acceptability of studies based on human semen analysis. *Hum Reprod.* 2016;31:227-32.

Another publication has described the details essential for any publication aiming at providing scientific evidence related to "semen quality":

Sanchez-Pozo MC, Mendiola J, Serrano M, Mozas J, Björndahl L, Menkveld R, Lewis SE, Mortimer D, Jorgensen N, Barratt CL, Fernandez MF, Castilla JA, Special Interest Group in Andrology of the European Society of Human R, Embriology. Proposal of guidelines for the appraisal of SEMen QUALity studies (SEMQUA). *Hum Reprod.* 2013;28:10-21.

¹ <http://www.who.int/reproductivehealth/publications/infertility/9789241547789/en/index.html>

² http://eshremonographs.oxfordjournals.org/cgi/pdf_extract/2002/2/1

³ http://www.cambridge.org/gb/knowledge/isbn/item2713262/?site_locale=en_GB

BASIC SEMEN ANALYSIS COURSE

ANOVA

Stockholm – Sweden: November 13-17, 2017

Day 0	
12.00-12.30	Registration
12.30-13.00 ¹	Basic introduction to laborator work
13.00-14.30	1. Introduction to course and WHO Lab Manual ² (2010)
14.30-15.00	Break with Refreshments
15.00-16:30	2. Clinical Significance of semen analysis 1(2)
16.30-16.45	Paus
16.45-17.15	3. Sample collection and macroscopic examination
17.15-17.30	General Discussion
Day 1	
09:00-13.30	PRACTICAL A: Pre-test ³ [refreshments around 11.00]
13.30-14.30	Lunch
14.30-15.00	
15:00-15.15	Discussion of results from PRACTICAL A
15.15-15.15	Pause
15.15-16.00	5. Sperm concentration measurement
16.00-16.15	Refreshments
16.15-17.00	6. Sperm motility assessment
17.00-17.30	7. Introduction to sperm kinematics
17.30-18:00	<i>General discussion</i>
19.30-	<i>Informal get-together</i>
Day 2	
09:00-13.00	PRACTICAL B: Training session 1 (concentration and motility), if possible with CASA demonstration; refreshments at 10:30
13.00-14.00	<i>Lunch</i>
14.00-15.00	8. Sperm morphology evaluation
15.00-15.15	Results of PRACTICAL B
15.15-15.45	Refreshments
15.45-16.15	9. Assessment of sperm vitality
16.15-16.45	10. Antisperm antibodies
16.45-17.00	Pause
17.00-17.45	11. Sperm preparation methods
17.45-18.00	<i>General Discussion</i>
Day 3	
09.00-12.00	PRACTICAL C: Training session 2 (morphology, vitality and antibodies), if available with CASA demonstration (morphology); Refreshments at 11.00
12.00-13.00	Lunch
13.00-13.15	Results of PRACTICAL C
13.15-14.15	12. Introduction to basic principles of quality control
14.15-14.30	<i>General Discussion</i>
14.30-15.00	Refreshments
15.00-16.00	Written examination
Day 4	
09.00-13.00	Practical Examination (coffee available between 10:30 and 11.30)
13.00-14:00	Lunch
14:00-14.30	Summary and closure of the course

¹ All times given are given as advice, based on estimated time needed to present the topic properly according to the syllabus and examination

² WHO Lab Manual (5th edition, 2010) is essential pre-course reading

³ Laboratory sessions start with a practical, "hands-on" demonstration by a faculty member, followed by the registrants' own practical work.

**Send information as specified below by e-mail
to: lars.bjorndahl@ki.se**

Participants: "Medical responsible" "Laboratory staff"

Name: *		
Title:		
Lab: *		
Clinic: *		
Hospital: *		
Address: *		
Town/ZIP: *		
Country: *		
Phone:		
FAX:		
e-mail: *		
Invoice address (if different from address above): *		
Course fee: *	<input type="checkbox"/> SAF/NAFA/ESHRE member Please provide proof of membership ¹ <input type="checkbox"/> Non-member	<input type="checkbox"/> SAF/NAFA/ESHRE member Please provide proof of membership ¹ <input type="checkbox"/> Non-member
Total fee: *	_____	_____
Approx. lab coat size: *	<input type="checkbox"/> XL <input type="checkbox"/> L <input type="checkbox"/> M <input type="checkbox"/> Small	<input type="checkbox"/> XL <input type="checkbox"/> L <input type="checkbox"/> M <input type="checkbox"/> Small
For Coffee breaks: *	<input type="checkbox"/> Coffee <input type="checkbox"/> Tea	<input type="checkbox"/> Coffee <input type="checkbox"/> Tea
Special food requirements:		

Please, send this *information* by e-mail ,

as soon as possible. Note that application is BINDING!

Any remaining questions? Please e-mail

lars.bjorndahl@ki.se

¹ Membership number or similar