

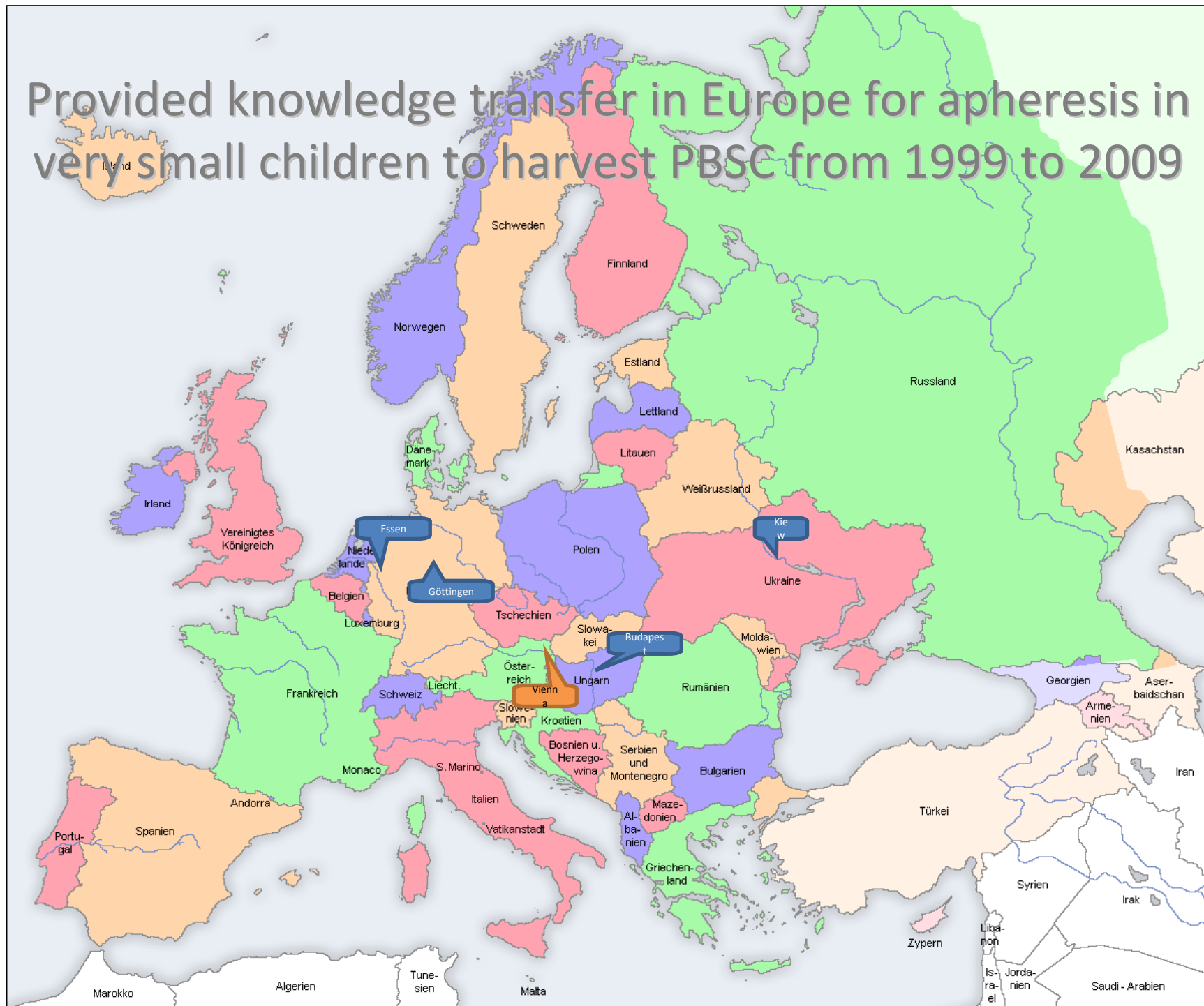
# On site course in pediatric PBSC collection

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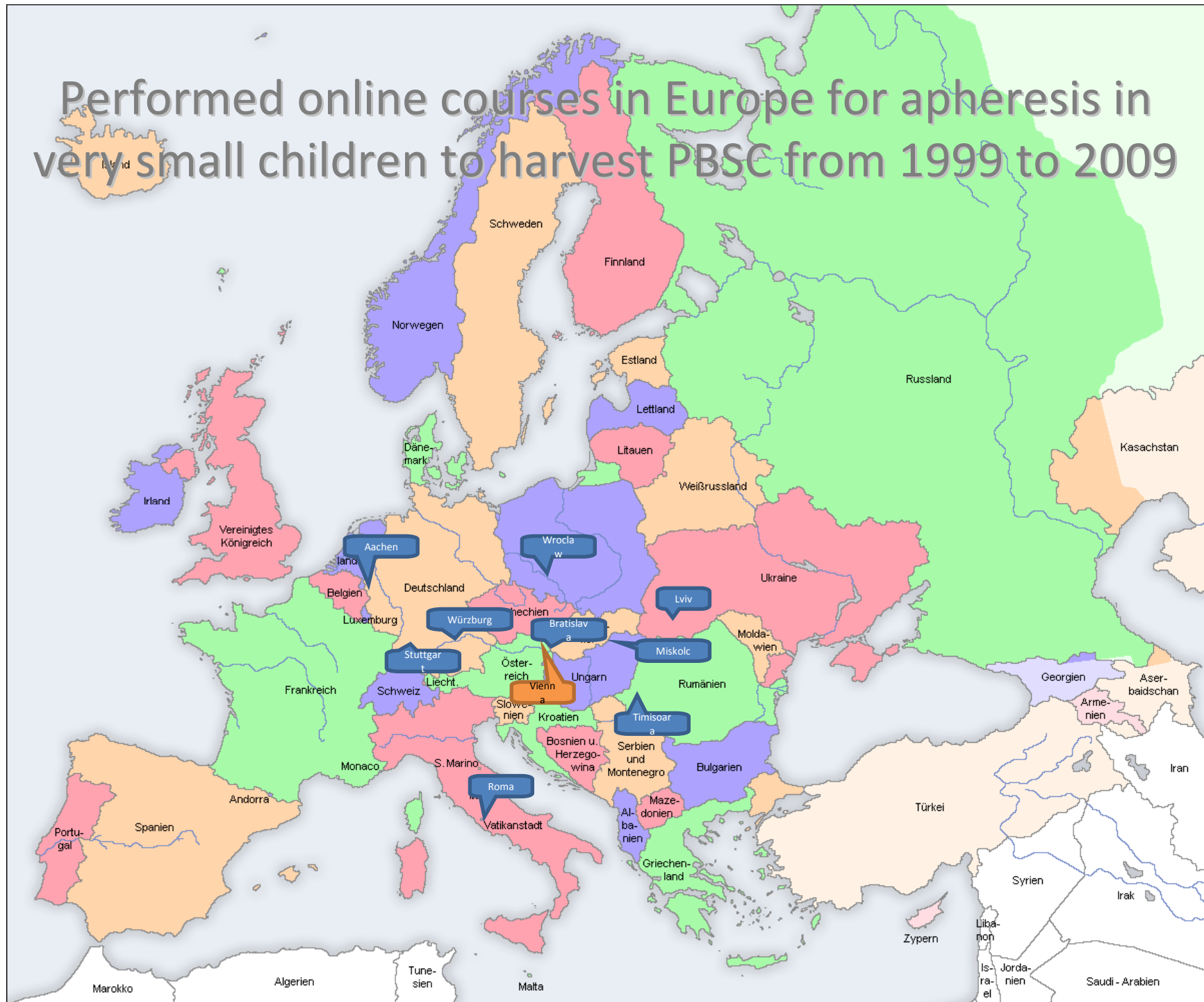
# What is the problem

- Data from the WAA registry 2003 – 2007
  - 15 centre entered data in the web-based new WAA registry; link in [www.worldapheresis.org](http://www.worldapheresis.org)
- 12448 procedures
- 2013 patients
- **612 (5%) procedures in 135 (7%) patients  $\leq$  21 years**
- In median 18 aphereses per centre, range 1 to 281
- Apheresis in small children is for most centres a rare event
- Most procedures for stem cell harvests in this patient group are performed in adult wards like Department of Transfusion medicine, Internal medicine, a.s.o.
- Cooperation with a pediatric ward is necessary, while experience in handling very small children during apheresis is also rare in pediatric wards

Provided knowledge transfer in Europe for apheresis in very small children to harvest PBSC from 1999 to 2009



Performed online courses in Europe for apheresis in very small children to harvest PBSC from 1999 to 2009



# On site course

(short description)

- 1 to 2 day course consisting of
  - Theoretically:
    - Introduction in the physiological aspects and characteristics of very small children (bw < 20 kg)
    - Theoretical illustration of the priming procedure in very small children
  - Hands on
    - Exemplification with a procedure in a 10 kg bw child (dummy run)
    - Fault management on the machine
  - Support how to document the apheresis procedures
  - Invitation to the team to exchange the data with the St. Anna Kinderspital data base

# On site course

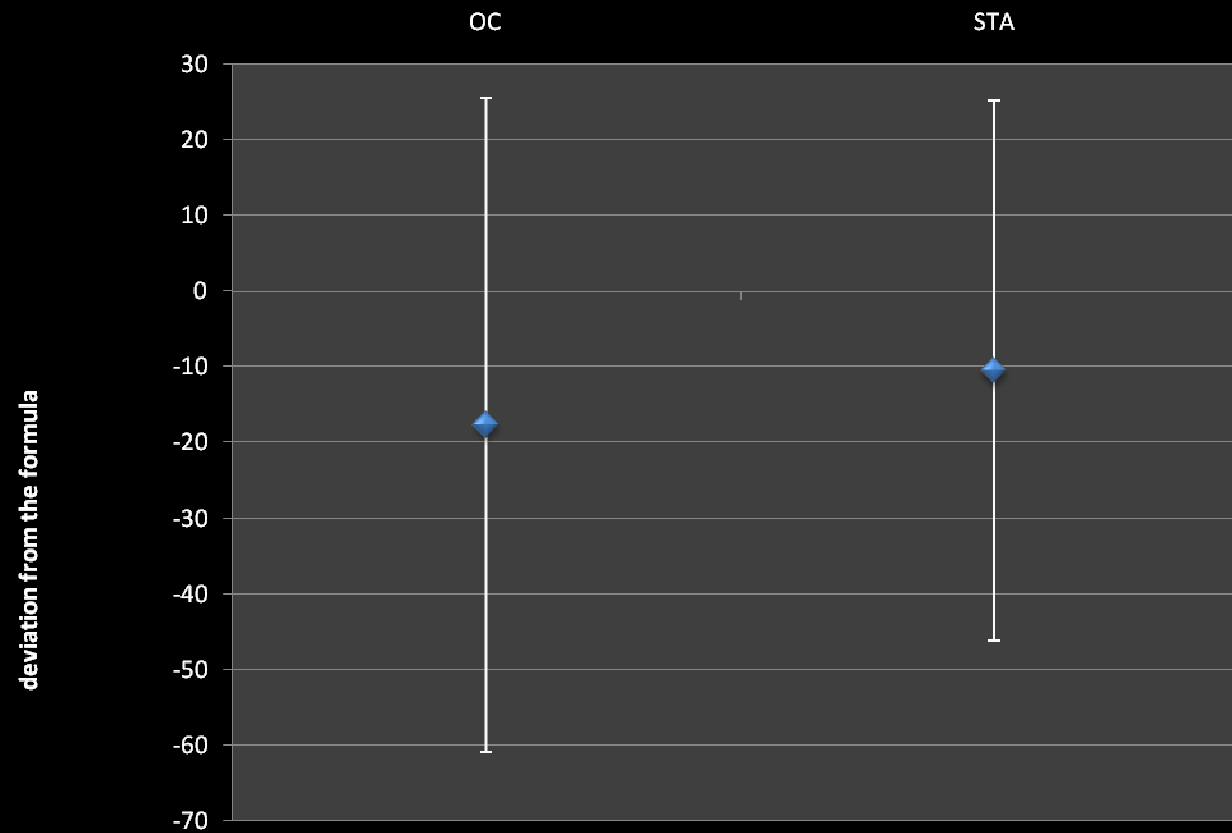
- Supported by the ESFH and the WAA
- Reasonable expenses to pay for
  - Traveling expenses
  - Local accomodation
- Reimbursement of the expenses for the institution are depending on the company of the used apheresis device

## Report on the reproducibility of the knowledge transfer by evaluating the harvest results

- From 6 centers 20 procedures were reported and 15 were evaluable
- We used the deviation of agreement (Bland and Altman) between the results and the predicted harvest calculated by the following formula :

$$C = [(A \times D) : B \times 0.5] : 1000$$

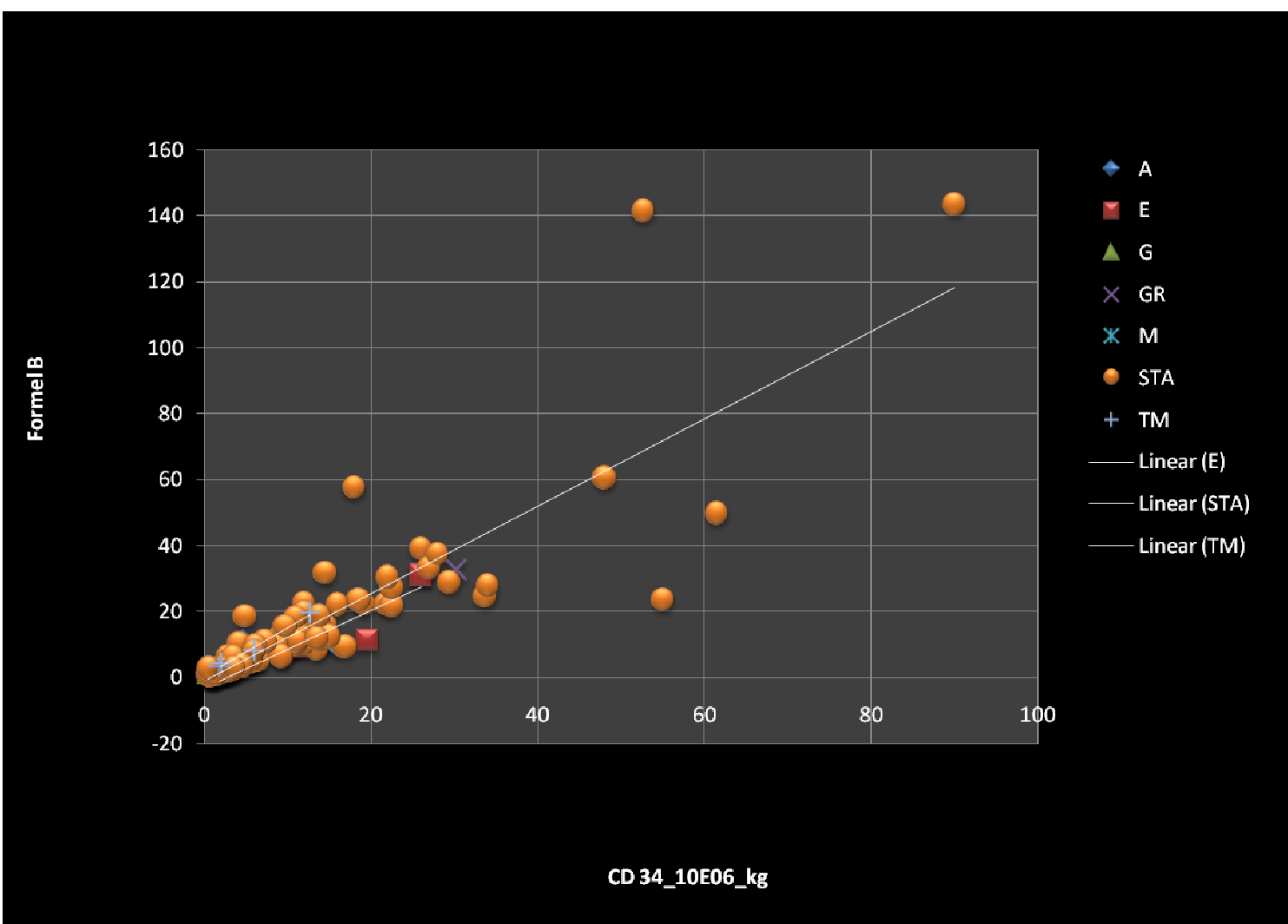
- A = CD34+ cells in peripheral blood [ $10^{03}/\text{ml}$ ]
  - B = bodyweight [kg]
  - C = CD34+ cells/kg bw in the product
  - D = processed volume
- 
- Estimation of an efficiency of 50%

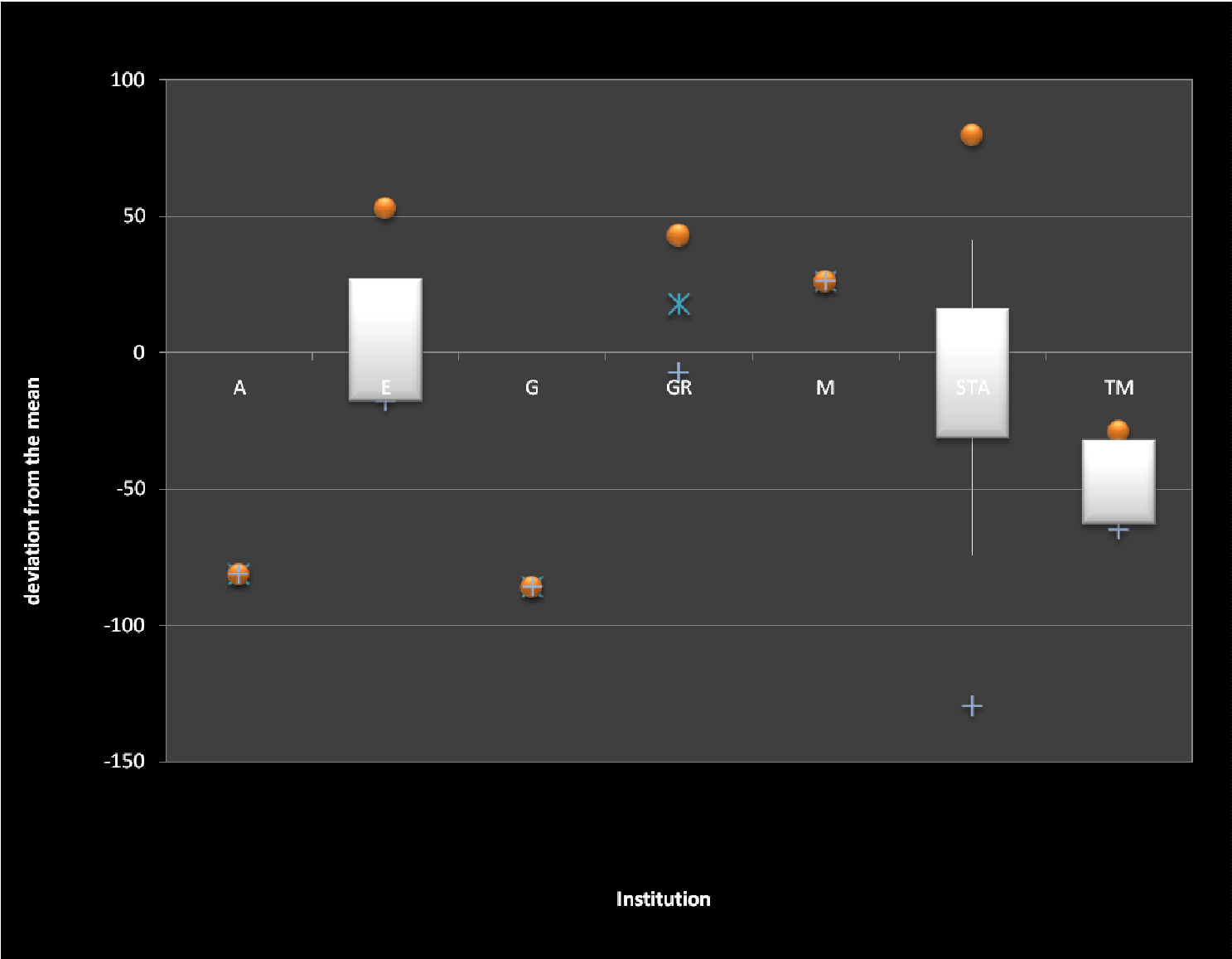


± standard deviation

OC = on site course  
STA = St. Anna Kinderspital

U-Test  $p = 0.56$  (OC  $n = 15$ , STA  $n = 126$ )





# results

- Using a standardized formula to evaluate the prediction of the yield and the real harvest we could demonstrate no significant difference between our own results and the results reported from the participating centre
- Indicating a reasonable reproducibility of the advised technique.

**How it is organized**

# lecture part:

- What is the difference?
  - What are the physiological differences?
  - What are the psychological differences?
  - What are the legal differences?
- How to decide which machine/system is the best for your patient (-group)?
- Standards in pediatric apheresis
- EBM, is there only a knowledge transfer from the adults?
- What is your part in improving the EBM in pediatric apheresis?
- How can we use the WAA registry for these purposes?

# Practical part:

- How to prime the systems, blood, human albumin, or saline?
- How to monitor a pediatric patient / donor
- How to handle a pediatric patient /donors behavior
  - Electronic jungle
  - Psychologists
  - Nursing
  - Parents
- What could happen during the apheresis procedures?
  - Technical pitfalls
  - Physiological pitfalls
  - Psychological pitfalls
- Entering data in the WAA registry

# expenses

- half day course (4 h) mainly theoretically
  - € 500,- plus travelling and accomodation
- full day course (8 h) theoretically and practically
  - € 750,- plus travelling and accomodation
- one and a half day course (no time limit) => full day course plus supervision of an apheresis procedure in a small child on site
  - € 900,- plus travelling and accomodation
- every extra day € 150,- as the centre needs and wants to have further supervision or help.