

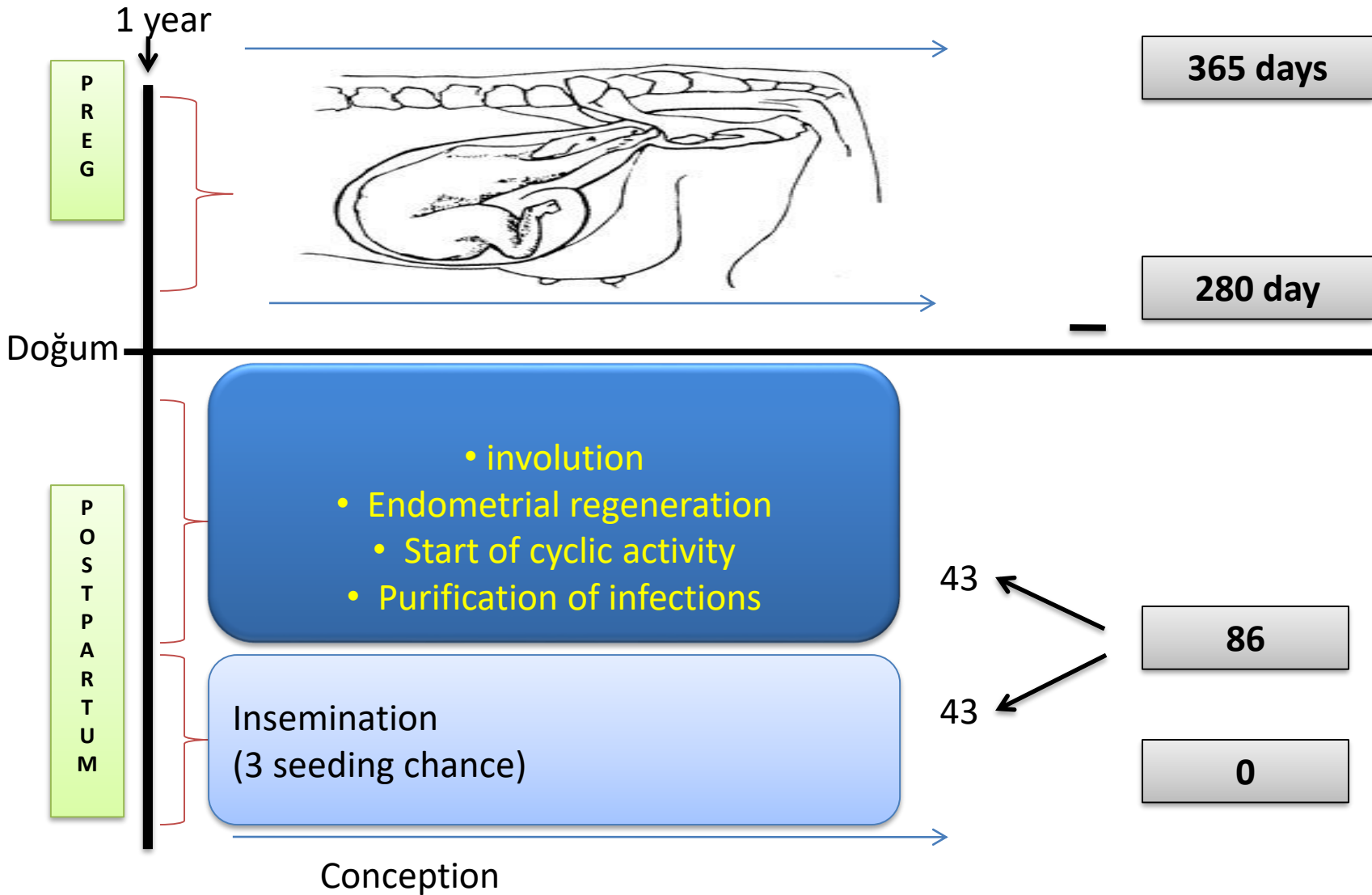


REPRODUCTIVE HERD HEALTH

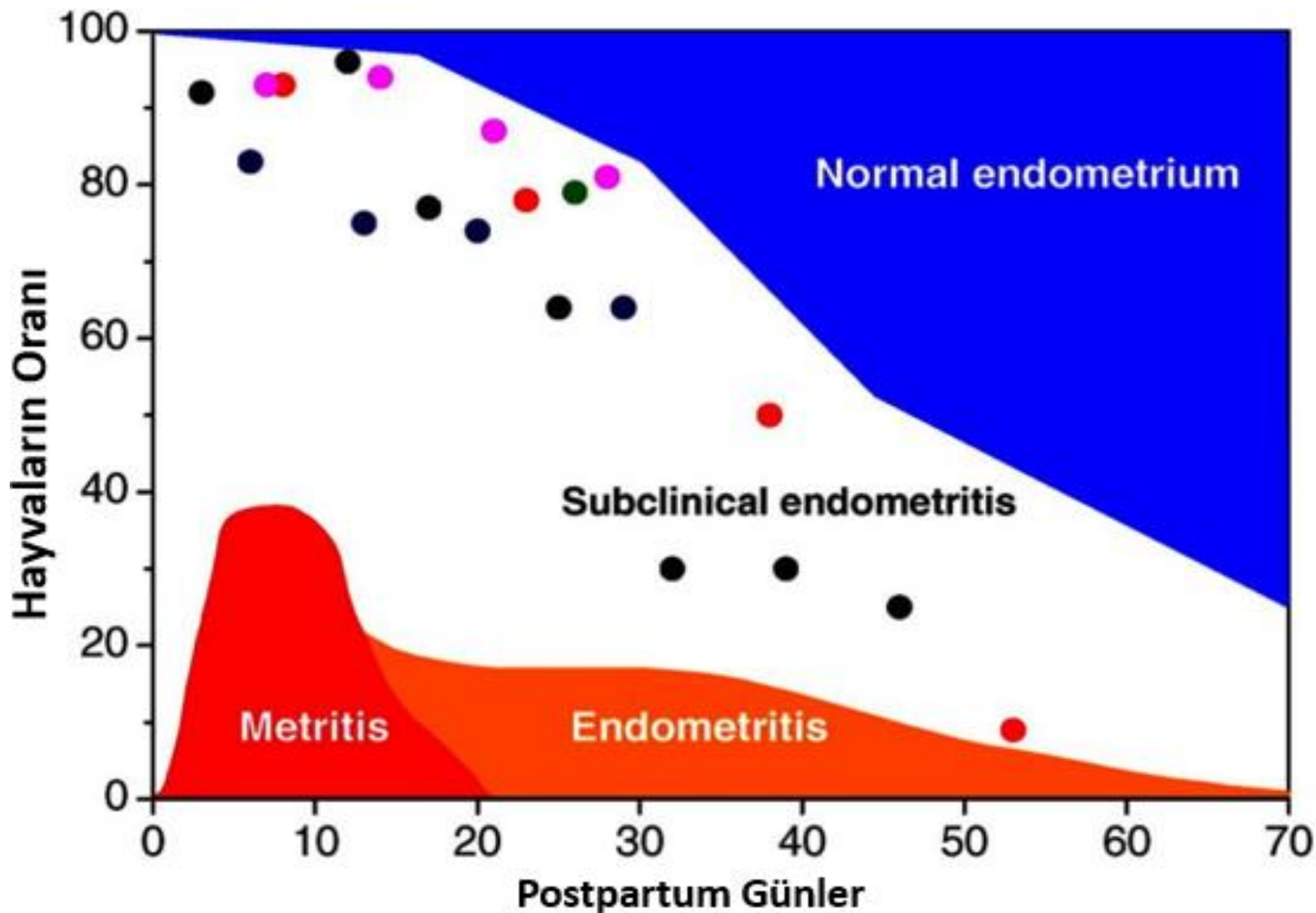
Doç. Dr. Halit Kanca

CLINICAL-PRACTICAL APPROACH TO UTERUS INFECTIONS IN COWS

Hypothetical Approach to Fertility

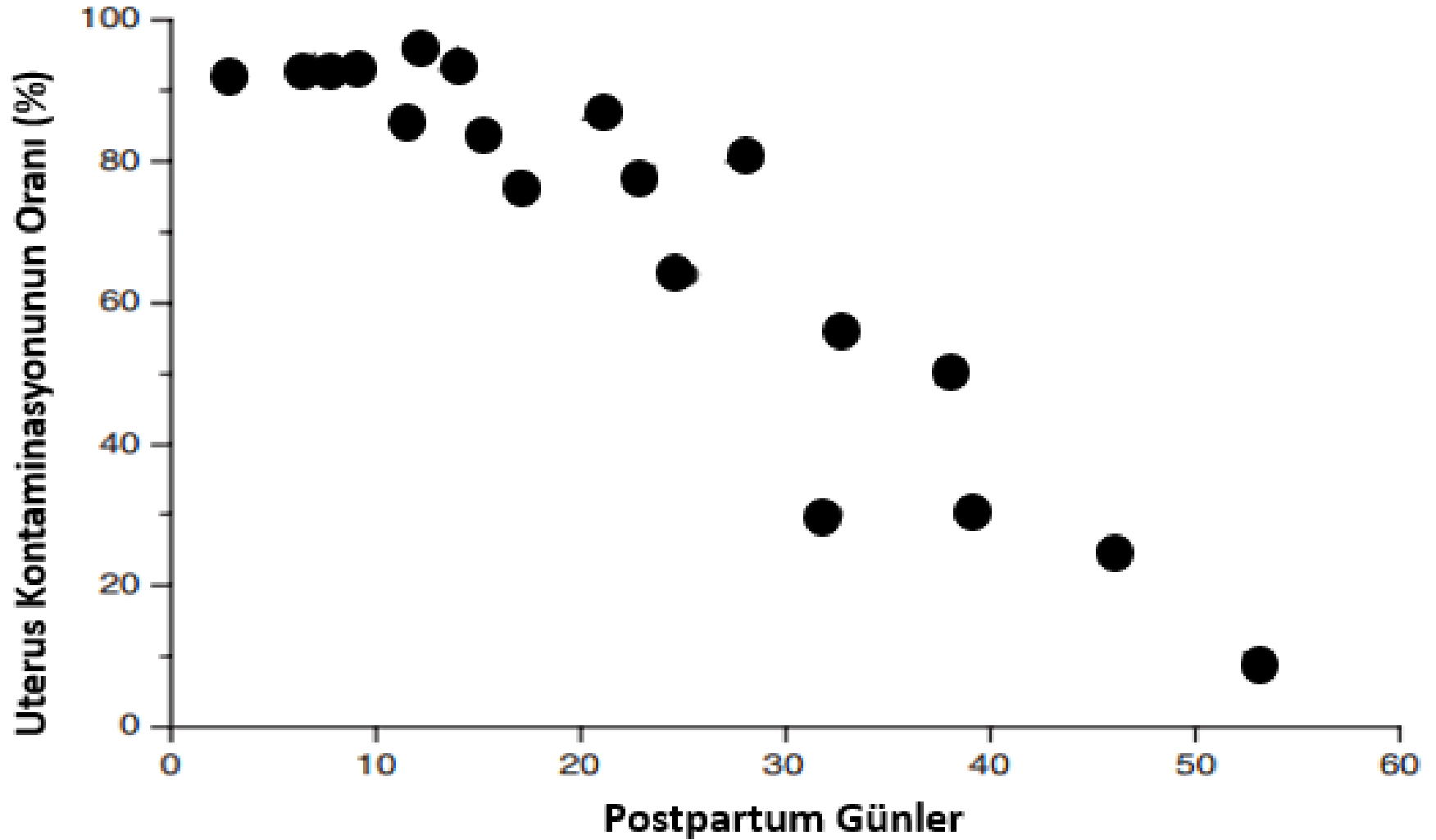


Postpartum uterine infections



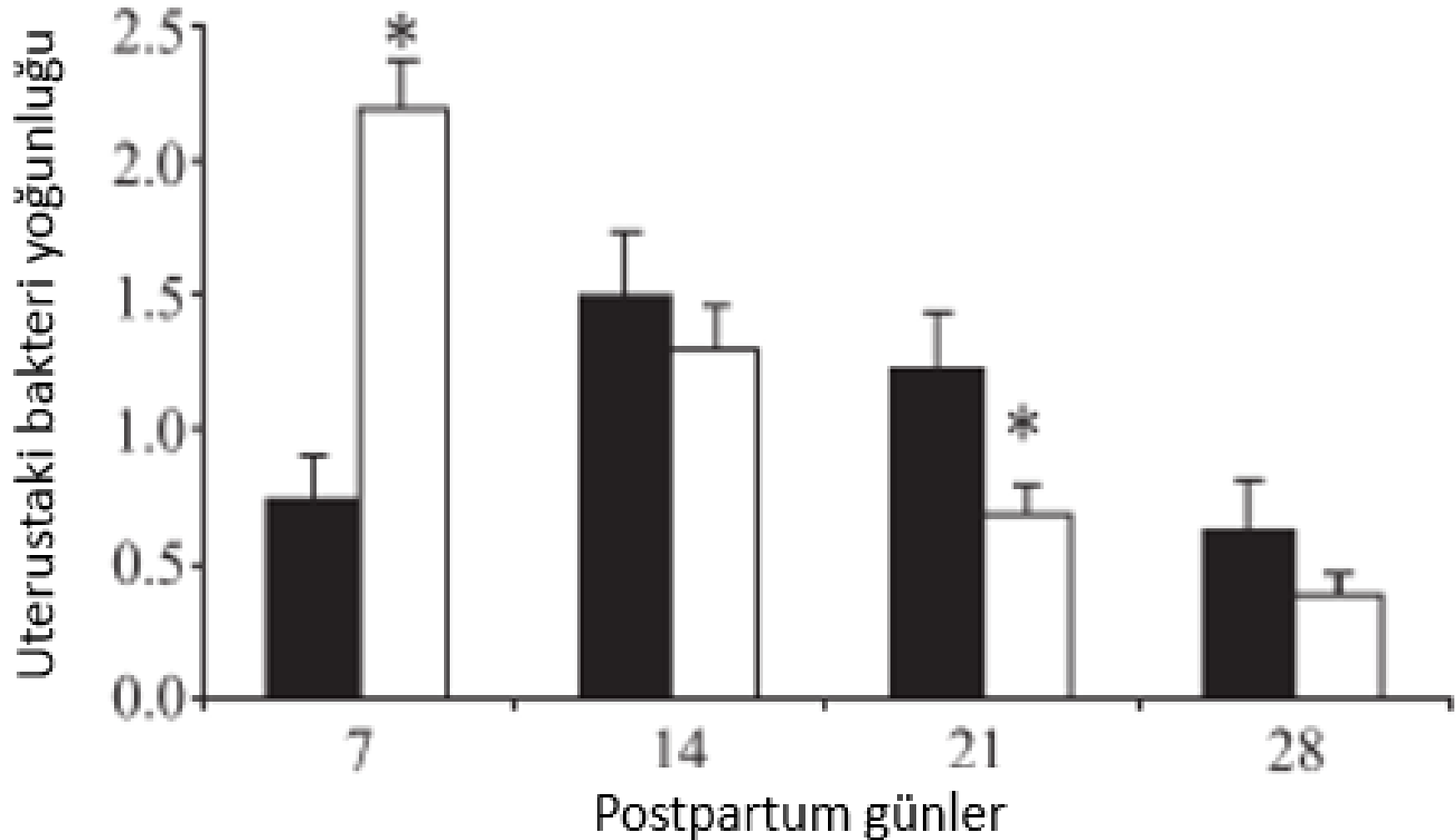
(Hansen, 2013)

Postpartum uterine contamination



(Sheldon ve Dobson, 2004)

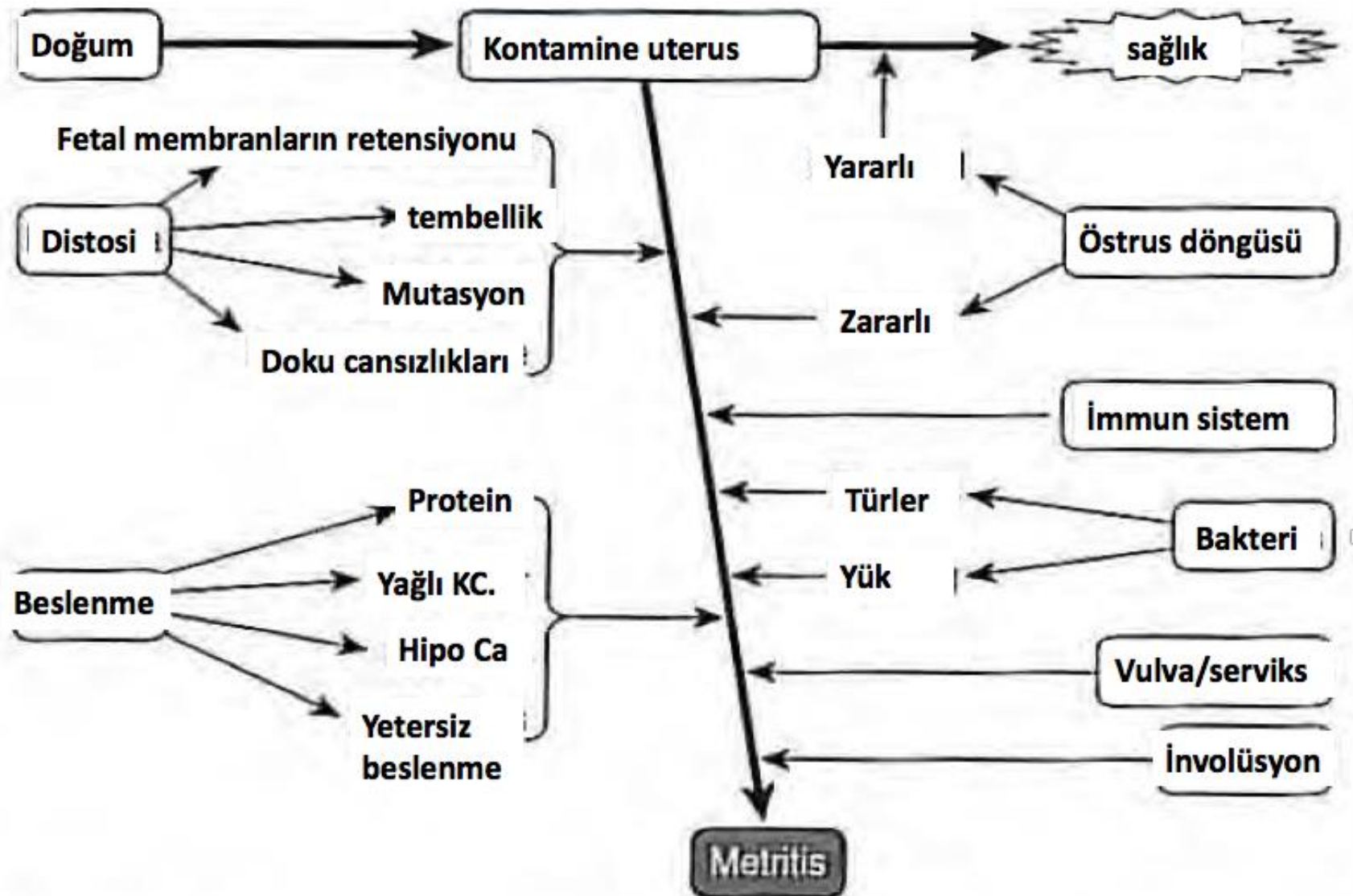
The most common bacterial species and density in P.P uterus



□ *Trueperella pyogenes*, ■ *E. coli*

(Williams, 2013).

P. P. Factors Associated with the Development of Uterine Infections



The face of metritis (the importance of the Puerperal period)



Lochia

The face of metritis (the importance of the Puerperal period)



(Küplülü Ş, Vural R, Polat M ,2012)

Puerperal physiology-pathology



(Küplülü Ş, Vural R, Polat M ,2012)

Puerperal physiology-pathology



(Küplülü Ş, Vural R, Polat M ,2012)

Puerperal physiology-pathology



(Stella ve ark., 2016)

Economic importance of metritis

Metritis are,
*** Seen on every cow and farm**

NEGATIVE RESULTS OF METRITIS

Death

Treatment costs

Labor

Milk loss

Meat-milk antibiotic residual problem

Infertility

Sterility - Cutting



ECONOMIC LOSS

Incidence of Metritis - Factors affecting incidence

Sheldon, 2009

Variable - increases or multiplies depending on factors. Every farm

Metritis incidence rates

Postpartum metritis: 36-50% (40%)

Systemic symptoms: 15-20% (3 weeks postpartum)

Subclinical endometritis: 30%

Herd management and management

Vaccination program

Feeding in transition period

Negative energy balance

Management of birth process

Mat, birth aid, etc.

Immunological competence of flock and individual

Stres

Intensity of the causative agents of infection

Environmental hygiene

Metritis is sometimes a CONCLUSION and sometimes a CAUSES
[Infertility] Metritis is an immunological problem

Sudden increase in metabolic
requirement

Fry growth and milk synthesis

Transition period dry matter
intake
(Risk factors are effective)

Risk factors

NEB

(IGF-I, insulin)

Affects cellular immunity
PMN weakness

METRITIS

Mikroorganism

Transition immunology and uterine infections

NEGATIVE ENERGY CURVE BEFORE AND AFTER BIRTH

Parturition

Increased Energy Demand

- Rapid growth of the calf
- Kolostrogenesis

Increased Energy Demand

- High lactation
- Insulin independent energy use of the udder

Disadvantage
KM uptake
reduction
High steroid
cortisol

Disadvantage
Ruminal adaptation

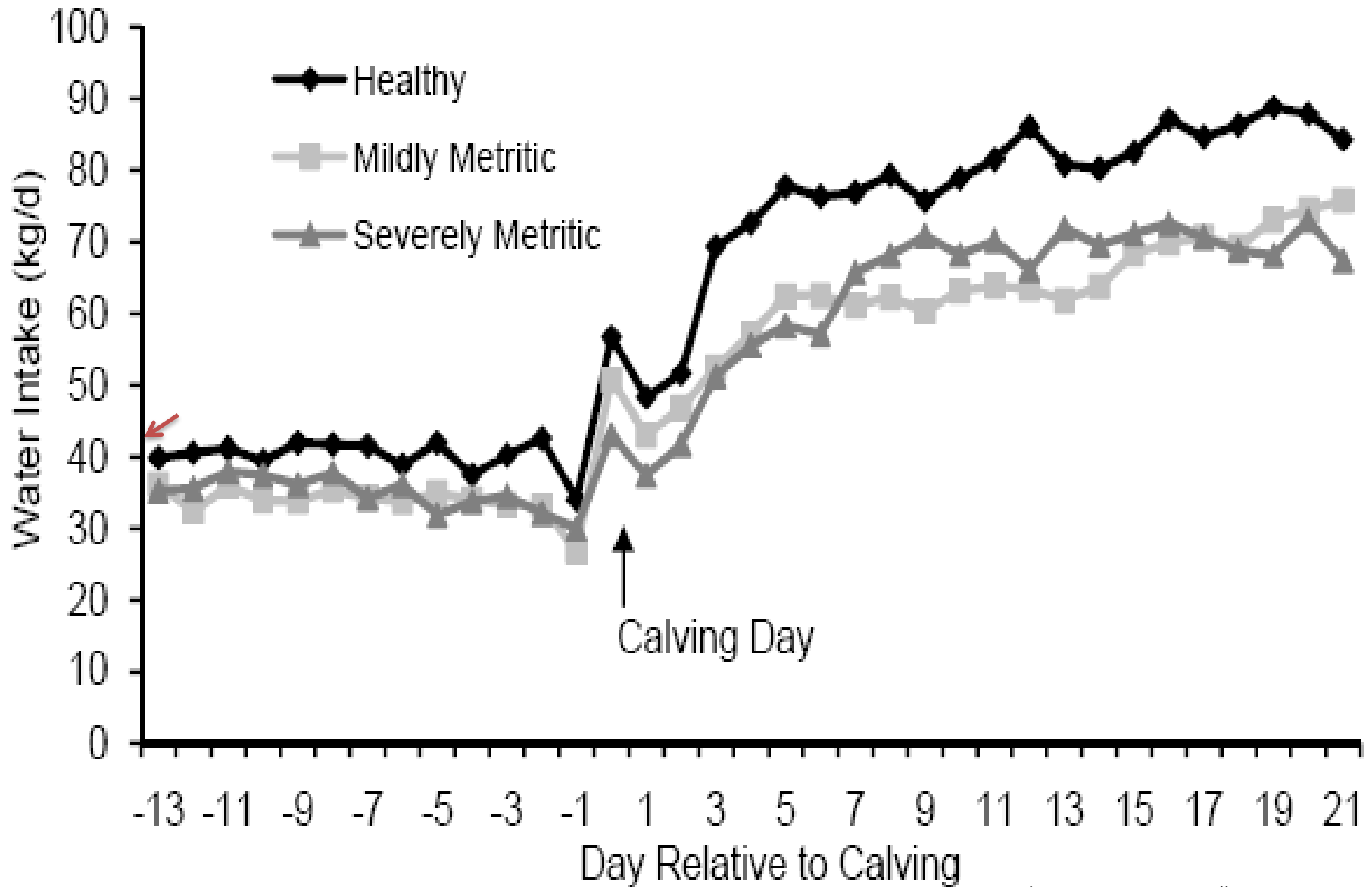
Metritis low

Metritis more

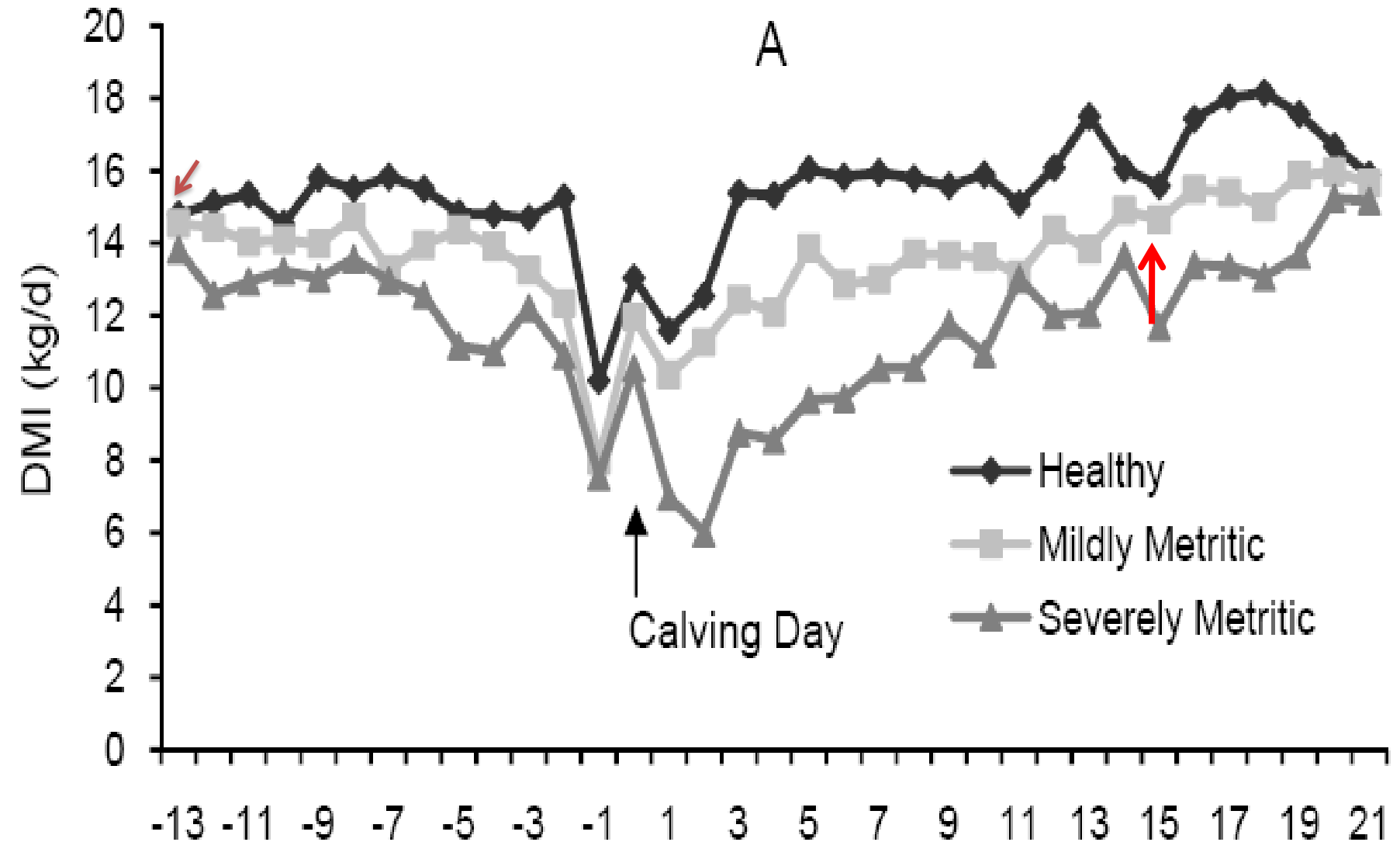
Energy curve and balance

NEB = NEFA = IGF-I = PMN reduction = Ig production reduction = Immune deficiency

Water intake-Metritis relationship in periparturient period



The relationship between dry matter intake and metritis in the periparturient period



Metritis, factor-predisposition factors and the role of immunity

FACTORS

bacteria

E.Coli

a.pyogenes

I f.necroph

Streptococcus spp.

Staphylococcus spp.

viruses

IBR (Herpes 1 and 4)

BVD-MD

Mushrooms

Aspergillus fumigatus

Mucor spp.

Mortierella wolfii

parasites

Neospora species.

Tritrichomonas

Sarcocystis neuroni

FACTOR / RISK LEVEL

Retentio sec.

Power birth

Abortions

Stillbirth

twins

hypocalcemia

Metabolic diseases

Season

IMMUNOLOGICAL FACTORS

1. Cellular immunity
(Leukocytes)

2. Humoral immunity

3. Complement proteins

4. Mechanical defense
(involution, mucosal health,

IMPROVEMENT
or
metritis

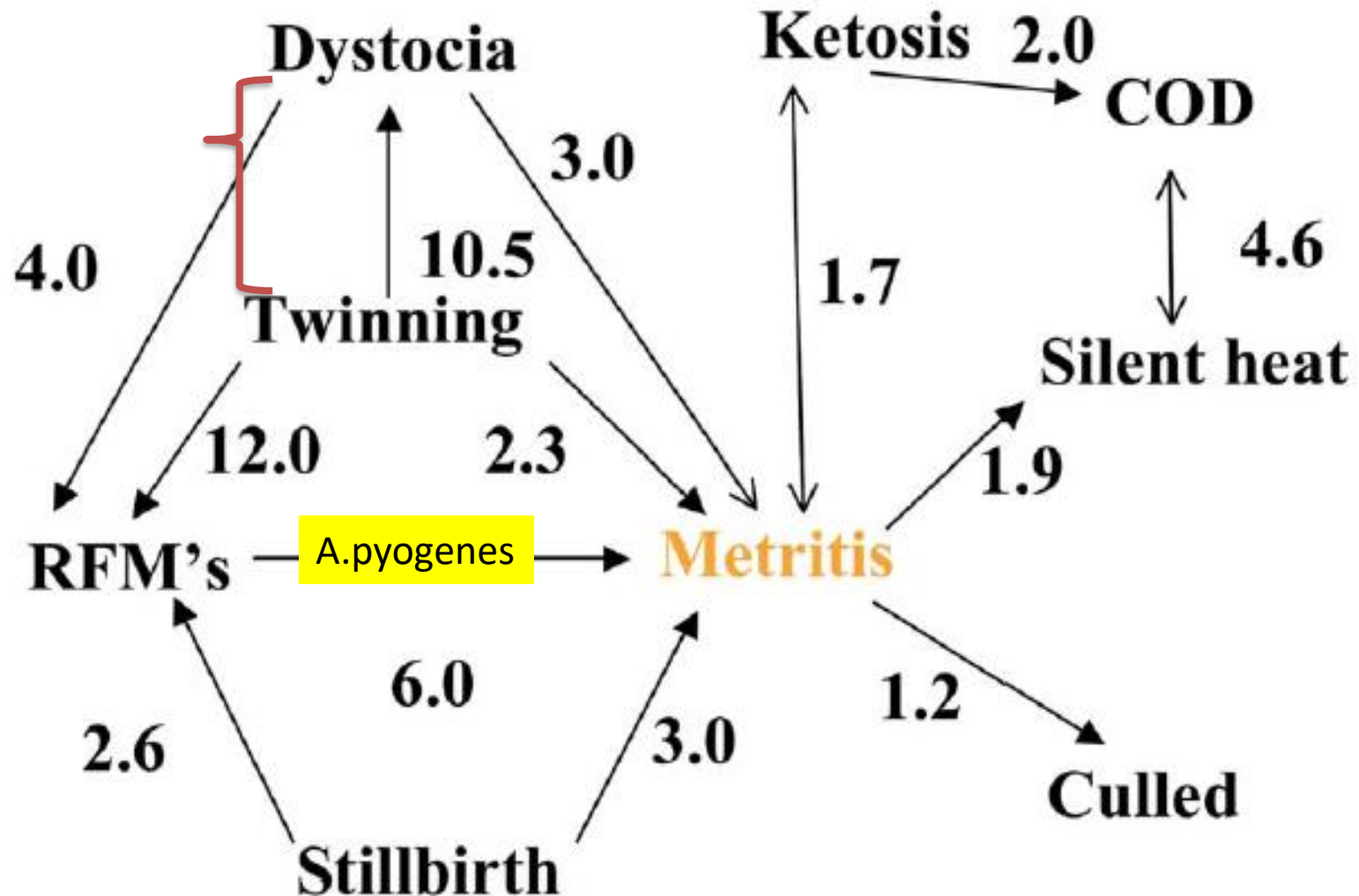


IMMUNOLOGICAL
AND RISK FACTORS
INTERACTION

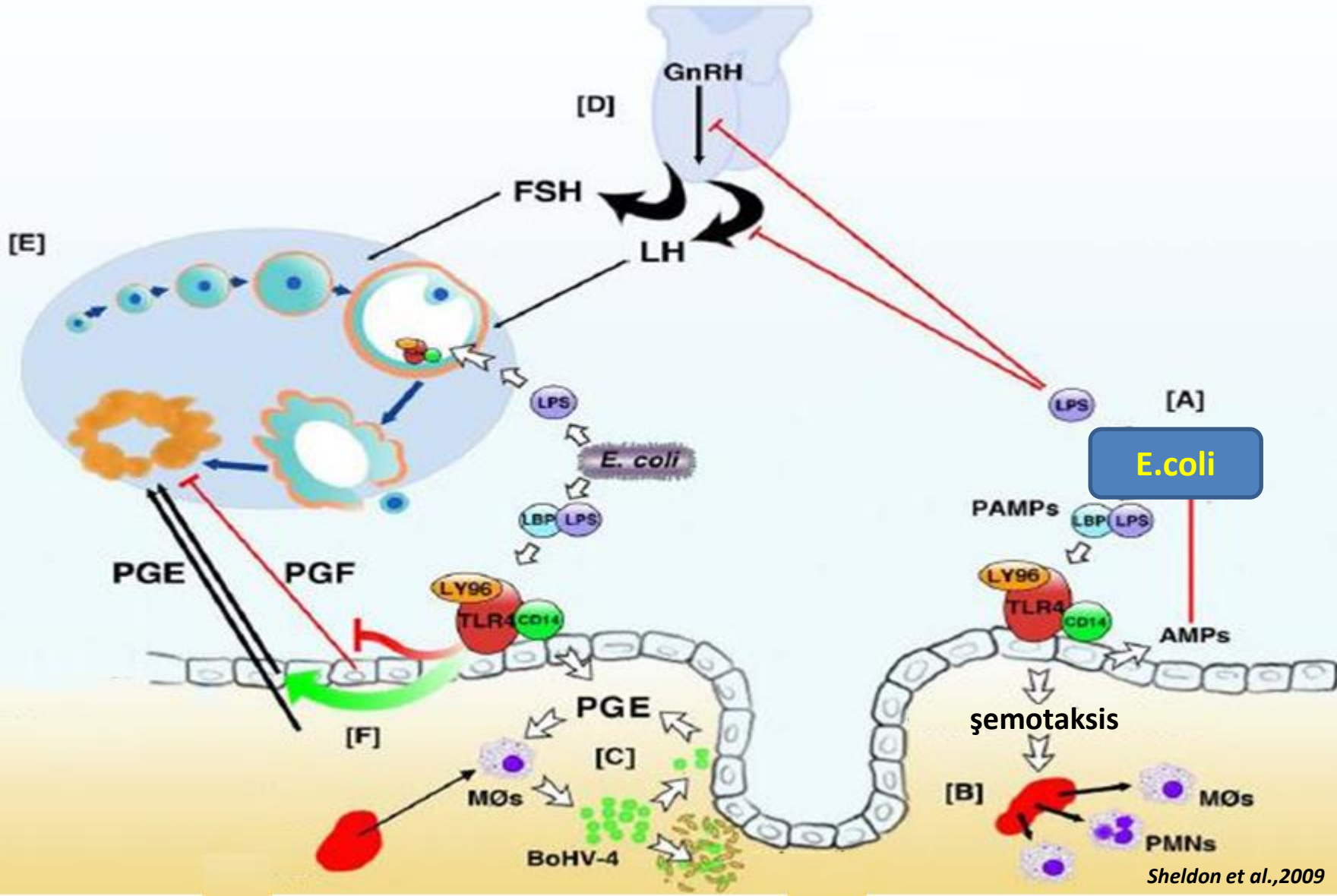
TARGET

Less active agent to the uterus / Predisposition factors should be monitored
/ Active immune system

How important are the risk factors in metritis? (How do they impact)



Uterine Infections-Ovary Function Interactions



Metritis-Fertility: Prognosis

1. Type of infection
 2. The duration of infection in the uterus
 3. Endometrial gland degeneration
-

4. Depends on the effectiveness of treatment ?

Cervicitis
Oophoritis
Salpingitis
IBR, BVD
Neospora

Heat stress
Mineral
Trace element
Vitamin

Sperm factor
Seeding factor
Insemination at the right
time