

# MIQvet

A revolution in radiology.

June 11, 2019



# Agenda



MIQvet

MIQvet, an  
introduction

MIQvet, the calibration

MIQvet, an introduction

MIQvet, the calibration

# Calculate your radiology.



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# Calculate your radiology.

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# Calculate your radiology.

*For any kV there can be found a mAs value resulting in the minimal dose needed for an image of good quality.*

# Calculate your radiology.

*When the chosen kV is low, the mAs needed will be high and tube wearing increases dramatically.*

# Calculate your radiology.

*When the chosen kV is high, contrast in the image will be reduced.  
An advantage is that there will be less scattered radiation.*

## *Settings in radiology:*

- \* depend on your hardware*
- \* determine image quality*
- \* depend on the subject*



## *Settings in radiology:*

*\* kV determines the penetration  
of the radiation used for imaging.*

*\* mAs determines the amount of  
radiation at a given kV.*

## *Settings in radiology:*

*\* an increasing kV will result in more penetration of the subject.*

*\* it will reduce the contrast in the image.*

## *Settings in radiology:*

*\* an increasing mAs will result  
in more tube wearing.*

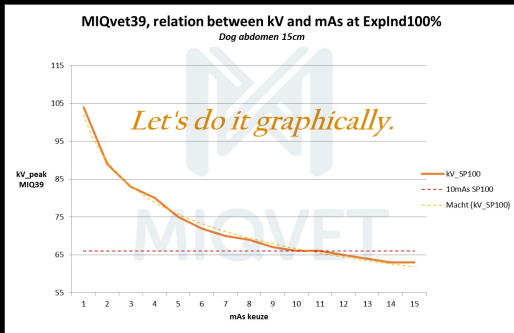
*\* this will lower the kV needed for  
the minimum dose of radiation  
and thus result in better contrast.*

# Calculate your radiology.

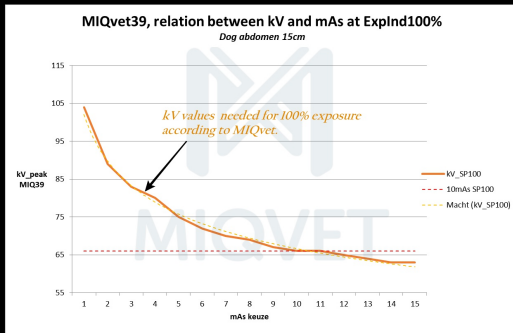


*A calculated example  
with MIQvet.*

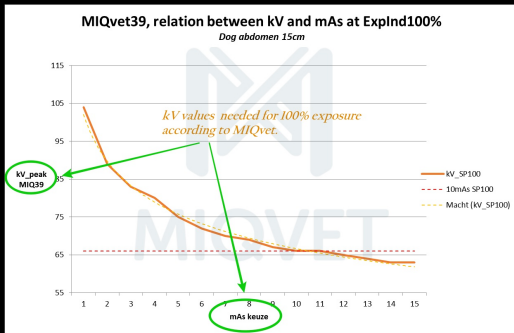
# Calculate your radiology.



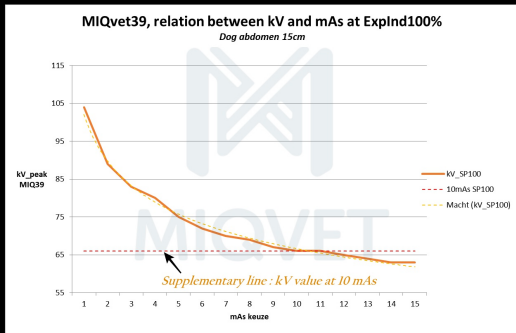
# Calculate your radiology.



# Calculate your radiology.

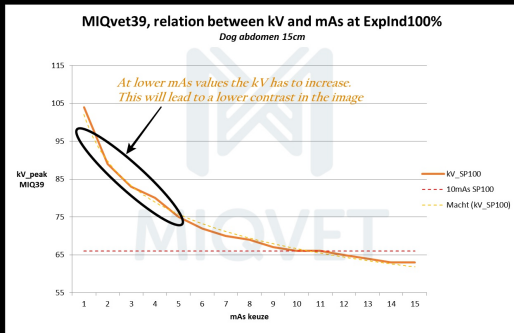


# Calculation your radiology.

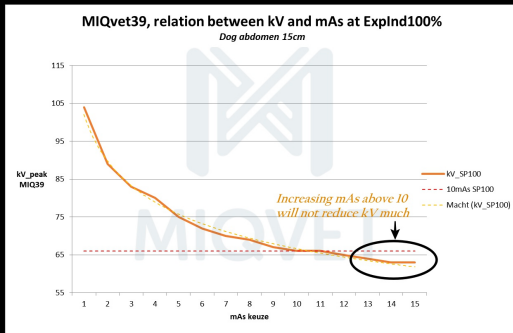




# Calculate your radiology.



# Calculate your radiology.



# Calculate your radiology.



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## MIQVET

*Due to the properties of digital X-ray detection systems, in MIQvet the default setting for mAs is set to 10. Users can select other values when preferred.*

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MIQvet b.v.

# The calibration.



# The calibration.

*MIQvet is based on a  
set combination of  
X-ray tube and detector*

*This combination has  
an unknown sensitivity.  
To determine the  
sensitivity calibration is  
needed.*

# The calibration.

*Calibration is done by  
making images of an  
abdomen of approximately  
15cm.*

*Measure the subject  
exactly and calculate kV  
and mAs in standard  
calibration.*



*At standard calibration  
MIQvet calculates  
66kV and 10mAs  
for an abdomen of  
exactly 15cm.*

# The calibration.

*Make images in a range  
of -10kV to +10kV  
in steps of 2kV.*

# The calibration.

*Select the best image  
in this range and enter  
the settings of this  
image as your calibration.*

# The calibration.

*MIQvet will calculate  
and store the  
sensitivity of your  
system.*

# The calibration.

*A tutorial with  
demo images  
is available.*

# Example of calibration.

