

## Spay/Neuter Surgery: Atypical Approaches

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Updated: 4/26/18

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## Pregnant Spay – Cat or Dog

- Points to remember
  - Greater risk of hemorrhage
  - Patient will lose a greater fluid volume
  - Pre- & intra-operative surgical times will be longer

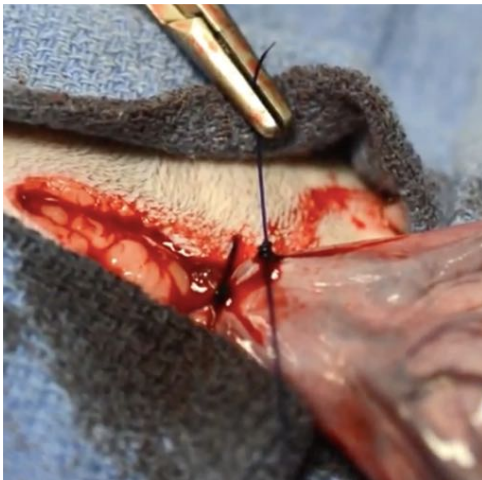
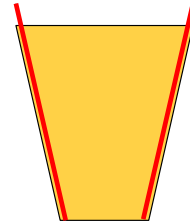
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## Pregnant Dog Spay

- Extended incision
- Strangle Knot
- Transfixation?
- Exteriorizing uterus
  - Fluid shift to facilitate exposure
  - Quickly displace from abdomen



## Transfixation



Via Needle



Via "Stick Tie"

## Pregnant Cat Spay



### Positioning



## Precautions

- Guard against hypothermia
- IV fluids?
- Ensure hemostasis



## Ovarian Pedicle Tie

- Achievable even in pregnant cat



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## Ovarian Pedicle Tie



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## Flank Spay



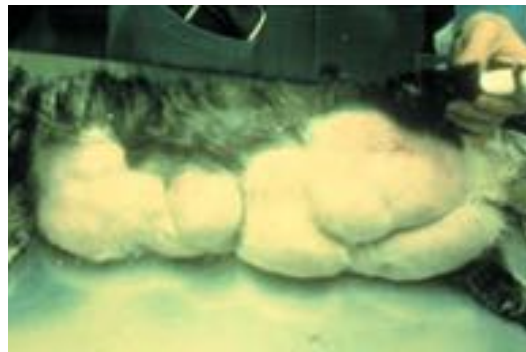
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## Ideal Patients for Flank Spays



Lactating



Mammary hyperplasia

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# Flank Spay

## Advantages

- Avoid mammary gland
- Reduced risk of dehiscence
- Observation of incision from a distance

## Disadvantages

- Scar isn't readily visible
- Increased wound pain



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## Flank Spay: Other Disadvantages

- Difficult to explore the abdomen
  - Confirm previous spay
  - Control hemorrhage
  - Find dropped stump or pedicle
  - Pyometra
  - Unexpected findings



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## Flank Spay: Positioning & Preparation

- Right lateral recumbency
- Legs extended
- Prep 10-cm square with greater trochanter marking right upper corner

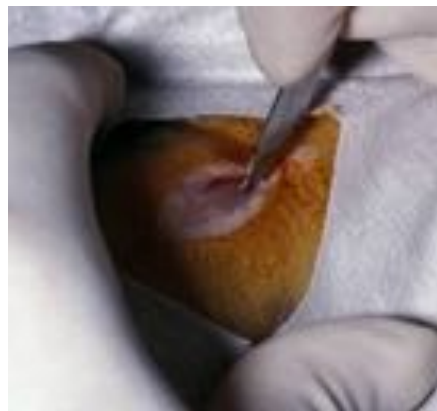


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## Flank Spay: Landmarks for Incision

- Midway between dorsum & ventrum
  - Increased risk of hooking ureter if too dorsal
- 2-3 finger widths cranial to hip joint
  - Can miss abdomen if too caudal
- 1-2 cm skin incision – horizontal or vertical



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## Flank Spay: Body Wall

- Tent body wall to avoid injuring the spleen
- Blunt dissect through muscle layers
- Tag body wall in fat cats



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## Flank Spay: Retrieving the Ovary

- Ovary is found immediately under the incision
- Do not clamp uterus before identifying the ovary
  - Ureter looks like a uterine horn

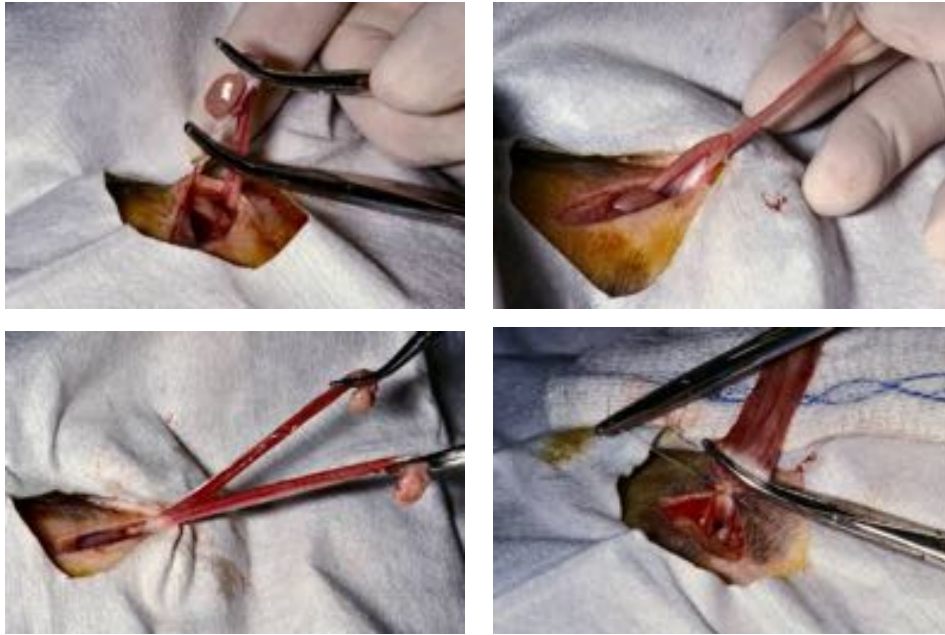


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## Flank Spay: Routine Ovariohysterectomy



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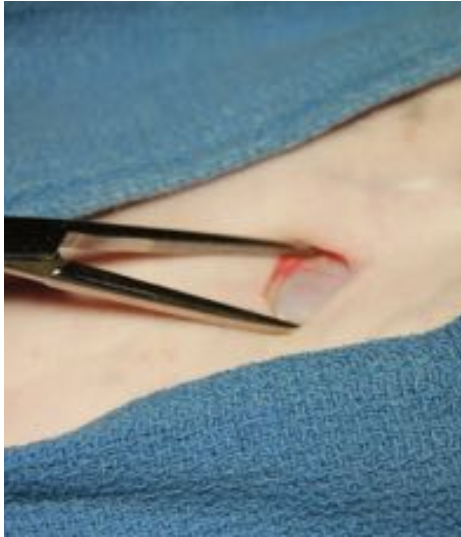
## Flank Spay: Closing the Wound

- Appose body wall edges
  - Apposition not as critical as for midline
- Subcuticular closure to avoid skin sutures



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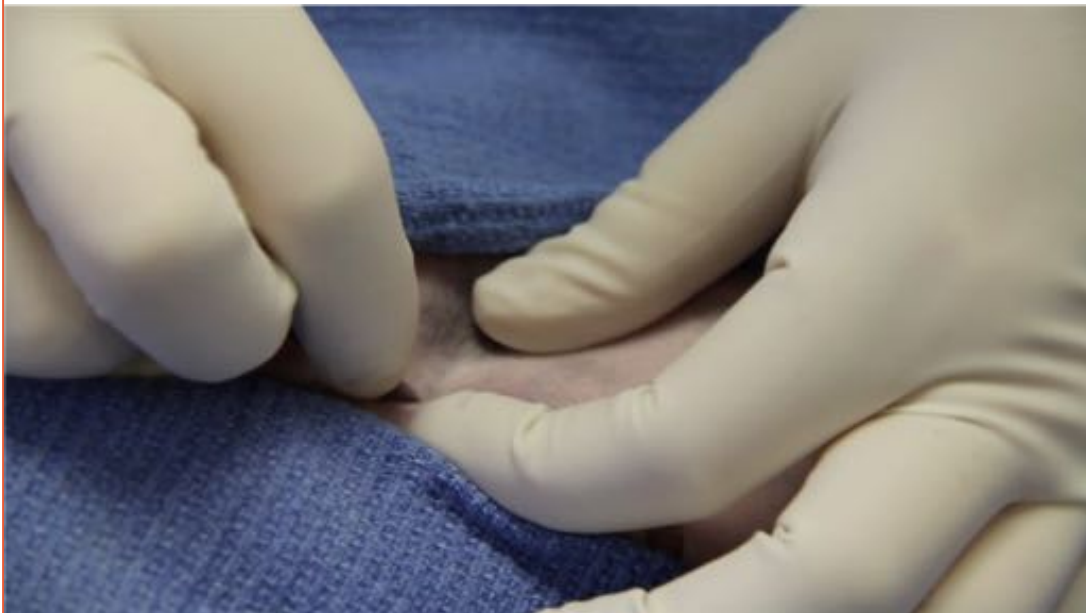
## Ventral Midline Approach (w/ Blunt Dissection)



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## Ventral Midline Approach (w/ Blunt Dissection)



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# Cryptorchidism

## Cryptorchidism in Dogs



## Subcutaneous



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## Abdominal



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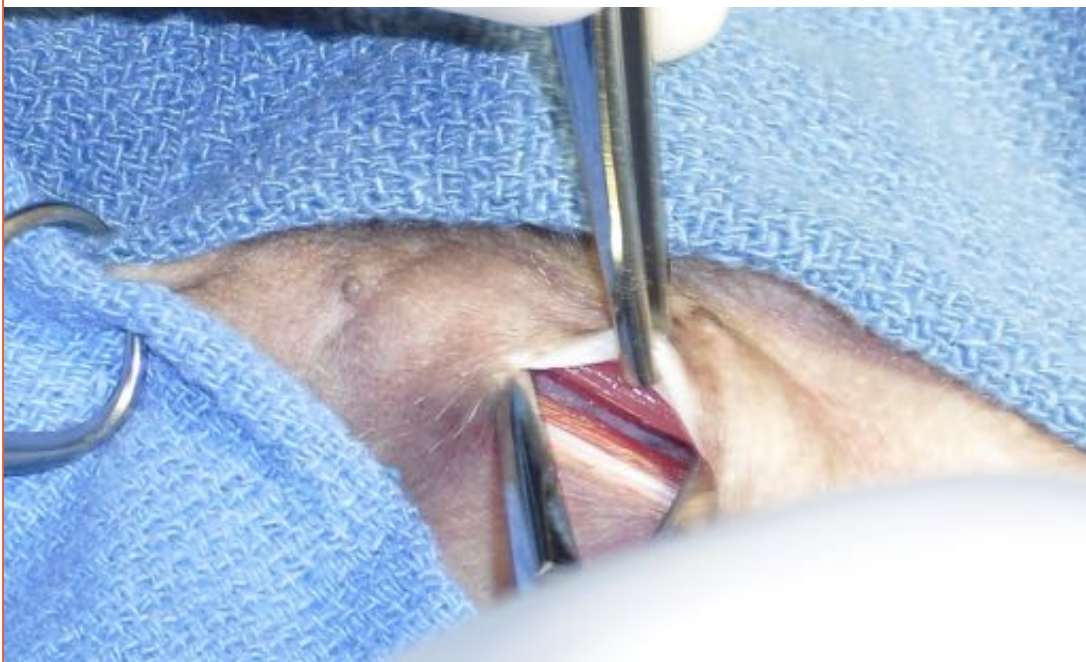
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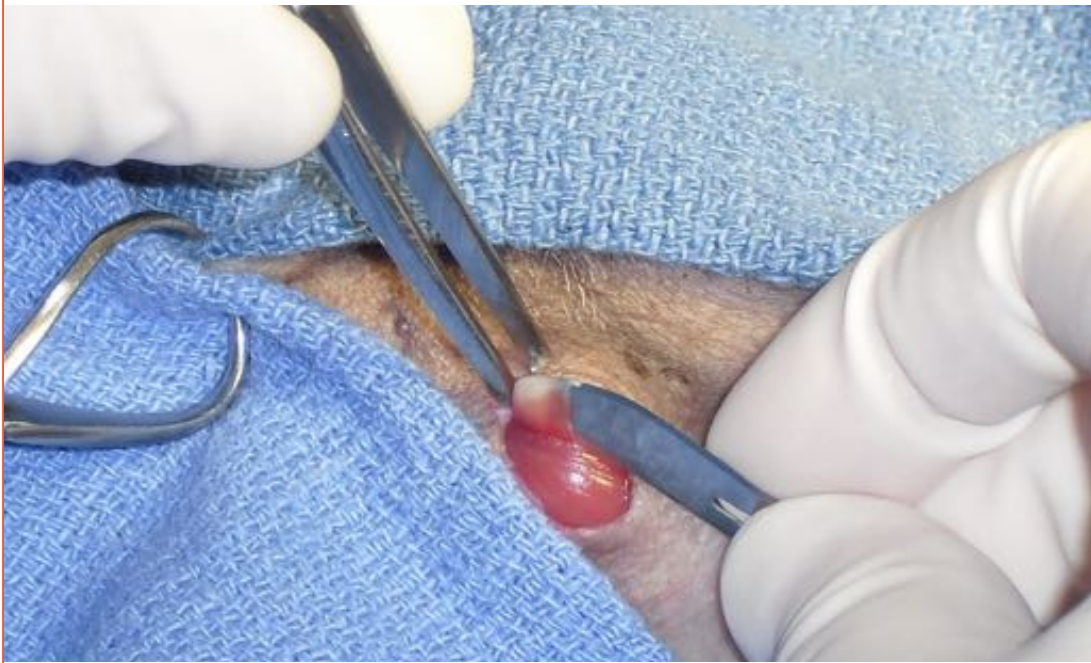
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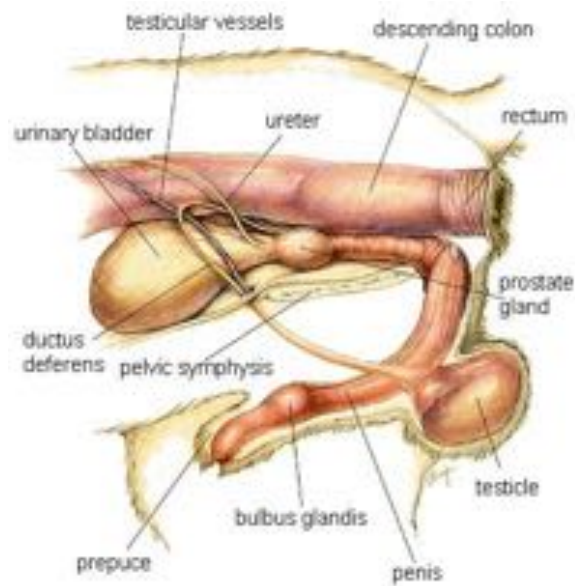




## Neuter Hook



## Caution



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## Cryptorchidism in Cats

- Normally in scrotum by 6-8 weeks



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## Often in the SQ of Inguinal Region



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## Bilateral Cryptorchid



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## Is There a Testicle Present?



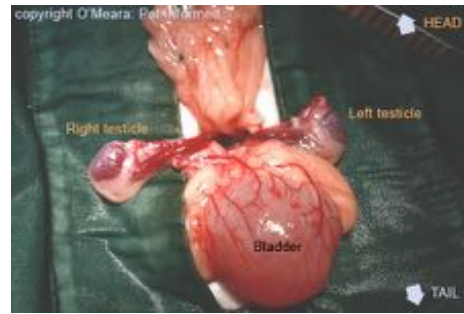
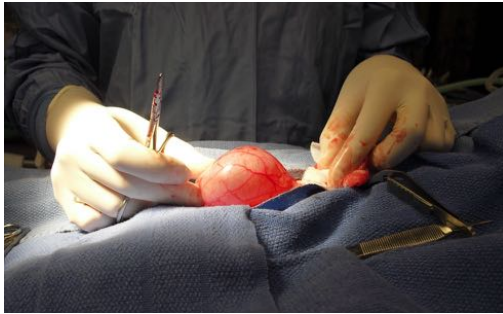
## Abdominal



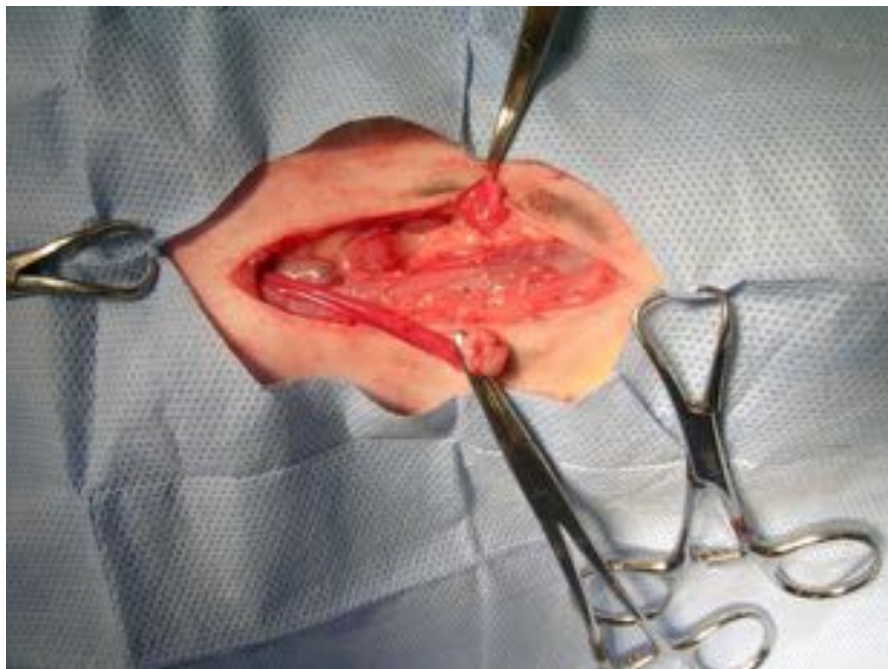
Spay hook

## Bladder

- The testicle can usually be located next to the bladder
- If not, the bladder can be retroflexed & the ductus deferens can be traced from its prostatic termination to the testicle



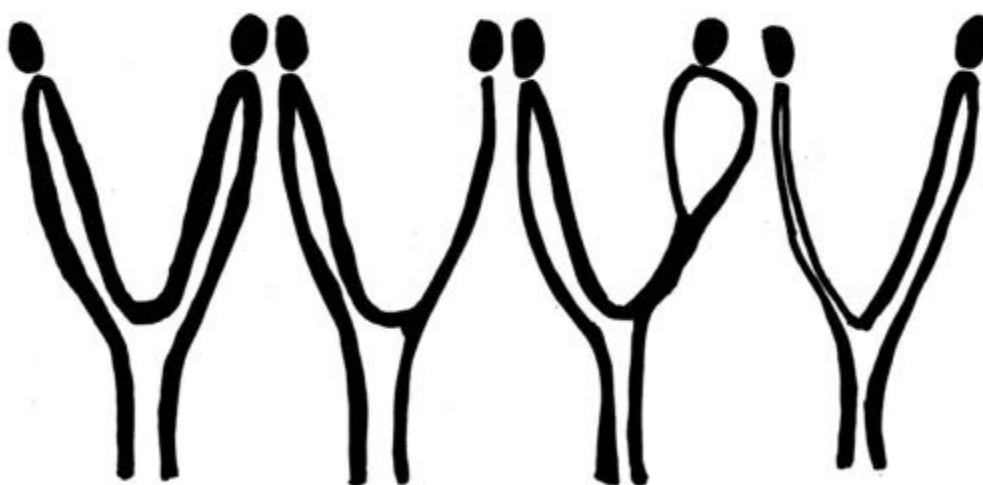
## Uterus Unicorni



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## Uterus Unicorni



Normal  
Uterus

Unicornuate  
Uterus

Segmental  
Agenesis

Hypoplastic  
Horn

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## Developmental uterine anomalies in cats and dogs undergoing elective ovariohysterectomy

Robin L. McIntyre, DVM; Julie K. Levy, DVM, PhD, DACVIM; John F. Roberts, DVM, DACVP; Roger L. Reep, PhD

- Uterine anomalies were twice as common in cats (9 in 10,000) compared with dogs (5 in 10,000)
- Ipsilateral renal agenesis is commonly associated with uterine anomalies
- Both ovaries are almost always present
- Most affected cats & dogs have no clinical signs & may have normal pregnancies



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## Clinical Significance

- When an uterine horn anomaly is encountered . . .
  - Look for an ovary on the same side
  - Check for both kidneys
  - Search abdomen for possible ectopic fetuses



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## Hydrometra



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## Ectopic Ovarian Tissue?



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## Hermaphrodites



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## Special Thanks to



- Brenda Griffin, DVM, MS, DACVIM
- Julie Levy, Julie K. Levy, DVM, PhD, DACVIM, DABVP (Shelter Medicine Practice)
- Philip A. Bushby, DVM, DACVS
- Mark Bohling, DVM, PhD, DACVS

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