***Inguinal approach to remove inguinal testis:***

The horse is positioned in dorsal recumbency. A skin incision of ± 5 cm is made over the external inguinal ring. Only the skin and subcutaneous tissue is sharply incised with a scalpel blade, all other dissection is by blunt finger dissection only. Sharp dissection should be avoided at this time to reduce bleeding and accidental incision of larger blood vessels. The vaginal tunic is easy recognizable within the inguinal canal. This vaginal tunic is grasped with a forceps and a small incision is made to expose its contents. The epididymis and testis should both be present. If the horse has already been castrated, a stump of the spermatic cord will be found within the inguinal canal.

In partial abdominal cryptorchids, only the epididymis is present within the inguinal canal, with the testis still present within the abdomen. Gentle traction on the proper ligament which connects the tail of the epididymis with the caudal pole of the testis, will result in exteriorization of the retained testicle. In some cases the retained abdominal testicle is too large to be pulled safely through the vaginal ring (internal inguinal ring). If this is the case, the vaginal ring can be stretched, by introducing a maximumof1 to 2 fingers through the vaginal ring. At no time should the vaginal ring or internal inguinal ring be incised. This can lead to further tearing of the vaginal ring during recovery resulting in a strangulating inguinal hernia.

***Inguinal approach to remove abdominal testis:***

The inguinal approach is similar to removing an inguinal testis as described above, the difference being that no vaginal tunic or testis/epididymis will be encountered in the inguinal canal.

The key to this technique is to locate the vaginal process, which in abdominal cryptorchids lies inverted within the abdominal cavity together with the testis and epididymis. The trick is to evert this vaginal process into the inguinal canal by gentle traction on the scrotal ligament, which is an extension of the gubernaculum testis. This scrotal ligament attaches the vaginal process to the scrotum. It can only be recognized when gentle and blood free blunt finger dissection is performed at the margin of the external inguinal ring. Gentle traction will cause evertion of the vaginal process in the inguinal canal and a white structure, the size of a fingertip, can be recognized deep within the inguinal canal. This is the vaginal process and can be grasped with a forceps. Malleable retractors are very helpful to increase visualization deep down in the vaginal canal. A small incision is made in the vaginal process, which then exposes the epididymis. Gentle traction on the epididymis and the proper ligament (ligamentum propria connecting epididymis and testis) will result in exteriorizing the testis. As described above the internal inguinal ring can be stretched slightly using 2 fingers, but it should never be incised or stretched greater than this, in order to avoid inguinal herniation. Once testis and epididymis are exteriorized, an emasculator can be positioned on the spermatic cord and the cord is ligated. Subcutaneous tissue and skin closed in a routine way.