

CULLING SHOT PLACEMENT

ENGLAND & WALES
BEST PRACTICE GUIDES

the deer
initiative

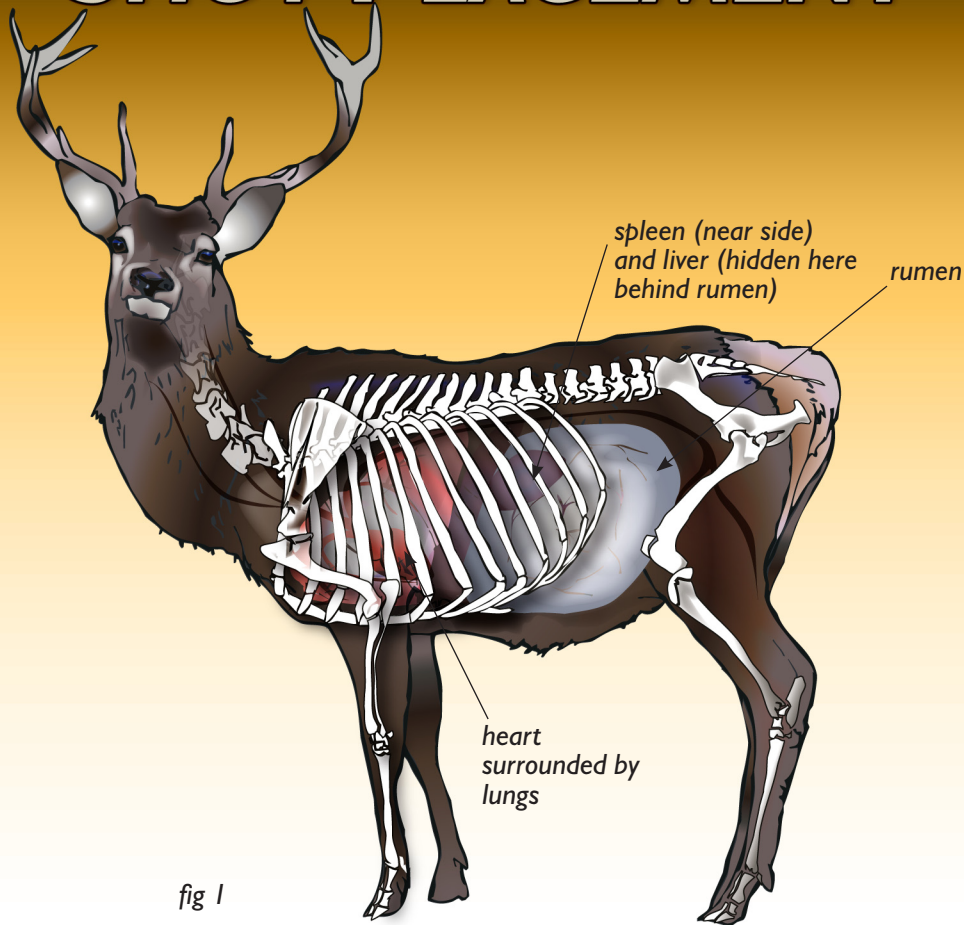


fig 1

Introduction

This guide describes how the anatomy of deer determines where shots should be placed to achieve a rapid, humane death, and at the same time avoid carcass contamination. The Follow up, and Firearms and Ammunition guides are essential companion reading.

Humane death

The objective of good bullet placement is to induce unconsciousness as swiftly as possible, rendering the animal insensitive to pain, and for this to be quickly followed by death. A correctly placed bullet causes death within seconds.

Vital zones

When a bullet strikes certain areas of the body, a rapid death will result. These areas are known as “vital zones” and are inside the animal.

Chest

The recommended shot is to the chest.

The chest vital zone is centred on the complex of blood vessels just above the heart. Damage, either to these blood vessels, the heart itself and/or the lungs that surround it, will cause a rapid loss of consciousness and death through loss of blood circulation. Because the chest vital zone is by far the largest it should be the shot of choice in most circumstances. For an animal standing broadside, the aim point is halfway up the chest and in line with, or just behind, the vertical line of the foreleg(s), see Fig2.

A common reaction to a lethal chest shot is that the deer will run a short distance, then collapse, dead. A shot slightly more forwards, which involves both shoulders, is equally humane and will usually cause the animal to drop on the spot.

Head

A shot which destroys vital areas of the brain (head shot) will achieve instantaneous loss of consciousness and death. However, the brain is a very small target and for this reason head shots should be avoided except for humane dispatch³. The brain is located high and towards the back of the skull, a shot fired on the horizontal must strike above the level of the eyes. If a head shot becomes necessary a shot from behind is preferred. For humane dispatch at extreme close range the shot would ideally be from the front, but may have to be from any angle. Be aware that for male deer, antlers and pedicles may cause a significant obstruction if shooting from the side.

Neck

A neck shot will prove fatal if the spinal chord is severed, if it is not, loss of consciousness cannot be guaranteed. The spinal chord is a very small target and for these reasons neck shots should be avoided. If a neck shot becomes necessary it should ideally be taken from behind.

Other areas

Shots elsewhere in the body will be the result of a stray shot. They are thankfully rare but are unlikely to be immediately fatal and must be followed up as soon as possible¹.

Anatomy

It is important to be familiar with the anatomy of deer so that the position of the vital zones can be located (figs. 1-3).

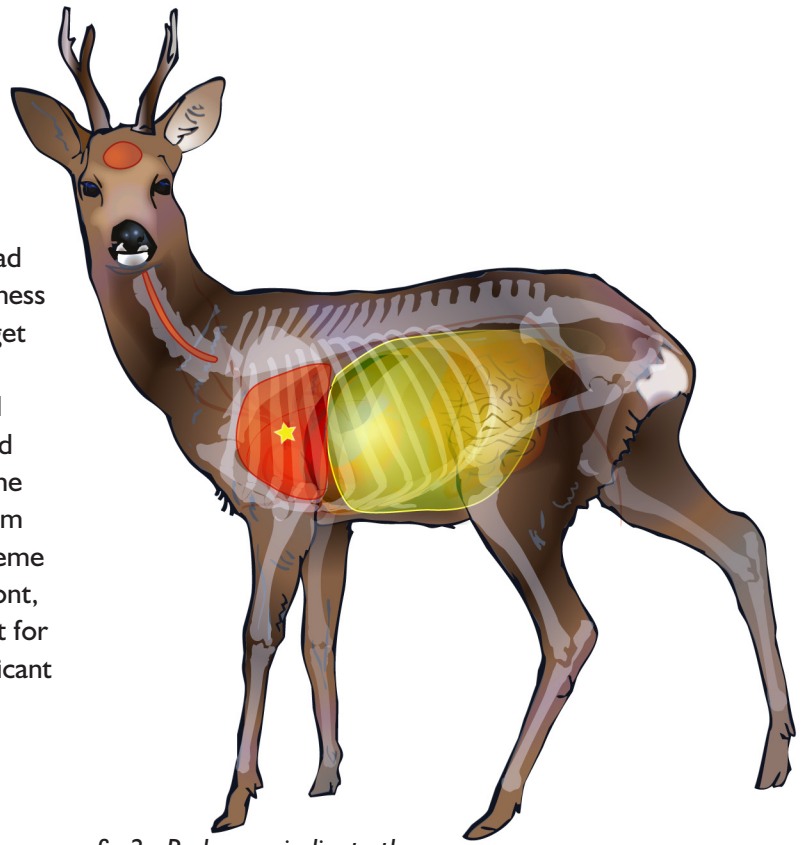


fig 2. Red areas indicate the vital zones referred to in the text. The yellow star indicates the preferred aim point for a chest shot. The shooting "clock" on next page together with Table 1 illustrates how the chest aim point must vary according to how the animal is presented

fig 3.

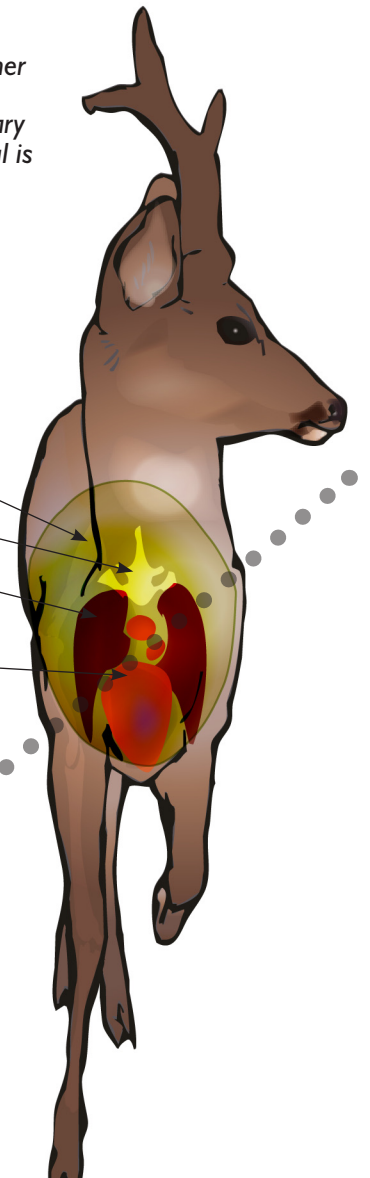
shoulder blade

spine

lungs

heart (note it sits low in the body)

any line of shot taken away from 90° broadside must consider bullet entry point and the angle of the path of the bullet through the body



Shooting clock.

Yellow star indicates the aim point required for the bullet to pass through the centre of the vital zone. Note that only over a narrow range of angles (at or close to broadside) is the shot likely to be "clean" and not involve the rumen. The gut completely obscures the chest from behind and will be damaged over a wide range of angles in other positions. Do not attempt chest shots outside of the angles indicated.

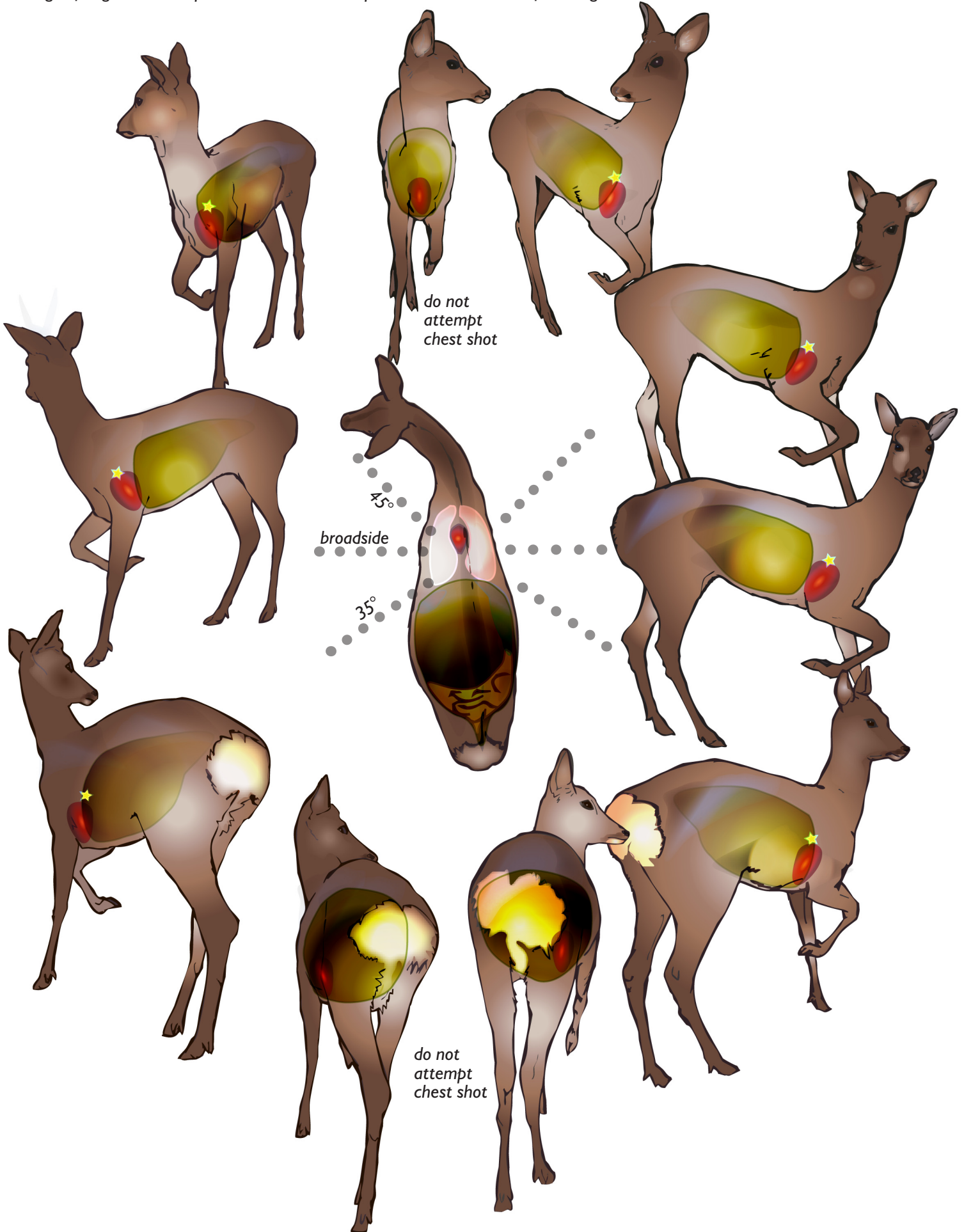


Table 1	
Bullet path	Comments
Chest shot, broadside, horizontal	The recommended shot as it presents the largest target area involving the heart and other vital structures in the chest and is unlikely to damage the stomach. The aim point is halfway up the chest and in line with or just behind the vertical line of the lower foreleg, the head should be up.
Chest shot frontal and frontal oblique, horizontal	As the deer turns towards the rifle: <ul style="list-style-type: none"> ◆ the target area decreases, requiring a greater degree of accuracy to place the shot. ◆ the aim point moves progressively forward compared with the broadside aim ◆ the possibility of the bullet bursting the stomach and causing contamination and/or damaging the haunches or shoulder is significantly increased. <p>In the "head on" position the chest target area is very small and there is an additional possibility that the bullet passes between the foreleg and the ribs but does not enter the body cavity at all, do not take such shots. There is no substantial difference between right or left frontal oblique shots Shots at an angle of more than 45 degrees from broadside are not recommended.</p>
Chest shot, from the rear and rear oblique, horizontal	As the deer turns away from the rifle: <ul style="list-style-type: none"> ◆ the target area decreases, requiring a greater degree of accuracy to place the shot. ◆ the aim point moves progressively rearward compared with the broadside aim ◆ the possibility of the bullet bursting the stomach and causing contamination and/or damaging the haunches or shoulder is significantly increased. <p>Left and right oblique shots from behind are not identical. Right side oblique shots may pass through the liver before entering the chest. This causes substantial liver damage and extensive haemorrhage. Although this will be fatal the stomach cavity and chest cavity will be contaminated with liver fragments. Left side oblique shots are likely to burst the stomach, contaminating much of the body cavity, the stomach contents can also take much of the energy from a bullet, causing it to be less effective. Shots at an angle of more than 45 degrees from broadside on the right of the animal and more than 35 degrees from broadside on the left are not recommended</p>
Shots uphill or downhill	As the firing point gets higher or lower than the deer: <ul style="list-style-type: none"> ◆ the target area gets marginally smaller ◆ the likelihood of the spine being hit increases <p>Shots from above and below are not identical. With the rifle above the deer, the aim point needs to be higher than the horizontal shot. Shooting from below the deer, the aim point needs to be lower. Shots taken from above or below but at an oblique angle will be subject to the same considerations as for horizontal oblique shots.</p> <p>Note: Shots taken from above at very close range e.g. from a high seat at less than 30 metres may strike low because the bullet trajectory is likely to be below the line of sight at this distance². Shots fired up or down will tend to strike higher than normal². This effect is most significant at distances of more than 100 metres and at very steep angles (45 degrees or more)</p>

Further Information

¹See Follow Up of Shot Deer guide

² See Rifles and Ammunition guide

³ See also Deer Vehicle Collisions guide