Determine the direction of capillary growth (Checa & Prendergast, 2009) {p1=p2=0.4}.

The direction of capillary growth is determined by 3 probabilities:

- Chemotactic direction, p1: the probability of the capillary to grow in the direction of VEGF gradient
- Persistence ratio, p2, or the probability of growing in the direction of the previous time step
- Random direction, p3: probability of growing in a random direction

Since p1 + p2 + p3 =1 then p3 = 1 – 0.8 = 0.2.

The capillary tip cell is equally likely to follow the VEGF gradient or continue in its previous direction, with a smaller chance (0.2) of deviating randomly from it. Therefore, the capillary grows toward VEGF-rich regions with some fluctuations.