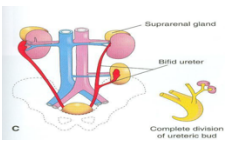
Time	Event	region	Notes
Beginning of **4th** week	Pronephric system	Cervical region	- Not functioning, - Disappear completely
End of **4th** week	Mesonephric system	thoracic & abdominal regions	- Temporarily function. - Not disappear completely, *both sexes: forms ureteric bud. *male: forms genital duct.
5th week	Metanephric system "permanent kidney"	Pelvic region	- Formed of **2** origins: 1- Ureteric Bud → give Collecting part of kidney 2- Metanephric Blastema (Mass): (derived from nephrogenic cord) → give Excretory part of kidney
9th week	**Events** - Metanephric system starts to function → **Beginning of glomerular filtration.** - kidney attains its adult position. - The hilum is rotated medially.		
At birth	Nephron formation is completed.		
After birth	1- ↑ in kidney size (C.T not nephrons!) 2- Disappearance of kidney lobulation.		

Congenital anomalies	
Anomalies	**Description**
Pelvic kidney	- Failure of ascent of one kidney (ureter is short)
Horseshoe kidney	- The poles of both kidneys fuse. - The kidneys have a lower position than normal but have normal function
Unilateral renal agenesis	- Due to absence of one ureteric bud. ما عندهم إلا كلية وحدة.
Supernumerary kidney	- Due to development of 2 ureteric buds. يصير عندهم ٣ كلى، والكلية الثالثة لها يوريتر مستقل.
Complete division of ureteric bud	Look at the pic C → - **Right** side → Malrotation of kidney. - **Left** side → bifid ureter & supernumerary kidney. 

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