**Table 2**

| **Genetic Causes of CS** | **Features** | |
|---|---|---|
| MEN1 | • Associated with pancreatic tumors producing gastrin, insulin and/or ACTH that may metastasize to the liver<br>• Multi-gland hyperparathyroidism<br>• Pituitary tumors<br>• Lipomas and angiofibromas | 11p13 (MIM 130650) |
| McCune-Albright synd. | Mosaic constitutively activating postzygotic $G_s\alpha$ mutation that can lead to polyostotic fibrous dysplasia, pigmented skin lesions GnRH-independent precocious puberty, hyperthyroidism, renal phosphate wasting and other endocrine and non-endocrine manifestations. | 20q13.2 (MIM 174800) |
| Beckwith-Wiedemann synd***** | Macroglossia, visceromegaly, hyperinsulinema, omphalocele, and risk of adrenal carcinoma, nephroblastoma, hepatoblastoma, rhabdomyosarcoma, and thoracic neuroblastoma requiring biannual sonograms | 11p13 (MIM 130650) |
| Hemihypertrophy***** | Adrenal tumors in association unilateral tissue overgrowth on ipsilateral or contralateral side. Compare upper and lower limbs and look for facial asymmetry | (MIM 235000)<br>Hoyme, H. E.; Seaver, L. H.; Jones, K. L.; Procopio, F.; Crooks, W.; Feingold, M. :<br>Isolated hemihyperplasia (hemihypertrophy): report of a prospective multicenter study<br>of the incidence of neoplasia and review. Am. J. Med. Genet. 79: 274-278, 1998.<br>PubMed ID : 9781907 |
| Li-Fraumeni Syndrome ***** | Adrenal Neoplasm – personal or family history of multiple tumors including lung breast, nasopharynx, CNS, melanoma, pancreas, gonads and prostate. | 17p13.1 - p53 gene<br>22q12.1<br>(MIM 191170; 151623) |
| Carney Complex | Primary pigmented nodular adrenal disease (PPNAD), lentigines, myxomas of heart, skin and breast, melanotic schwannoma, , GH and PRL secreting pituitary adenomas Sertoli cell tumors of the testis, multiple small hypoechoic thyroid lesions, thyroid carcinoma. | 2p16 and 17q22-24<br>(MIM 605244; 160980) |

*** risk of adrenal malignancy**