Supplementary Table. Overview of the survey results, indicated in percentages.

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| **Question** | **Anwered**  **n= 256 (%)** | **Results (subdivided if data provided)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| How many radical orchidectomy specimens are processed annually in your practice? | 208  (81.3) | 0-10 | | | | 11-20 | | | | 21-30 | | | | | | | | | 31-50 | | | | | | | >50 | | | | |
| 12 | | | | 25.5 | | | | 26.4 | | | | | | | | | 19.2 | | | | | | | 16.8 | | | | |
| Did you utilize IHC differently after the recommendation paper (Ulbright *et al*., 2014) in your clinical practice? | 201  (78.5) | No | | | | | | | | Don’t know/not aware | | | | | | | | | | | | | | | | Yes | | | | |
| 35.8 | | | | | | | | 17.4 | | | | | | | | | | | | | | | | 46.8 | | | | |
| Do you routinely use IHC to deliver a final diagnosis on a germ cell tumor? | 207  (80.9) | Never | | | | | | <10% | | 10-50% | | | | | | | | | 50-80% | | | | | | | >80% | | | | |
| 2.4 | | | | | | 16.9 | | 24.2 | | | | | | | | | 24.6 | | | | | | | 31.9 | | | | |
| Do you document presence of GCNIS in testicular biopsy specimens based on immunostaining? Specify. | 205  (80.1) | No | Yes: | | | OCT3/4 | | PLAP | | D2-40 | | | | SALL4 | | | | | cKIT | | | PAS | | | | GCNIS? | | NA | | |
| 74.6 | 25.4 | | | 48.3 | | 22.9 | | 7.8 | | | | 5.4 | | | | | 4.4 | | | 0.49 | | | | 0.49 | | 22.9 | | |
| Do you document presence of GCNIS in orchidectomy specimens based on immunostaining? Specify. | 203  (79.3) | No | Yes: | | | OCT3/4 | | PLAP | | D2-40 | | | | SALL4 | | | | | cKIT | | | PAS | | | CD30 | GCNIS? | | OCT3/4 burned out tumor | | |
| 50.3 | 49.7 | | | 33.0 | | 19.2 | | 7.4 | | | | 5.4 | | | | | 3.9 | | | 0.49 | | | 0.49 | 0.49 | | 2.0 | | |
| How often is molecular/genetic testing performed on orchidectomy/biopsy specimens (requested by pathologist or clinician) per year? | 206  (80.4) | Never | | | | | | 1-4/year | | | | | | | | | | | | | | >4/year | | | Always | | | | | |
| 70.9 | | | | | | 23.8 | | | | | | | | | | | | | | 4.9 | | | 0.5 | | | | | |
| What molecular testing is performed/requested? Please check all that apply. | 202  (78.0) | NA | | | Gain 12p | | | Mutational profile | | | | | | | | | | | | | | MSI | | | DNA CNV | | miR profiling | | | |
| 72.3 | | | 22.8 | | | 7.4 | | | | | | | | | | | | | | 2.5 | | | 2.0 | | 0.0 | | | |
| If gain 12p is requested, please state when1 and please specify technique. | 103  (40.2) | FISH in house | | | FISH outside | | | ONCOSCAN | | | | SNP array | | | | | | Ref. center | | | | Molec. biol. | | | | | NGS | | | |
| 65.7 | | | 8.6 | | | 2.9 | | | | 2.9 | | | | | | 8.6 | | | | 2.9 | | | | | 8.6 | | | |
| If targeted of genome wide mutational profiling is requested, please specify when and technique. | 85  (33.2) | Chemoresistant | | | NGS, sex cord tum. ; clin. request | | | | Compr. Molec. testing | | | | | | | Targeted actionable genes | | | | | | Cancer hot spot panel | | | Molec. Biol. | | NA | | Not requested | |
| 2.3 | | | 11.8 | | | | 1.2 | | | | | | | 1.2 | | | | | | 1.2 | | | 1.2 | | 1.2 | | 1.2 | |
| If microsatellite instability analyses are requested, please specify when and technique. | 85  (33.2) | IHC | | | NGS | | Metastasis | | | | Compr.Molec. testing | | | | | | IHC + NGS | | | | | Compreh. Molec. Testing | | | PCR | | UTUC | | Abundant lymphocytes NGS + IHC | |
| 14.8 | | | 2.5 | | 1.2 | | | | 1.2 | | | | | | 1.2 | | | | | 1.2 | | | 1.2 | | 1.2 | | 1.2 | |
| If analysis of Genome Wide DNA copy number variation is requested please specify when technique. | 81  (31.6) | NGS or SNP | | | Germ cell origin? | | ONCOSCAN | | | | NGS | | | | Compreh. Molec. Testing | | | | | | IHC & broca | | | Molec. Biol. | NGS outside | | FISH | | RNASeq | |
| 1.2 | | | 1.2 | | 2.5 | | | | 1.2 | | | | 1.2 | | | | | | 1.2 | | | 1.2 | 1.2 | | 1.2 | | 1.2 | |
| If analysis of targeted wider microRNA profiling is requested please specify when and technique. | 80  (31.3) | Never/NA | | | | | NGS | | | | | | | | | | | | | Unknown | | | | | | | Molec. Biol. | | | |
| 79.4 | | | | | 2.6 | | | | | | | | | | | | | 2.6 | | | | | | | 1.3 | | | |
| If analysis of single nucleotide polymorphism is requested please specify when and specify technique. | 80  (31.3) | Never/NA | | | | | NGS | | | | | | | | | | | | | Allele specific PCR | | | | | | | Molec. Biol. | | | |
| 92.5 | | | | | 5.0 | | | | | | | | | | | | | 1.3 | | | | | | | 1.3 | | | |
| What is the context for molecular testing in your practice related to testis cancer? | 202  (78.9) | NA | | GCNIS related in primary tumor | | | Metastatic tumor of germ cell tumor origin | | | | | | Mutation therapy | | | | | | | Primary tumor | | | Recurrent | | Mutations | | Gene profiling | | | Other |
| 60.9 | | 59.3 | | | 24.3 | | | | | | 11.4 | | | | | | | 15.8 | | | 10.4 | | 4.0 | | 3.5 | | | 3.0 |

Abbreviations used (alphabetical order): CNV = copy number variation; FISH = fluorescent in situ hybridization; GCNIS = germ cell neoplasia in situ; GCT = germ cell tumor; IHC = immunohistochemistry; NA = not available; MSI = microsatellite instability; Molec. biol. = molecular biology (not further specified); NGS = next generation sequencing; PCR = polymerase chain reaction; Ref. center = reference centre; RNASeq = RNA sequencing; SNP = single nucleotide polymorphism.

1.Mainly pre- vs postpubertal (epidermoid cyst) and germ cell vs non germ cell tumor, prim vs metastatic (gastric adenocarcinoma with yolk sac), somatic transformation.