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.