

2015 Prostate Re-audit: Assessment of Prostate Biopsy Histology Concordance with RVI MDT Review

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Previous Audit Results

- Assessed 90 cases reported at NTGH and subsequently reviewed at the RVI prior to MDT discussion.
- 93 prostate biopsies
 - Reports concordant in 73 (78%)
 - Reports changed in 20 (22%)
 - Resultant change in management in 5 cases (5%)

Previous Audit Results

- Change in Gleason (20)
 - 13 upgraded
 - 7 downgraded
- Tumour volume (6)
 - 4 increased
 - 2 decreased

Outcome

- Suggestions
 - Internal consensus
 - EQA accreditation
- Plan: Repeat audit following EQA accreditation

Repeat Audit – Planning

- No clear standard set in prior audit
- Data collection methods unclear
 - Original reports Vs MDT sheets
- Lack of specificity regarding measured outcomes
 - Change in Gleason grade not quantified
 - Change in tumour volume not quantified
- Change in management
 - Often multifactorial in clinical practice

2015 Audit - Method

- Standard set as 78% concordance in Gleason grade.
 - In keeping with literature¹
- List of prostate core biopsies reported between Jan 2015 and August 2015 generated using Pathosys
- List cross-referenced with cases recorded as having been sent to the RVI within APEX
 - Record of slide transfer and record of received RVI report
- 86 cases identified
 - RVI reports located for 82 cases
- All original NTGH reports compared to reports received from RVI

Areas Analysed

- Change in Gleason Grade
 - Decreased by 2 or more
 - Decreased by 1
 - Increased by 1
 - Increased by 2 or more
- Perineural invasion (PNI) discrepancy
- Volume percentage change >5%

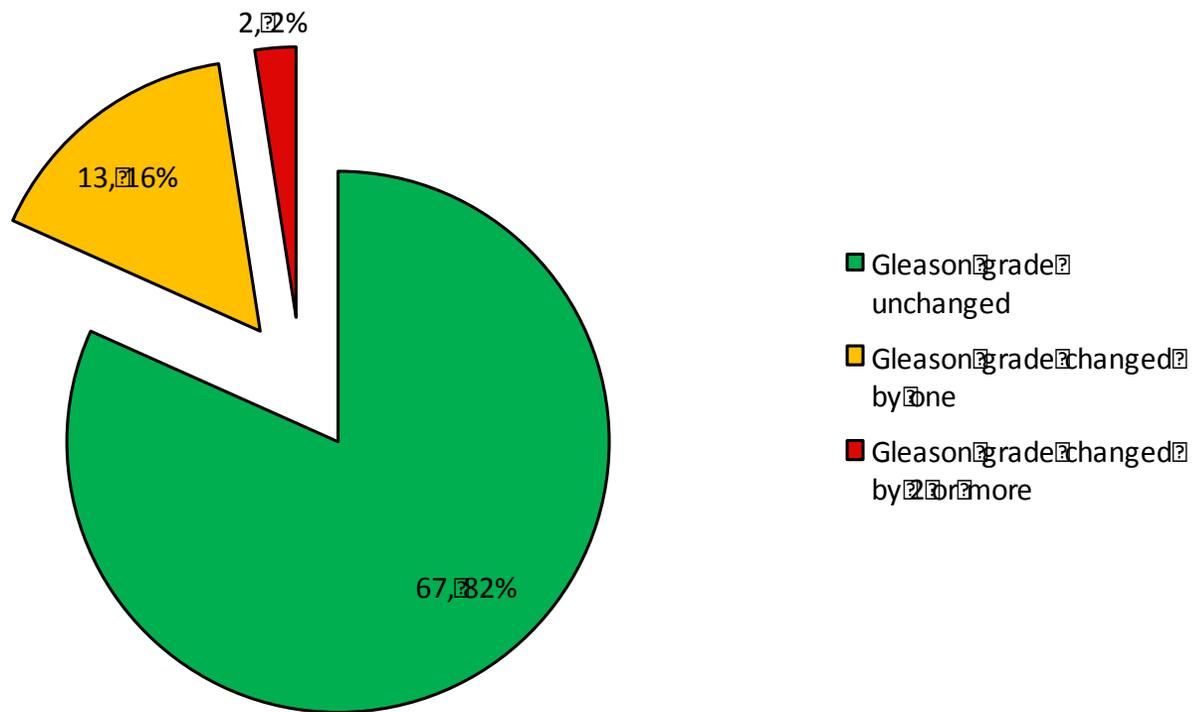
Results

| Parameter | Number of cases | Percentage (%) |
|---|-----------------|----------------|
| No change | 64 | 78.1 |
| Decreased by 2 or more grades = 0 cases | 0 | 0 |
| Change of 1 grade (up or down) | 13 | 15.8 |
| Increased by 2 or more | 2 | 2.4 |
| PNI discrepancy | 4 | 4.9 |
| Percentage volume change | 4 | 4.9 |

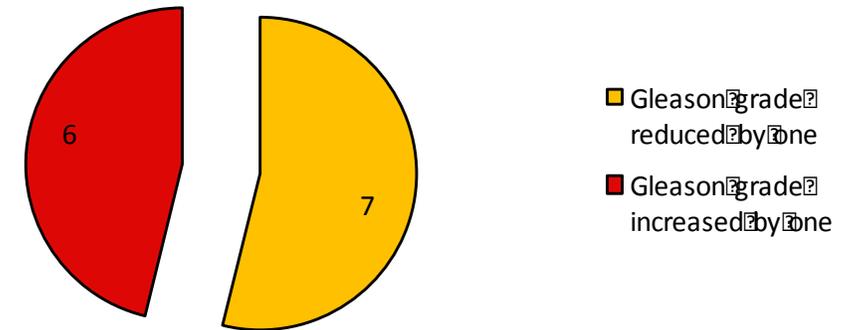
- One case diagnosed as benign and changed to G4+3
- ASAP changed to G3+3
- Percentage volume change range 8 - 20%

Results

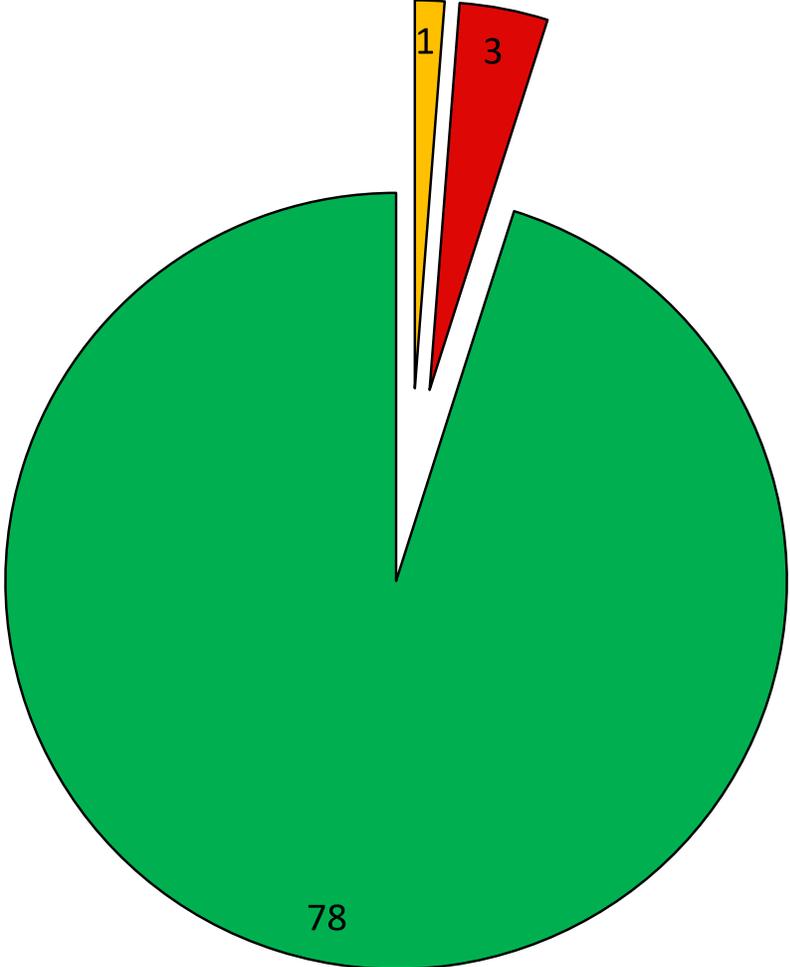
Gleason Grade



Gleason Grade Changed by One



PNI



- False negative PNI
- False positive PNI
- No change in PNI

Other Results of Interest

- Diagnosis of PIN changed 11 cases (13.4%)
- ASAP missed 1 case (1.2%)
- Variation between anonymised pathologists
 - Fewer changes in those seeing most biopsies

Recommendations

- Encourage self-audit
 - PDPs
- Prostate lead to review all prostate cancer biopsy cases
- Repeat Audit
 - ? Include changes in Gleason grade 7
 - E.g. 4+3 to 3+4

Limitations of Audit

- Cross-referencing over 2 systems increases chance of missing cases when collecting data
- Potential for human error when recording slide transfer and receipt of RVI report within APEX
- 4 cases missing from Ad-hoc file
- Uncertainty as to whether changes are clinically relevant

References

1. A UK-based investigation of inter- and intra-observer reproducibility of Gleason grading of prostatic biopsies. J Melia, R Moseley et al. (2006) *Histopathology* 48, 644–654.