

**AEROMEDICAL EXAMINATION OF
ROTARY-WING PILOTS
-A FORGOTTEN CLASS 1:
A RETROSPECTIVE ANALYSIS OF
ACCUMULATING ANNUAL RECORDS OF
2013-2015**

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ROTARY-WING AIRCRAFT (HELICOPTER) PILOTING

- ❖ Different from that of fixed-wing airplanes
- ❖ Higher noise from turbine engine and rotor blades and vibration
- ❖ Mostly Visual flight rule(VFR) and Low altitude flight
- ❖ Less common flying job and less concerned



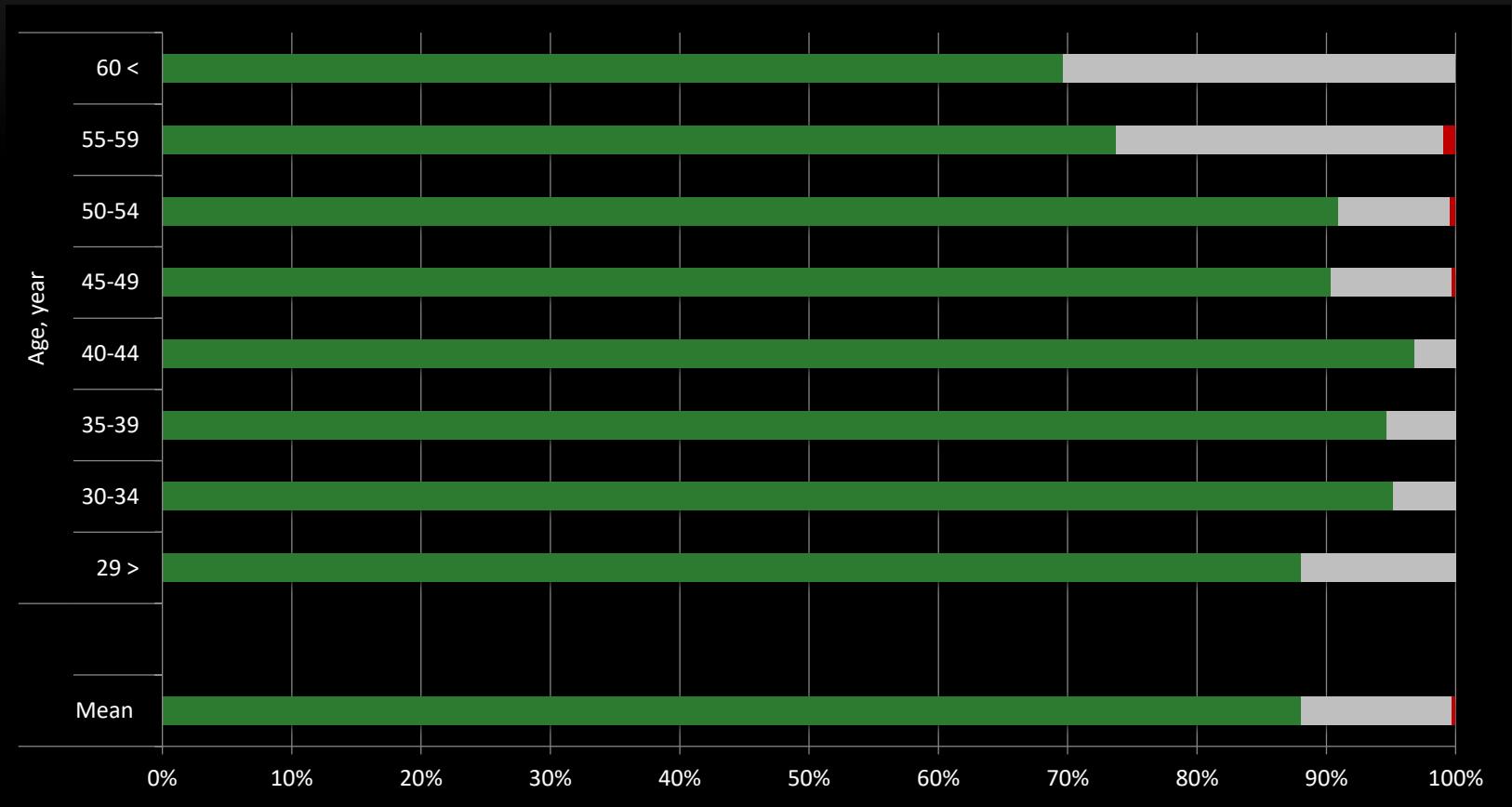
METHODS

- ❖ Retrospective, consecutive cohort study
 - ❖ Total 1692 cases from annual air medical examination records database of helicopter pilots between 2013-2015 in South Korea
 - ❖ Categories of age and flight time distribution
 - ❖ Microsoft Excel sheet, Pearson's Chi-squared test and linear trend test, SPSS statistical software package (version 21.0)
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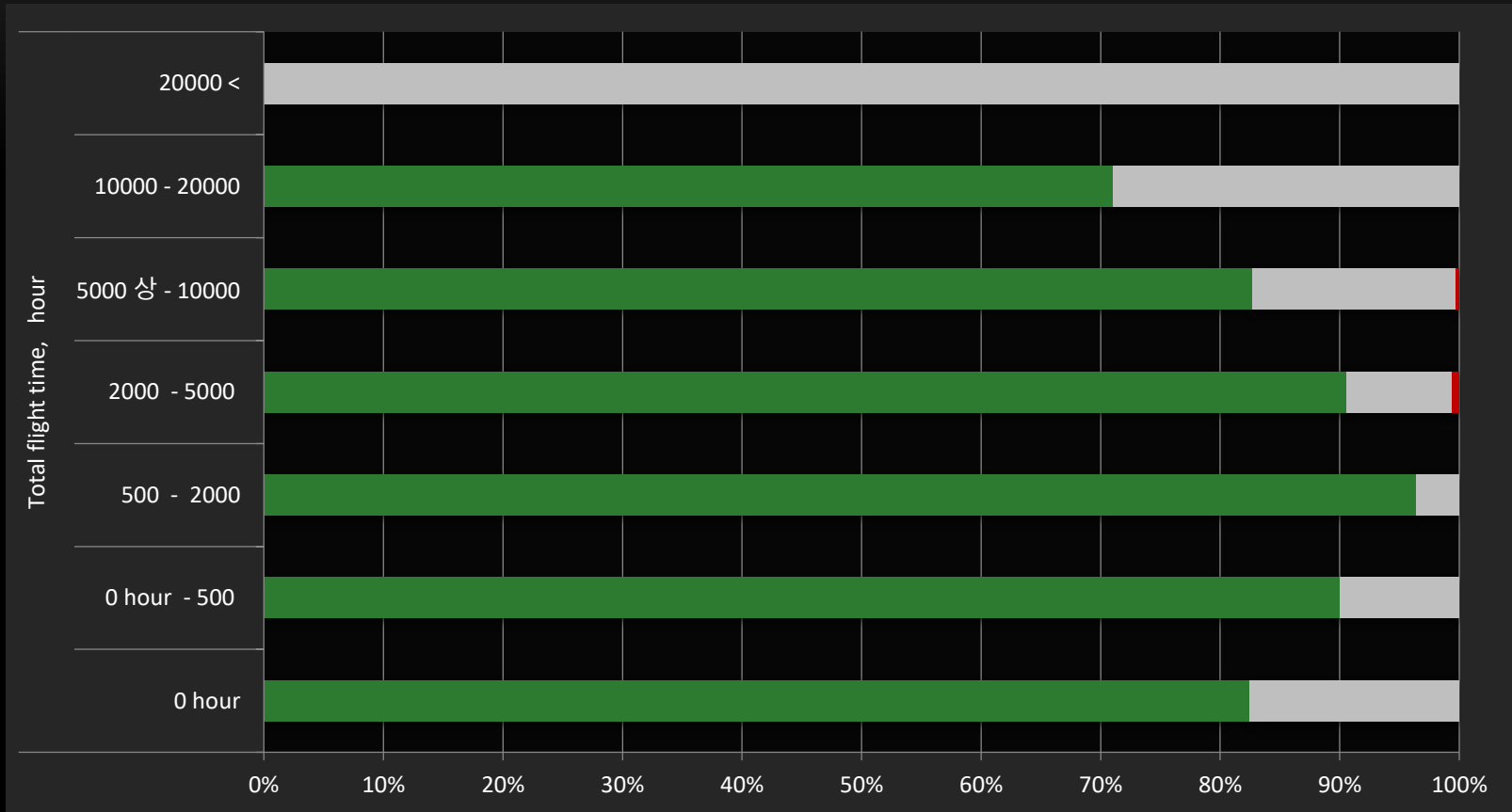
RESULTS

- ❖ Total 1692, Fit 1489 (88%), Conditioned Fit 198 (11.7%), Unfit 5 (0.3%)
- ❖ Mean age-45.5 yrs, Mean total logged flight time - 3744 hours
- ❖ Mean age of conditioned fit / disqualification - 51.4 / 53.8 yrs
- ❖ Age of 55 or older and the flight time of 10,000 hours or more significantly predominated in the cases with conditioned fit
- ❖ Hearing loss as unacceptable pure tone audiometry level (32.7% of cases) - the most common reason for the initial disqualification
- ❖ Hypertension (19.3%) and postoperative state of eye correction surgery (14.4%)
- ❖ 5 cases of permanent disqualification : 1 hearing loss, 2 history of myocardiac infarct, 1 cardiac arrhythmia and 1 postoperative state of cancer

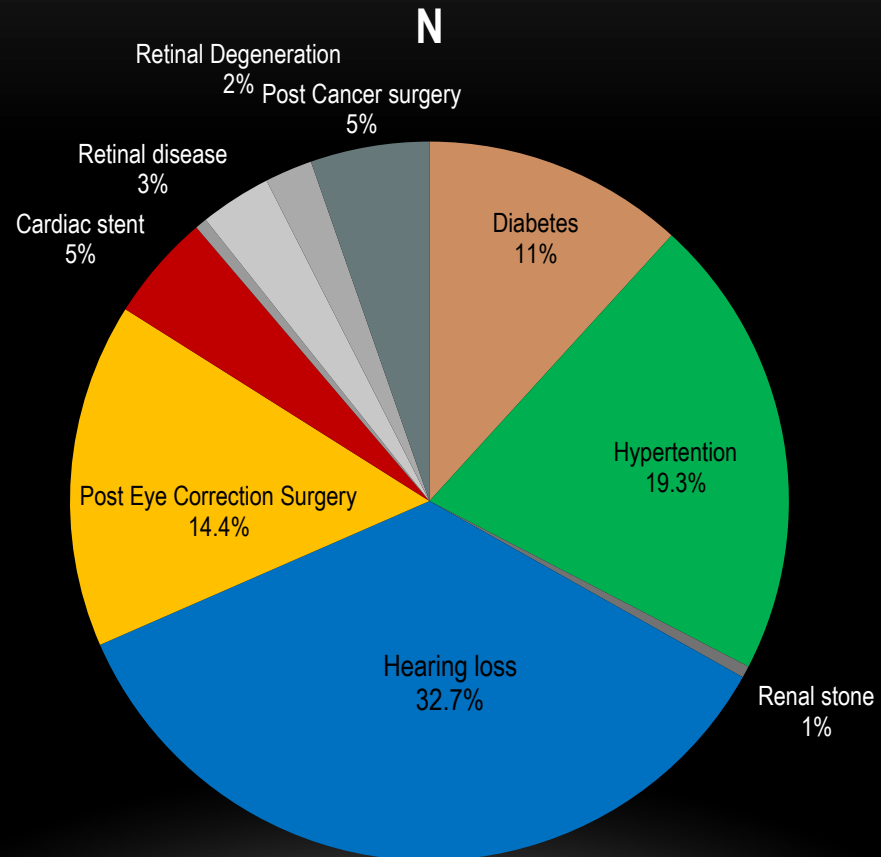
AGE DISTRIBUTION



TOTAL FLIGHT TIME DISTRIBUTION



DISEASE CATEGORY



CONCLUSION

For Helicopter pilots,

- ❖ Number of initial disqualification paralleled increasing seniority and flying experience
 - ❖ Hearing loss as unacceptable pure tone audiometry level (32.7% of cases) was the most common
 - ❖ Hypertension (19.3%) and postoperative state of eye correction surgery (14.4%) were the next common
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- ❖ Warrants more concern if age > 55 yrs or total logged flight time >10000 hrs
 - ❖ Future concerns for Metabolic disease (Diabetes..) neoplastic disease and psychiatric disease