INTRODUCTION
Gender determination is one of the most important parameters in forensic medicine. As the years pass by the forensic odontology has become the charm for the sex determination. Forensic odontology or forensic dentistry is defined by Keiser-Nelson in 1970 as ‘the branch of forensic medicine, which in the interest of justice deals with the proper handling and examination of dental evidence with proper evaluation and presentation of the dental findings’. On top of it, forensic odontology is one of the best because teeth is the one structure which provides resistance to damage in terms of bacterial decomposition and fire when the rest of the body is damaged beyond recognition which makes it a valuable tool in forensic investigation.

This topic has brought me an interest from the forensic odontology training which was conducted by NRHC. I aim to determine the gender from a sample of Nepalese population in adults measuring the mesio-distal crown and dimensions of the maxillary central incisors. Theirs size, shape, and position aids to determine and create a definite coherence in order to identify the gender. According to Roy Sabrithe average vertical height of the maxillary central incisor is 10.6 mm in males and 9.8 mm in females. According to Pascal Magne

KEYWORDS : Forensic odontology, fragmentation, central incisors, economic

METHODS
Sample: 118 subjects 59 male and 59 female. The age ranging from 20-35 years.
Sample collection: Department of Dental, Manipal Teaching Hospital and other private clinics.
Financial Support: Not required
Study design: Observation
Time periods: 8-12 months.

History and clinical examination
Each of 100 subjects will be asked to sit comfortably on the dental chair and taken the information about the name, age, ethnicity, medical history, the history of facial trauma and orthodontic treatment. Then they will be asked to look forward horizontally for clinical examination to check their fulfillment of the required criteria for sample selection.

Dental cast analysis
Dental cast production
Upper arch Impressions will be taken for every subject using Alginate impression material then poured with dental stone material. Allow to set the dental stone.

Measurements
Mesio-distal crown width of the right and left maxillary central incisors will be taken by measuring the greatest mesio-distal crown width of these teeth from the casts.
The measurement also done in live patient with taking the oral consents Long axis (vertical) length will be measured from the highest point.

**Instruments used:** Vernier caliper

**Exclusion and inclusion Criteria:**

**Exclusion:**
Under age 20 excluded because below 20 the central incisors are not in proper alignment.

Above age 35, there will be attrition and excessive periodontal problems.

History of trauma, flap surgery and any dental prosthesis of central incisor.

**Inclusion:**
Age range from 20-35.

**Objectives of the study**
- To determine the sex by measuring the maxillary central incisors
- Comparisons between the right and left central incisors

**Statistical Analysis**
- SPPS 21 is used

**Discussion**
The authors came with the researches conclusion that permanent maxillary incisors and canines showed that the mesiodistal dimensions of only right and left exhibited larger mean values of mesio-distal dimension in males compared to females but only canines were found to be statistically significant for sexual dimorphism maxillary canines were significantly different in males compared to those in females.

According to author Mohammed Nahidh, the mesio-distal dimensions of the maxillary central incisor but the canine were larger in males than females with a high significant difference.

According to Dr S.Kaushal who have done the study on maxillary central incisor in North Indian showing the range of Males right-7.62-9.90 mm left 7.70-9.98 mm.

Same studies have been done by Anjali S etal has proved that mesio-distal dimensions of left maxillary central incisors were significantly different in males than female.

In the thias population, the author has proved that dimension of the central incisor can be used for sex determination.

The study have made in Kosovo–Albanian population aged between 18-25 years which established that established mesio-distal of the maxillary central incisor recognize significant sexual dimorphism.

Sonal Pamecha, H. R. Dayakara done the study mesio-distal length of all the six anterior teeth which showed that the male is having greater than female.

Rahul Srivastava etal, An odontometric study done in maxillary central and canine to determine the gender which showed that mesio-distal diameter of the central incisors in the male is greater than female.

**Results**

**Length of the central incisors**

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length - L Male</td>
<td>59</td>
<td>9.73</td>
<td>.85</td>
<td>11.146</td>
<td>.004</td>
</tr>
<tr>
<td>Length - R Male</td>
<td>59</td>
<td>9.74</td>
<td>.95</td>
<td>12.435</td>
<td>.004</td>
</tr>
</tbody>
</table>

The above table showing that the length of central incisors (Right and Left) is greater in male than a female. If you see statistically, it is highly significant.

**Breadth of the central incisors**

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breadth left</td>
<td>59</td>
<td>8.230</td>
<td>6069</td>
<td>.0790</td>
<td>.41</td>
</tr>
<tr>
<td>Breadth right</td>
<td>59</td>
<td>8.124</td>
<td>5253</td>
<td>.0684</td>
<td>.41</td>
</tr>
</tbody>
</table>

The above table shows that the breadth of the central incisors is greater in male than a female. But statistically, it is insignificant.

**Acknowledgment**
This journey would not be possible without the guidance and support of my co-author Dr. Nirjala Malla and also Dr. Ram Bhakta Adhikari Head of the dental department. At this juncture, it’s my privilege and honor to owe my immense gratitude to Dr Anjana Karmacharya for her tremendous help and support.

**Conclusion**
Central incisors teeth of maxilla is the most accessible and easy to do the measurement. The length and breadth of the central incisor of maxillary teeth can be used for the sex determination. The teeth is hardest skeleton and can’t be destroyed by bacteria.

**Pictures**
References

7. Anjali S et.al. Gender determination using maxillary central incisor and maxillary canine. Archives of Dental and Medical Research, 2(1).